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July 3, 2014

RECEIVED
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SITE ASSESSMENT, REMEDIATION & REVITALIZATION

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: Remedial Investigation (RI) Report
Delavan Spray Technologies Site
Bamberg, South Carolina
SCDHEC VCC Number 13-4762-RP
SCDHEC File Number 51778
AECOM Project Number 60314964

Letter
SCANNED
7-8-14

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 Remedial Investigation (RI) Report for the Delavan Spray Technologies Site. This report is being submitted to the Department in accordance with Section 3.B of the 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
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cc: Mr. Bill Penn – United Technologies Corporation
Ms. Evelyn Rogers, PE – AECOM
Project File 60314964

Remedial Investigation 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

July 3, 2014

REMEDIAL INVESTIGATION 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:

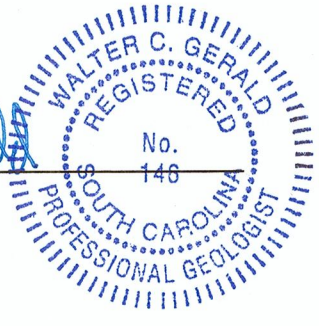
Leslee J. Alexander, PG
South Carolina PG No. 2433
AECOM Project Hydrogeologist

July 3, 2014
Date

Stephen M. Dillard
AECOM Senior Risk Assessor

July 3, 2014
Date

Reviewed by:



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

July 3, 2014
Date

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LIST OF ACRONYMS AND ABBREVIATIONS

µg/L	micrograms per liter
µg/m^3	micrograms per cubic meter
1,1-DCE	1,1-Dichloroethene
1,1,1-TCA	1,1,1-trichloroethane
ADAF	age-dependent adjustment factor
AECOM	AECOM Technical Services, Inc.
A.E. Drilling	A.E. Drilling Services, LLC
ASTM	American Society for Testing and Materials
ATSDR	Agency of Toxic Substances and Disease Registry
bgs	below ground surface
BRA	Baseline Risk Assessment
CalEPA	California Environmental Protection Agency
cis-1,2-DCE	cis-1,2- Dichloroethene
COC	chemical of concern
COPC	chemical of potential concern
COPEC	chemical of potential ecological concern
CSM	Conceptual Site Model
DA_{event}	absorbed dosage
DAF	dilution-attenuation factor
DAR	Data Assessment Report
dh/dl	hydraulic gradient
DO	Dissolved Oxygen
DOT	Department of Transportation
DPT	Direct Push Technology
EC	exposure concentration
ED	exposure duration
EF	exposure frequency
E_{inh}	inhalation exposure
EPC	exposure point concentration
EPD	exposure pathway diagram
ERA	ecological risk assessment
ERAGS	Ecological Risk Assessment Guidance for Superfund
ESH	Environment, Safety and Health
ESV	ecological screening value
ET	exposure time
°F	degrees Fahrenheit
ft/day	feet per day
ft/ft	feet per foot
ft/yr	feet per year

GI	gastrointestinal
H&H	Hart & Hickman, PC
HEAST	Health Effects Assessment Summary Tables
HHRA	human health risk assessment
HI	hazard index
HQ	hazard quotient
HRC	Hydrogen Release Compound®
I.D.	Inside Diameter
IDW	Investigation-Derived Waste
IRIS	Integrated Risk Information System
IUR	inhalation unit risk
K	horizontal hydraulic conductivity
L/min	liters per minute
MCL	Maximum Contaminant Level
mg/kg	milligram per kilogram
mg/kg-day	milligram per kilogram per day
MNA	monitored natural attenuation
mS/cm	milliSiemens per centimeter
msl	mean sea level
MS/MSD	matrix spike/matrix spike duplicate
mV	millivolt
n	effective porosity
NAD-83	North American Datum of 1983
NAVD-88	North American Vertical Datum of 1988
ND	not detected
NELAP	National Environmental Laboratory Accreditation Program
NRWQC	National Recommended Water Quality Criteria
O.D.	Outer Diameter
ORP	Oxidation-Reduction Potential
OSWER	Office of Solid Waste and Emergency Response
PCE	Tetrachloroethene
PCOI	potential compound of interest
PID	photo-ionization detector
ppm	parts per million
PPRTV	Provisional Peer-Reviewed Toxicity Value
PVC	Polyvinyl Chloride
QA	Quality Assurance
QC	Quality Control
RAGS	Risk Assessment Guidance for Superfund
RCRA	Resource Conservation and Recovery Act
RfC	reference concentration
RfD	reference dose

RI	Remedial Investigation
RME	reasonable maximum exposure
RPD	Relative Percent Difference
RSL	Region Screening Level
SCDHEC	South Carolina Department of Health and Environmental Control
SCDNR	South Carolina Department of Natural Resources
SCDOT	South Carolina Department of Transportation
SF	slope factor
SLERA	screening-level ecological risk assessment
SMDP	scientific/management decision point
SSL	Soil Screening Level
SSV	sub-slab vapor
su	standard units
SVOC	semi-volatile organic compound
T&E	threatened and endangered
TCE	Trichloroethene
TCLP	toxicity characteristic leaching procedure
TOC	total organic carbon
the Site	Delavan Spray Technologies Site
trans-1,2-DCE	trans-1,2-Dichloroethene
UCL	upper confidence level
USEPA	United States Environmental Protection Agency
UST	underground storage tank
UTC	United Technologies Corporation
V	horizontal groundwater flow velocity
VC	vinyl chloride
VCC	Voluntary Cleanup Contract
VISL	vapor intrusion screening level
VOC	volatile organic compound
WWTP	wastewater treatment plant

EXECUTIVE SUMMARY

The Delavan Spray Technologies Site is located in Bamberg, South Carolina. Prior assessment activities identified chlorinated volatile organic compounds in groundwater beneath the Site. A Voluntary Cleanup Contract (VCC 13-4762-RP) was signed between South Carolina Department of Health and Environmental Control (SCDHEC) and Delavan Spray, LLC. As part of the VCC, a Remedial Investigation (RI) was conducted to further evaluate the vertical and/or horizontal extent of previously identified soil and groundwater impacts; assess additional potential areas of interest for either secondary sources of soil impacts and/or groundwater impacts; evaluate potential vapor intrusion pathways; determine risk to potential human and ecological receptors; and provide additional data needed to develop a remedial strategy for the Site. The RI field work included the following activities:

- Installation and development of eight monitoring wells;
- Groundwater level measurement and sample collection from 32 monitoring wells for laboratory analyses;
- Collection of 23 soil samples from five background soil borings and 34 shallow subsurface soil samples from 30 Direct Push Technology (DPT) soil borings;
- Installation and sampling of four sub-slab vapor (SSV) sample points;
- Surveying of eight new monitoring wells, four SSV sample points, five background soil borings, and 30 DPT soil borings.

The Site geology has been subdivided into three general geologic zones. 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 poorly cemented coarse shell fragments overlying a layer of 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 water levels within the shallow aquifer zone occur between approximately 134 to 142 feet in elevation. The primary horizontal groundwater flow direction is inferred to be toward the west, toward Halfmoon Branch. Groundwater flow beneath the northern portion of the Site varies between northward and southward flow directions, with local groundwater highs at MW-4 and MW-5. Groundwater levels appear depressed along a line from MW-18, MW-8, MW-1 MW-21, and MW-3. The horizontal groundwater seepage velocity in the shallow aquifer was estimated to be 0.95 feet per year (ft/year).

The potentiometric surface within the deeper limestone aquifer zone occurs between 133 and 135 feet in elevation. The inferred direction of horizontal groundwater flow is to the south-southwest and is consistent with regional topography and drainage. The horizontal groundwater seepage velocity in the deeper (limestone) zone was estimated to be 36.8 ft/year.

A downward vertical gradient exists between the shallow aquifer zone and the underlying deep limestone aquifer zone. Downward vertical flow between these two zones may be impeded in the northern portion of the Site due to the clays and silty layers encountered at depth in the upper zone.

Samples of subsurface soil were collected from seven areas at the Site, analyzed, and the results screened against maximum contaminant level (MCL) -based Soil Screening Levels (SSLs) and Residential Regional Screening Levels (RSLs) to further characterize the Site and provide a preliminary indication of potential risk. Samples were also collected from five background locations to evaluate the levels of naturally-occurring metals in the Site vicinity. A risk assessment was then conduced for Human Health and Ecological receptors to determine constituents of concern.

MCL-Based SSLs were exceeded in soils for the following constituents at one or more locations: methylene chloride, tetrachloroethylene (PCE), trichloroethylene (TCE), cis-1,2-dichloroethylene (cis-1,2-DCE) and 1,1-dichloroethylene (1,1-DCE) and the metals arsenic, copper and selenium. The MCL-based SSL values were also exceeded by concentrations of arsenic, selenium, and mercury in one or more background samples. The Residential RSLs were exceeded in soils for the following constituents at one or more locations: PCE, TCE, arsenic and hexavalent chromium. Detected concentrations of arsenic and hexavalent chromium exceeded their respective residential RSLs in one or more background samples.

Sub-slab vapor was collected and analyzed for volatile organic compounds (VOCs) from four SSV points installed inside the main manufacturing building. PCE and TCE concentrations exceeded both their RSLs for industrial air and their calculated shallow soil gas standards. Benzene was detected at a concentration above the RSL for benzene in industrial air.

Groundwater from all new and existing monitoring wells was sampled for laboratory analysis of VOCs and select monitoring wells were sampled for analysis semi-volatile organic compounds (SVOCs), metals, and monitored natural attenuation (MNA) parameters. Analytical results were screened against United States Environmental Protection Agency (USEPA) MCLs to identify potential compounds of interest (PCOIs) in groundwater beneath the Site.

Concentrations of PCE, TCE, cis-1,2-DCE and methylene chloride exceeded their respective MCLs in one or more samples of shallow groundwater. All of these exceedances were from shallow monitoring wells constructed on-Site. There were no exceedances of VOC MCLs in groundwater collected from off-Site wells screened in the shallow aquifer zone. Detected concentrations of SVOCs and metals did not exceed their respective MCLs in any shallow aquifer zone groundwater samples.

PCE, TCE, cis-1,2-DCE, 1,1-DCE, methylene chloride and chloroform exceeded their respective MCLs in one or more samples of deep aquifer zone groundwater. Of these compounds, only chloroform and PCE exceed the respective MCL in groundwater from off-Site locations. Detected concentrations of SVOCs and metals did not exceed their respective MCLs in any deeper limestone aquifer zone groundwater samples. None of the VOC, SVOC, or metals analytes were detected above their respective MCLs in the groundwater samples collected from the deeper sandstone aquifer zone.

Based on the MNA parameter analyses, nitrate, sulfate, and methane concentrations are favorable for anaerobic degradation of chlorinated VOCs in groundwater beneath the Site. However, low pH and total organic carbon (TOC) levels, and limited areas with favorable dissolved oxygen concentrations, 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 RI groundwater samples.

A water well survey was previously conducted in the Site vicinity. The survey was updated as part of the RI, including a windshield survey by automobile and an on-line and in-person records search of the South Carolina Department of Natural Resources (SCDNR) well information for Bamberg County. There were no new groundwater users identified within the 1-mile search radius of the Site.

A Human Health Risk Assessment (HHRA) was conducted for the Site to evaluate chemicals detected in Site-related media. Potential risks to human health under current and future land use scenarios were quantitatively evaluated. Chemicals of concern (COCs) were identified in the Risk Characterization based on the risk and hazard calculations. The human health COCs identified for each receptor are the following:

- Current and Future Industrial Worker – no COCs identified.
- Future Construction Worker – no COCs identified.
- Future On-Site Resident (Adult) – bromodichloromethane, chloroform, cis-1,2-DCE, dibromochloromethane, methylene chloride, naphthalene, PCE, TCE arsenic, and chromium (based on the assumption that the chromium is entirely hexavalent) in groundwater; and PCE in soil gas.
- Future On-Site Resident (Child) – chloroform, cis-1,2-DCE, dibromochloromethane, methylene chloride, PCE, and TCE in groundwater.
- Future Off-Site Resident (Adult) – bromodichloromethane, chloroform, dibromochloromethane, PCE, and TCE in groundwater.
- Future Off-Site Resident (Child) – no COCs identified.

Human health COCs were identified only for a hypothetical future on-Site resident, which is a very unlikely scenario, and for an off-Site resident assumed to regularly consume and use groundwater, which also is less likely to occur due to the availability of municipal water.

An Ecological Risk Assessment (ERA) was performed to evaluate whether potentially Site-related chemicals in the environment pose unacceptable risks to ecological receptors. None of the chemicals in Site media were found to warrant designation as Chemicals of Potential Environmental Concern (COPECs), and further evaluation of ecological risk in a baseline ERA is not needed.

1.0 SITE INTRODUCTION

Additional assessment activities were performed at the Delavan Spray Technologies Site (the Site) as part of a Remedial Investigation (RI). The Scope of Work for the RI was presented in the *RI Work Plan*, which was prepared by Hart & Hickman, PC (H&H) (August 1, 2013). The RI was designed and performed in accordance with Section 3 of the Voluntary Cleanup Contract (VCC) (VCC 13-4762-RP) between the South Carolina Department of Health and Environmental Control (SCDHEC) and Delavan Spray, LLC. The VCC was executed on July 3, 2013.

The Site is located at 4334 Main Highway (US Highway 301 South) in Bamberg, Bamberg County, South Carolina (Figure 1-1).

1.1 Project Overview and Objectives

The purpose of assessment activities that were conducted as part of this RI is the following:

- further evaluate the vertical and/or horizontal extent of previously identified soil and groundwater impacts;
- assess additional potential areas of interest for either secondary sources of soil impacts and/or groundwater impacts;
- evaluate potential vapor intrusion pathways;
- collect data to support a baseline risk assessment; and
- provide additional data needed to develop a remedial strategy for the Site.

1.2 Site Description and Topographic Setting

1.2.1 Site Description

The Site is comprised of a main manufacturing building and smaller associated support buildings, which are located on approximately 20 acres. The facility manufactures several types of metal spray nozzles for fuel oils. A chain-linked fence surrounds the operational portion of the Site. An old family cemetery is located within a small, discrete portion of the 20 acre Site (Figure 1-2).

An unnamed creek flows through the area immediately north and northwest of the Site and enters Halfmoon Branch approximately 300 feet west of the Site. The Bamberg wastewater treatment plant (WWTP) is located to the northwest beyond the creek and approximately 500 feet from the Site perimeter, with its surrounding spray fields extending to within approximately 200 feet of the Site. Properties to the northeast across Log Branch Road consist of residential properties and the County of Bamberg Rhodes

Senior Center. Properties to east and southeast across Main Highway (US Highway 301 South) include a propane distribution facility, Jeff's Auto Care, and a sparsely populated residential area. Remaining properties to the south across Main Highway are undeveloped and used for silviculture. Properties to the southwest consist of a sparsely populated residential area, a junk yard, and a machinery shop (Figure 1-2).

Surrounding properties are under either Bamberg County or City of Bamberg zoning. The Site and the commercial businesses to the east of the Site (propane distribution facility and Jeff's Auto Body) are zoned Industrial by Bamberg County. Properties to the northeast, east, southeast, south, and southwest are zoned by Bamberg County as Rural District. The Bamberg WWTP facilities and spray fields to the west and northwest of the Site are zoned by the City of Bamberg as Industrial. Properties to the north of the Site are zoned R-15 (residential) by the City of Bamberg (H&H, 2013).

1.2.2 Site Topographic Setting

The Site is located south of the Bamberg City limits in a relatively flat area (Figure 1-1). Land surface elevations on-Site range from approximately 142 to 148 feet above mean seal level (msl) and decrease to the southwest of the Site to about 136 feet msl. Halfmoon Branch and its tributaries drain the Site vicinity, flowing southward into Lemon Creek, approximately 4,500 feet from the Site (Figure 1-1).

1.2.3 Climate

The climate of the Bamberg area is characterized as humid subtropical; with relatively high summertime temperatures and evenly distributed precipitation throughout the year. The average annual low and high temperatures are 53 and 76 degrees Fahrenheit (^{o}F), respectively. Precipitation averages 47 inches per year (www.weatherbase.com).

1.3 Organization of the Report

This RI report is organized into eight sections. Section 1 presents an introduction and overview of the project. The Site background and history are presented in Section 2. The field and analytical methods used to generate the environmental quality data are outlined in Section 3. Section 4 presents a discussion of the regional and Site-specific geology and hydrogeology as it relates to the Site. Section 5 discusses the environmental quality data. The Baseline Risk Assessment (BRA) is presented and discussed in Section 6. A summary and conclusions that may be drawn from the data are presented in Section 7. Pertinent references cited in the RI report are presented in Section 8.

2.0 SITE BACKGROUND

The Site background and history were determined from a review of previous documents and reports and from information obtained during visits to the Site.

2.1 Previous Hydrogeologic Investigations

H&H initiated soil and groundwater assessment activities at the Site in 2003 after a preliminary environmental assessment conducted in December 2002 indicated that tetrachloroethene (PCE) was detected in groundwater in the central and eastern portions of the Site (H&H, 2003). The subsequent assessment activities confirmed the presence of chlorinated volatile organic compounds (VOCs) in groundwater at the Site. The primary compounds of concern were reported to be 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). Shallow groundwater impacts from these constituents primarily extend across the central, southern, and northern portions of the Site. The primary source area for VOCs detected in groundwater appears to be the former PCE underground storage tank (UST), which was located along the southern side of the manufacturing building (Figure 1-2). Assessment data also indicated other potential sources may include two former PCE degreasers, which were located inside the manufacturing building, the northeastern wooded area, and the former Eastern PCE Secondary Containment Area (Figure 1-2). Constituent concentrations in groundwater from the deeper limestone aquifer unit primarily extend across the southern and southwestern portions of the Site and to the adjacent South Carolina Department of Transportation (SCDOT) right-of-way of Main Highway (Highway 301 South) to the south of the Site (H&H, 2013).

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.

In August 2012, H&H initiated a source area investigation at the Site. The investigation included soil gas field screening, soil sampling, and groundwater sampling activities to determine the nature and general extent of potential compounds of interest (PCOIs) at seven areas of the Site. The seven areas of interest are depicted on Figure 1-2 and listed below.

- Former Eastern PCE Secondary Containment Area (east side of the manufacturing building);
- Former PCE UST (south side of the manufacturing building);
- Former Northern Secondary Containment Area (north side of the manufacturing building);
- Two Former Degreasers (inside of the manufacturing building); and

- Two Wooded Areas of Interest (north and northeast of the manufacturing building).

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).

2.2 Previous Remedial Efforts

In 2005, H&H injected Hydrogen Release Compound® (HRC) into shallow groundwater. The purpose of the injections was to stimulate natural biodegradation of chlorinated compounds in groundwater in three areas of the Site (the vicinity of monitoring wells MW-1, MW-9, and MW-10). Twelve HRC injection borings were advanced in three gridded rows on approximate 12 to 15 ft spacing at each of the three areas (a total of 36 borings). The borings were advanced to depths of approximately 20 ft below ground surface (bgs).

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. H&H concluded that anaerobic degradation was occurring at the Site based on the groundwater analytical data. However, it may be limited by low organic carbon content in the aquifer, which is needed to drive the biodegradation process, and by the low pH in shallow groundwater, which could inhibit microbial activity (H&H, 2013).

3.0 METHODS OF INVESTIGATION

3.1 Introduction

RI field work was completed between February 24, 2014 and March 20, 2014 in accordance with the *RI Work Plan* (H&H, August 2013), the SCDHEC work plan approval letter (October 22, 2013), the safe work procedures identified in the United Technologies Corporation (UTC) Pre-Work Hazard Checklist (Appendix A), and subsequent meetings and conference calls with SCDHEC and UTC. The field work included:

- Installation and development of eight monitoring wells;
- Groundwater sample collection from 32 monitoring wells for laboratory analyses;
- Collection of 23 soil samples from five background soil borings;
- Collection of 34 shallow subsurface soil samples from 30 Direct Push Technology (DPT) soil borings;
- Installation and sampling of four sub-slab vapor (SSV) sample points;
- Water level measurement of all 32 groundwater monitoring wells; and
- Surveying the horizontal and vertical position of eight new monitoring wells, four SSV sample points, five background soil borings, and 30 DPT soil boring.

Investigation activities are described in subsections 3.2 through 3.8 below. Deviations from the *RI Work Plan* (H&H, August 2013) are listed in Section 3.9. Field work was documented by AECOM Technical Services, Inc. (AECOM) personnel on the field forms which are included in Appendix B.

3.2 Drilling and Monitoring Well Installation

A.E. Drilling Services, LLC (A.E. Drilling) of Greenville, South Carolina was subcontracted to drill the soil borings and install the groundwater monitoring wells. All drilling and monitoring well installations were supervised by an AECOM geologist. The geologist recorded descriptions of the soils encountered and noted pertinent observations as the borings progressed on Test Boring Reports (Appendix B). The soil samples were screened with a photo-ionization detector (PID) for the presence of VOCs and the measurements were recorded on the Test Boring Reports. The geologist also directed the installation of the monitoring wells and selected the screened interval based on the objectives of the assessment and Site-specific conditions encountered.

3.2.1 Borehole Drilling

Thirty DPT soil borings (shown on Figure 3-1) and five background soil borings (shown on Figure 3-2) were installed as part of the RI. Soil borings were installed using a Geoprobe® 6610DT track-mounted rig with the exception of borings DPT-37 through DPT-44, which were installed with a hand auger because they were inaccessible to a Geoprobe® rig, and DPT-45, which was combined with MW-21. The Geoprobe® rig enabled the collection of continuous soil core samples in acetate sleeves for lithologic evaluation using 2.25 inch outer diameter (O.D.) probe rods and the Geoprobe® MacroCore System. DPT hand auger locations were sampled continuously using 3.25 inch stainless steel hand augers. Soil boring details are summarized on Table 3-1.

For the shallow 2-inch monitoring well locations (MW-17, MW-18, and MW-21; shown on Figure 1-2), 4.25-inch inner diameter (I.D.) hollow stem augers were used to advance the borings until the desired depth or the underlying limestone formation was encountered. Soil samples for lithologic description were collected with a split spoon sampler at five foot intervals in general accordance with the work plan and American Society for Testing and Materials (ASTM) D-1586 procedures. One-inch diameter shallow monitoring well MW-19 was installed at the location of Geoprobe® soil boring DPT-35 and 1-inch diameter shallow monitoring well MW-20 was installed a the location of hand auger soil boring DPT-41.

For the deeper monitoring wells MW-21D through MW-23D, 4.25-inch I.D. hollow stem augers were initially used to advance the borings and collect split spoon soil samples through the shallow, water-table aquifer, as described above. The borings were then over-drilled using 8.25-inch I.D. augers to depths of 31.5 to 36.0 feet into the limestone formation. At each boring a 6-inch I.D. Schedule 40 polyvinyl chloride (PVC) surface casing was then set and grouted into place using cement-bentonite grout pumped to total depth via tremie pipe and grout shoe. The PVC surface casing was set to isolate the overlying shallow aquifer from the underlying limestone aquifer unit during well drilling and construction. After allowing the surface casing grout to cure for a minimum of 48 hours, the lower portion of the wells were drilled using mud rotary methods with a nominal 6-inch diameter drill bit to depths ranging from 51.5 to 54.0 feet bgs. Soil samples were collected with a split spoon sampler at five foot intervals. Drilling mud and soil cuttings were containerized 55-gallon drums and stored on-Site until they could be profiled and disposed as described in Section 3.7.

3.2.2 Sub-Slab Vapor Point Installation

SSV monitoring points were installed by first coring an 8-inch diameter hole through the concrete slab at the SSV location using a concrete corer. A drill with a 1-inch bit was then used to bore a 1-inch (approximate) hole to approximately six inches below the base of the concrete slab. The SSV points were constructed using AMS stainless steel Gas Vapor Tip assemblies with #50 mesh screens. The SSV points were fitted with a length of 0.25-inch diameter Teflon® tubing and were inserted into the bottom of the borehole. Filter sand was then poured through the borehole around the vapor tip to approximately 1-inch above the SSV point. Powdered bentonite was installed in the annular space around the sample

tubing from the top of the sand to the approximate top surface of the concrete slab and was hydrated with potable water. The SSV points were completed with 6-inch cast iron flushmount vaults at the concrete surface. The Teflon® tubing was capped after installation and coiled up inside the flushmount well vault. SSV point details are summarized on Table 3-2.

3.2.3 Monitoring Well Installation

Five shallow Type II monitoring wells (MW-17 through MW-21) and three deeper Type III monitoring wells (MW-21D through MW-23D) were installed at the Site during the RI. The monitoring well locations are illustrated on Figure 1-2; newly installed wells are shown in black and existing monitoring wells are shown in gray. The RI monitoring wells were installed between February 24, 2013 and March 7, 2014 to further evaluate groundwater impacts down-gradient of the northern wooded areas, beneath the former PCE degreasers, and off-Site down-gradient of the facility.

Monitoring wells MW-17 and MW-18 were installed north of the Site behind the Bamberg County Rhodes Senior Center to monitor shallow groundwater down-gradient of the wooded areas of interest. Monitoring wells MW-19 and MW-20 were installed inside the manufacturing building adjacent to each of the two former PCE degreasers. Monitoring well MW-21 was installed near the southeast corner of the plant building adjacent to the former PCE UST. Monitoring well MW-21D was installed in the parking lot immediately south of the plant building to monitor groundwater within the limestone aquifer immediately down-gradient of the source areas. Monitoring wells MW-22D and MW-23D were installed across Main Highway (US Highway 301 South), down-gradient of the Site.

The 2-inch diameter, Type II, shallow monitoring wells MW-17, MW-18, and MW-21 were installed through the center of the hollow-stem augers. These wells were constructed of 2-inch diameter Schedule 40 PVC casing and 10 feet of 0.010-inch machine slotted PVC screen. Filter sand was placed into the annular space of each well to approximately two-feet above the top of the well screens. A pelletized bentonite clay seal approximately 2 feet thick was then placed in the annular space above the filter sand and hydrated with potable water, as necessary. As the filter sand and bentonite clay were added, the augers were pulled from the borehole to ensure the annulus would be completely filled. Depths to sand and bentonite were monitored with a weighted tape measure as the installation progressed. A neat cement-bentonite grout was then injected from above the bentonite seal to land surface via a tremie pipe.

Shallow monitoring well MW-19 was installed inside the building at the location of soil boring DPT-35. Following soil sample collection at DPT-35, 3.25-inch O.D. rods were advanced to allow the installation of the monitoring well. Shallow monitoring well MW-20 was installed in the hand auger boring DPT-41. These wells were constructed of 1-inch diameter Schedule 40 PVC casing and 1-inch ID schedule 40 PVC with a 2.5 inch O.D. pre-packed well screen. MW-19 was constructed with 15 feet of screen and MW-20 was constructed with 10 feet of screen. Additional filter sand was placed into the annular space of each well to approximately one-foot above the top of the well screens. A pelletized bentonite clay seal approximately 2 feet thick was then placed in the annular space above the filter sand and hydrated with

potable water, as necessary. As the filter sand and bentonite clay were added, the DPT rods were pulled from the borehole to ensure the annulus would be completely filled. Depths to sand and bentonite were monitored with a weighted tape measure as the installation progressed. A neat cement-bentonite grout was then emplaced from above the bentonite seal to approximately 0.5 feet below the concrete surface via free pour from the surface.

The 2-inch diameter, Type III, deeper monitoring wells MW-21D, MW-22D, and MW-23D were installed through the 6-inch surface casing and into the open borehole. The wells were constructed of 2-inch diameter Schedule 40 PVC casing and 10 feet of 0.010-inch machine slotted PVC screen. Filter sand was added to the annular space in each deep well to approximately two-feet above the top of the well screens. A bentonite clay seal was placed in the annular space above the filter sand and hydrated with potable water, as necessary. Depths to sand and bentonite were monitored with a weighted tape measure as the installation progressed. Cement-bentonite grout was injected from above the bentonite seal to land surface via a tremie pipe.

The surface completions for the 2-inch shallow and deep monitoring wells consisted of an 8-inch diameter cast-iron vault with a bolt down lid. The vaults were flush-mounted into a two-foot by two-foot square pad of high strength concrete, which formed a surface seal. The surface completions for the 1-inch shallow monitoring wells completed within the manufacturing building consisted of a 6-inch diameter cast-iron vault with a bolt down lid. The vaults were flush-mounted into the 8-inch diameter core holes and grouted in place flush with the floor with high strength concrete, which formed a surface seal. Monitoring well construction details for all wells installed by AECOM at the Site were recorded on field forms provided in Appendix B. Table 3-3 presents a summary of the monitoring well construction information for each of the newly installed wells and existing monitoring wells.

3.2.4 Well Development

Upon installation, the groundwater monitoring wells were developed so that they would produce representative groundwater samples. Shallow 2-inch monitoring wells (MW-17, MW-18 and MW-21) were developed by AECOM personnel by surging and purging with a Nomad 12-volt electric submersible pump. Shallow 1-inch monitoring wells (MW-19 and MW-20) were developed by AECOM personnel by surging and purging with a peristaltic pump. Groundwater indicator parameters [e.g. temperature, specific conductivity, dissolved oxygen (DO), pH, oxygen reduction potential (ORP) and turbidity] were measured using a water quality meter and recorded on the Monitoring Well Development logs included in Appendix B. Development of shallow monitoring wells continued until parameters had stabilized and turbidity in the water was reduced as much as possible.

Deep monitoring wells (MW-21D, MW-22D, and MW-23D) were developed by A.E. Drilling using a Watterra pump, which produced a surging and pumping action. Well development was continued until the turbidity, was reduced. Water quality parameters were not recorded for the wells developed by A.E. Drilling, however, these parameters were recorded during groundwater sampling (Section 3.4.3). Purge

water from development was containerized in 55-gallon drums and stored on-Site until it could be profiled and disposed as described in Section 3.7.

3.2.5 Borehole Abandonment

DPT and hand auger soil borings were abandoned with bentonite/grout slurry. Borings complete above the water table were abandoned by gravity-pour of bentonite/grout slurry from the ground surface. Borings complete below the water table were abandoned by tremie-grouting the boring from the bottom until grout was visible at the land surface.

Borings with grass/soil at the surface were finished with bentonite/grout to ground surface. Borings in concrete were grouted to within 4-6 inches of surface and then finished with high-strength concrete. Borings in asphalt were grouted to within a few inches of surface and were finished with asphalt patch.

3.3 Water Level Measurements

Water level measurements were collected from all monitoring wells on March 20, 2014, approximately one week after groundwater sampling was completed to provide an assessment of groundwater levels and flow directions across the Site. An electric water level indicator was used to collect water level measurements in general accordance with the *USEPA Region 4 SESD Groundwater Level and Well Depth Measurement Operating Procedure* (January 2013). Measurements at each well were repeated until AECOM personnel were certain the water level had stabilized.

3.4 Environmental Sampling and Analysis

Environmental samples of subsurface soil, soil vapor, and groundwater were collected to further evaluate the vertical and/or horizontal extent of previously identified soil and groundwater impacts and to evaluate potential vapor intrusion pathways. With the exception of SSV samples, all environmental 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. Soil gas samples collected from SSV locations were analyzed by Accutest Laboratories located in Dayton, New Jersey, a NELAP accredited laboratory. Details of collection methods are presented in the sub-sections below.

3.4.1 Shallow Subsurface Soils

Subsurface soil samples were collected from the DPT soil borings illustrated on Figure 3-1 and the background soil borings illustrated on Figure 3-2. For DPT borings, intervals for soil sampling were selected by the AECOM geologist based on PID headspace screening results, olfactory and visual observations. For background soil borings, sample intervals were collected based on collecting

representative samples from each soil type in the subsurface beneath the Site. Subsurface soil samples were collected for laboratory analysis of the analytes stipulated in Table 9 of the *RI Work Plan* (H&H, 2013) using the methodologies described below.

Soil samples collected using the Geoprobe® rig (i.e., DPT-28 through DPT-36, DPT46 through DPT-57, and BG-1 through BG-5) were collected from the acetate MacroCore® sleeves. Soil samples from DPT-37 through DPT-44 were collected using decontaminated stainless steel hand augers. The soil sample from DPT-45, collected during the installation of MW-21, was collected from the decontaminated split spoon. Samples for analysis of VOCs were collected first, directly from the acetate sleeve, split spoon barrel, or hand auger using 5-gram Terra Core samplers. Sample portions for analysis of semi-volatile organic compounds (SVOCs), metals, hexavalent chromium, and/or pH were then composited. Homogenization was performed by mixing a soil aliquot large enough to fill the sample container [and quality assurance (QA) / quality control (QC) sample containers, if applicable) in a decontaminated stainless steel bowl with a stainless steel spoon. Samples collected for VOC analysis were not homogenized because of potential loss of analytes due to volatilization during the homogenization process. Once homogenized, the soil was placed into the laboratory-supplied glass containers. Containers were labeled and kept on ice prior to shipment to the laboratory.

3.4.2 Soil Vapor

Following installation and prior to collection of the vapor samples, a leak check of each SSV monitoring point was conducted. The leak check was performed by first placing a shroud over each sample point, filling the shroud with helium gas, and using a helium gas detector to verify that the shroud was saturated with helium gas. Then, the sample point was purged using a syringe and a three-way valve to collect purged vapor into a Tedlar® bag. The purged vapor was subsequently analyzed using the helium gas detector to ensure that helium concentrations were less than 10% of the helium concentrations in the shroud. The leak tests results confirmed that the SSV points were adequately sealed following their installation.

Following a successful leak check, the SSV samples were collected using laboratory-supplied sampling equipment including one-liter Summa canisters connected to flow regulators. The Summa canisters were allowed to fill slowly using an airflow regulator over a period of one hour at each location. The intake orifice of the flow regulator was connected directly to the SSV sample point tubing using a ferrule to form an air-tight seal with the tubing. Vacuum readings were recorded prior to and following the one hour sampling period to ensure adequate sample volume was collected.

Full details of the SSV Sampling Procedure are provided in Appendix C.

3.4.3 Groundwater

Groundwater samples were collected using low flow/low stress sampling methods in accordance with the *RI Work Plan* (H&H, 2013) and *EPA's Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures* (EPA/540/S-95/504 dated April 1996). Groundwater sampling was completed using a peristaltic pump and flow-through cell for field parameter measurement. The procedure was generally performed in the following manner:

1. The water level was measured as described in Section 3.3 above.
2. The intake tube for the peristaltic pump was placed into the well so that the bottom of the tube was in the approximate center of the saturated portion of the well screen interval. The tube was threaded through the pump head and the other end of the tube was attached to the bottom of the flow through cell. Another piece of tubing was connected to the flow through cell output to route flow to a 5-gallon bucket.
3. The pump was turned on and rate was adjusted to begin flow of water into the flow-through cell.
4. The pump was set at a rate 0.1 to 0.5 liters per minute (L/min). The flow rate was adjusted such that the drawdown in the well was less than 0.3 feet whenever possible. Depth to water measurements were recorded during the pumping to verify that the drawdown conditions were met.
5. Groundwater indicator parameters (i.e., pH, conductivity, temperature, DO, and ORP) were recorded approximately every five minutes using a YSI water quality meter connected to the flow through cell. This information was recorded on the Field Data Information Logs for Groundwater Sampling included in Appendix B. Purging continued until there were three consecutive measurements that met the following stabilization criteria:
    - pH - ± 0.2 standard units (su)
    - Dissolved Oxygen - ±10%
    - Conductivity - ±5%
    - ORP - ±20 millivolts (mV)
6. Once the field parameters stabilized, the groundwater sample was collected. For non-volatile analysis, the samples were collected from the discharge of the pump head (before the flow-through cell). For VOC analysis, the samples were collected using the peristaltic pump "soda straw" method.
7. Groundwater samples were collected in laboratory-supplied glass containers for the analytes specified in Table 13 of the *RI Work Plan* (H&H, 2013). Samples were labeled and placed in a cooler on ice prior to shipment to the laboratory.

Purge water was collected 5-gallon buckets and containerized while the appropriate volume of groundwater was being removed from the well. Containerized purge water was transferred to 55-gallon drums and stored on-Site until it could be profiled and disposed as described in Section 3.7.

3.4.4 Field and Analytical Quality Control

The quality control program for the RI consisted of procedures implemented to maintain quality and samples collected to measure successful implementation of quality measures. These procedures and sample types are described briefly below.

3.4.4.1 Equipment Calibration

Field screening and measurement devices (e.g., PIDs, water quality meters) were calibrated prior to delivery to the Site and at least once a day before use to ensure they were operating properly. Additional calibrations were performed as warranted (i.e. if the instrument was behaving erratically). Calibration details were recorded on the logs provided in Appendix B.

3.4.4.2 Sample Handling and Custody

Only new sample containers provided by an analytical laboratory were used for sample collection. All sample containers were labeled immediately before or after the containers were filled with the following information: the sample ID, collection date and time, sampler's initials, and required analysis. AECOM personnel donned new gloves prior to sample collection to minimize possibility of cross-contamination.

The AECOM personnel performing sample collection activities were responsible for maintaining sample custody in the field. Sample custody including chain-of-custody and transfer of custody generally followed the *USEPA Region 4 SESD Sample and Evidence Management Operating Procedure* (January 2013). Chain of Custody forms accompanied sample containers to document the transfer of the containers from field collection through shipping to the laboratory and receipt by the laboratory. Sample custody was maintained by AECOM personnel until the coolers were delivered to Federal Express for shipment to the laboratory. Copies of the Chain of Custody forms are included in Appendix B.

3.4.4.3 QA/QC Samples

QA/QC samples were collected to test the effectiveness of field and laboratory QA/QC procedures. The types of QA/QC samples collected for various media are discussed below. Sample results are discussed in Section 5.5.

Trip Blanks – Trip blanks were supplied by the laboratory and consisted of ultra-pure water contained in VOC sample containers and preserved similar to VOC samples. These samples serve as a QC check on potential external contamination and/or cross-contamination between VOC samples during shipping and storage. A trip blank accompanied the sampling team during sample collection and the samples during shipment for each cooler of VOC water samples sent to the laboratory.

Rinsate Blanks - These samples serve as a QC check on equipment decontamination procedure. Rinsate samples were collected at a rate of one sample for every 20 environmental samples, per sample equipment type, per matrix. Equipment rinsates were collected from non-disposable sampling equipment only; therefore, no rinsates were taken for groundwater samples because these were collected using peristaltic pumps and disposable polyethylene tubing. Rinsate samples were collected from soil sampling equipment by pouring analyte-free water down the decontaminated hand auger bucket or through the disposable acetate MacroCore liner and through the decontaminated steel MacroCore tip and into sample collection containers.

Field Duplicate Samples - Duplicate samples were collected to allow determination of analytical repeatability. Field duplicate samples were collected at a rate of one sample for every 10 groundwater samples and one sample for every 10 soil samples. A field duplicate for an SSV sample was collected simultaneously with one of the SSV samples utilizing a “T” to connect two summa canisters in parallel to the sample tubing.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples – MS/MSD samples were collected to help evaluate potential interferences caused by the sample matrix (i.e., soil or groundwater). Upon receipt by the laboratory, these samples were spiked with known concentrations of compounds and then the requested analyses were performed. These samples were used to evaluate the amount of recovery of spike compounds and to determine matrix effects specific to the Site. One MS/MSD sample was collected for every 20 samples for each matrix.

3.5 Equipment Decontamination

Larger equipment, such as drilling equipment that could contact the samples, was steam cleaned prior to initiating the field investigation. During the field investigation, drilling equipment such as drill augers, bits, and tools, and sampling equipment such as split barrel samplers and drill rods were decontaminated by steam cleaning. At times, split barrel samplers were also decontaminated during drilling using the procedure described below for small sampling tools.

Water used for steam cleaning and drilling was obtained from a spigot at the facility, which is connected to the local municipal supply water system. Decontamination of drilling equipment occurred within the temporary decontamination pad which was constructed behind the Combustion Lab building specifically for the RI. The decontamination pad was lined with plastic so that water could be collected and pumped

into Department of Transportation (DOT)-approved 55-gallon drums as needed during decontamination. The drums of decontamination water were stored on-Site until they could be profiled and disposed as described in Section 3.7.

Small sampling tools, such as hand augers, stainless steel bowls, stainless steel spoons, and water level indicators, were decontaminated using the following procedure:

1. Wash the equipment with laboratory-grade detergent and tap water;
2. Rinse with tap water;
3. Rinse with de-ionized water; and
4. Place the equipment in a polyethylene bag or wrap equipment in aluminum foil for storage and transport.

3.6 Water Well Survey Update

Well survey activities completed during the RI included a windshield well survey and a well records search. The purpose of the well survey was to update the information collected by H&H in December 2010 (see Appendix D, Table D-1 and Figure D-1).

The windshield well survey was completed by visually inspecting the properties within a one-mile radius of the Site and recording on the map any evidence of possible well structures. Any structure that could potentially be a well house or well structure was recorded on the map (see Appendix D, Table D-2 and Figure D-2) and identified for follow up via well records search and public utilities search.

The well records search was first conducted through use of the South Carolina Department of Natural Resources (SCDNR) website (http://www.dnr.sc.gov/water/hydro/WellRecords/Wells_main.htm), which contains the database of well records by county. SCDNR well records for Bamberg County within one mile of the Site are listed on Table D-3 and shown on Figure D-2 of Appendix D. An AECOM geologist also visited the SCDNR office to verify that 1) there were no other wells in the SCDNR files that were within one mile of the Site and 2) that there were no records for wells corresponding to the locations identified in the windshield well survey.

AECOM also contacted the Bamberg Board of Public Works to identify areas where public water is available. Personnel from the Board verified that public water is available along the streets highlighted in yellow on Figure D-2 in Appendix D. This is includes all streets on which possible well structures were identified during the windshield well survey.

3.7 Investigation-Derived Waste Management

Soil cuttings, purge and decontamination water, drilling mud, concrete, and plastic from the decontamination pad generated during the RI activities were containerized in DOT-approved 55-gallon steel drums and staged on-Site in an area indicated by the Facility Environment, Safety and Health (ESH) Advisor. Drums were labeled with pertinent information (including generation and fill dates, media type and origin, and contact information) and information was maintained on the investigation-derived waste (IDW) Management Forms included in Appendix B.

Five composite samples were collected from 21 soil drums and one composite sample was collected from nine drums containing drilling mud. These samples were collected for laboratory analysis of toxicity characteristic leaching procedure (TCLP) VOCs, TCLP SVOCs and TCLP Metals. Four composite samples were collected from 16 drums containing decontamination water and purge water generated during the RI activities. The IDW water samples were analyzed for total VOCs, SVOCs, and Resource Conservation Recovery Act (RCRA) metals plus copper and zinc. Upon receipt of the analytical results, the waste was characterized and proper off-Site disposal was coordinated by Delavan Spray Technologies Site personnel.

3.8 Surveying

All soil borings, SSV sample points, and monitoring wells were surveyed for horizontal and vertical position by Edisto Engineers and Surveyors, located in Orangeburg, South Carolina. Horizontal locations were reported in South Carolina State Plane Coordinates referenced to the North American Datum of 1983 (NAD-83) to the nearest 0.0001 foot. Ground surface elevations and well top of casing elevations were referenced to the North American Vertical Datum of 1988 (NAVD-88) to the nearest 0.01 foot. Location information is included in applicable summary tables for each location type.

3.9 Deviations from the Work Plan

Below is a list of minor deviations from the *RI Work Plan* (H&H, 2013) and an explanation for each deviation.

1. The final locations for deep monitoring wells MW-22D and MW-23D were changed following Site reconnaissance and consultation with SCDHEC. Originally both MW-22D and MW-23D were to be installed on the forested property south of the Site across Main Highway (US Highway 301 South). However, the close spacing of pine trees on the property prevented the installation of a well away from the owner's access road. Therefore, after consultation with SCDHEC personnel, only one deep well, MW-22D, was installed on the property along an unpaved access road. The location for MW-23D was moved to northeast of MW-14/14D, along Main Highway (US Highway

301 South) at the location specified by SCDHEC in their RI Work Plan approval letter (dated October 22, 2013).

2. Shallow monitoring wells MW-17, MW-18, and MW-21 were installed to depths deeper than proposed in the *RI Work Plan*. The borings at these locations were drilled deeper to identify the occurrence of the underlying limestone/bedrock. MW-17 and MW-18 were screened slightly deeper than planned based on lithology encountered. MW-21 was screened deeper than planned to bracket the interval with the highest PID readings, which was the zone immediately above the limestone bedrock.

3. Shallow monitoring well MW-20 was installed using a hand auger because the location was inaccessible with a Geoprobe® rig. Because of this, MW-20 was screened five feet shallower than planned.

4. Soil boring DPT-37 through DPT-44 were installed with a 3.25-inch stainless steel hand auger instead of the Geoprobe® MacroCore sampler because of inaccessibility with the drill rig. Soil boring DPT-45 was combined with the boring for MW-21 due to the proximity of multiple utilities and the soil sample was collected from the split spoon.

5. Deep monitoring wells (MW-21D, MW-22D, and MW-23D) were developed by A.E. Drilling using a Watterra pump and not by AECOM, in order to sufficiently remove residual mud from the drilling operations. Therefore, water quality parameter readings were not collected during well development.

6. The *RI Work Plan* stated that a Swagelok® tubing union would be permanently connected to the top of the SSV sample point so that the top of the union sits approximately 0.5 inches bgs. However, this would have made it difficult to work within the confines of the 6-inch vault. Instead, a longer length of tubing was left coming out of the seal and was coiled up in the well vault and capped when not in use.

7. Per the work plan, a trip blank was to be analyzed as part of the SSV sampling. However, upon contacting the lab to determine what procedures needed to be followed for the trip blank, the AECOM field crew was informed by the lab that they do not have a procedure for trip blanks. Therefore, no trip blank was analyzed for the SSV samples.

8. 2,2,4-Trimethylpentane, 2-chlorotoluene, 3-chloropropene, bromoethene, tertiary butyl alcohol, and xylenes (total) were not specified in the *RI Work Plan* but were analyzed and reported by the laboratory in the five SSV samples. Acrolein and naphthalene were in the *RI Work Plan* list for SSV samples, but were not reported by the laboratory.

4.0 HYDROGEOLOGY

4.1 Regional Geology / Hydrogeology

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. Changes in depositional environment are due, in part, to changes in sea level. During transgression (rising sea level), sedimentary units tend to fine upward. During regression (falling sea level) sedimentary units tend to coarsen upward. During periods of regression, sediments can be left exposed and subject to erosion. The resulting geologic complexity makes it hard to correlate geologic units over long distances (Logan and Euler, 1989).

The surficial geologic units that have been identified in the Bamberg County area of South Carolina include the Huber/Lisbon/Barnwell Formations of Eocene age, the Duplin Formation of Pliocene age, and the Penholoway Formation of Pleistocene age (http://mrdata.usgs.gov/geology/state/fips-unit.php?code=f45009). The undifferentiated sands and clays in that occur in the vicinity of the Delavan Spray Site are likely Pliocene in age and are assigned to the Duplin Formation (Willoughby and others, 2005).

The Santee Limestone (of middle Eocene age) likely underlies the Site at significant depth. The Santee Limestone is used extensively in the southeastern part of the Coastal Plain as a groundwater resource for private, municipal and industrial use. Often, the limestone is not confined and is hydraulically connected to underlying and overlying units. In these cases, the units are often referred to as the Floridan or Tertiary Limestone Aquifer system (Logan and Euler, 1989).

Bamberg County and thus, the Site, lie within the ACE River Basin of South Carolina. The ACE Basin is drained by the **A**shley-Cooper, **C**ombahee-Coosawhatchie, and **E**disto rivers. The Town of Bamberg is located at the junction between the Salkehatchie River and Edisto River watersheds, with the South Fork Edisto River being the closest major river to the Site, located 4.27 miles to the northeast.

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 the aquitards.

Groundwater flow in deeper confined aquifer units is typically to the south and southeast toward the coast. Locally, the water-table surface can subtly mimic land surface topography, with recharge of shallow unconfined aquifers occurring from direct infiltration of precipitation in upland areas and discharge occurring within nearby creeks and streams.

4.2 Site Hydrogeology / Conceptual Site Model

The Site geology and conceptual site model (CSM) were developed from borings drilled as part of prior assessments and as part of this RI.

4.2.1 Site Geology

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).

4.2.2 Groundwater Occurrence and Flow

Elevations of the groundwater surface measured in wells completed in the shallow aquifer zone were used to create a water-table surface map (Figure 4-1). The water levels within the shallow aquifer zone occur between approximately 134 to 142 feet in elevation. 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-5. Groundwater levels appear depressed along a line from MW-8, MW-1 MW-21, and MW-3. 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 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 water level elevations within the deeper limestone aquifer zone, the potentiometric surface occurs between 133 and 135 feet in elevation. Figure 4-2 is a potentiometric map of the deep limestone aquifer zone. 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.

4.2.3 Groundwater – Surface Water Interaction

Stream gauging data are not available for streams in the immediate Site vicinity. However, water level data from shallow monitoring wells on-Site indicate that groundwater flow is towards the west. Based on Site water levels and available topographic information, shallow groundwater flow is inferred to be toward Halfmoon Branch, where it is expected to discharge to Halfmoon Branch and its tributaries.

4.2.4 Hydraulic Conductivities

Hydraulic conductivity testing was not conducted as part of the RI field work. However, slug test results from H&H (2013) indicate the geometric mean horizontal hydraulic conductivity is approximately 0.13 feet per day (ft/day) in the shallow zone and 28 ft/day in the deeper limestone aquifer zone.

4.2.5 Groundwater Flow Rates

Using the March 20, 2014 groundwater elevations (Table 4-1) from the shallow zone and deeper (limestone) zone potentiometric maps (Figures 4-1, and 4-2, respectively), the hydraulic gradient in the aquifer units was determined to average 0.00402 and 0.000858 feet per foot (ft/ft), respectively. The hydraulic gradient in the deeper zone is relatively uniform across the Site vicinity; however there is more variability in the gradient in the shallow zone, which ranges as high as 0.0313 ft/ft in the vicinity of MW-6 and MW-8 on-Site.

Using the aforementioned data, an estimate of the horizontal groundwater seepage velocity can be calculated using a modified form of the Darcy equation:

$$V = (K/n) * (dh/dl)$$

where,

V = horizontal groundwater flow velocity (ft/day)

K = horizontal hydraulic conductivity (ft/day)

n = effective porosity (assume 0.2 for shallow sands and 0.25 for limestone [H&H, 2013])

dh/dl = hydraulic gradient (ft/ft)

Assuming a hydraulic conductivity of 0.13 ft/day (geometric mean of shallow zone slug test values reported by H&H, 2013, the horizontal groundwater seepage velocity in the shallow aquifer was estimated to be 0.0026 ft/day or 0.95 feet per year (ft/year). The horizontal groundwater seepage velocity in the deeper (limestone) zone was estimated to be 0.101 ft/day or 36.8 ft/year assuming a hydraulic conductivity of 28 ft/day (geometric mean of deeper limestone zone slug test values reported by H&H, 2013).

4.2.6 Vertical Head Relationships

Groundwater can also flow vertically due to the presence of hydraulic gradients occurring within or between aquifer zones. Where monitoring wells are installed as shallow and deep pairs, an evaluation of the vertical head relationship between the two units is possible.

The inset table below shows the monitoring well pairs used to evaluate the vertical gradients between the shallow zone and deep limestone zone and between the deep limestone zone and the underlying deeper sandstone zone. The vertical hydraulic gradients (dh/dl) were determined for the aquifer units by dividing the difference in the groundwater elevation (dh) by the difference in elevation of the mid-points of the saturated portion of the well screens (dl). The calculated for direction is then graphically depicted on the inset table.

As shown in the inset table below, a downward gradient exists between the shallow aquifer zone and the underlying deep aquifer zone. Downward vertical flow between these two zones may be impeded in the northern portion of the Site due to the clays and silty layers encountered at depth in the upper zone (H&H, 2013). Impeded downward vertical flow in this area may be responsible for the higher vertical gradients observed at MW-9/9D and MW-10/10D.

There is a negligible gradient between the deep limestone zone and the deeper sandstone zone. Thus, groundwater can be inferred to move laterally in the fossiliferous limestone aquifer zone, which is the primary zone of groundwater transport in the Site area.

Monitoring Well Pair	Groundwater Elevation (ft MSL)	Vertical Gradient (ft/ft)	Gradient Direction
Shallow Zone - Deep Limestone Zone			
MW-3 MW-3D	135.96 134.38	0.0503	↓
MW-9 MW-9D	139.02 135.05	0.117	↓
MW-10 MW-10D	139.56 134.80	0.136	↓
MW-14 MW-14D	136.41 134.17	0.0753	↓
MW-15 MW-15D	134.02 133.67	0.0123	↓
MW-16 MW-16D	135.76 133.59	0.0761	↓
MW-21 MW-21D	136.55 134.41	0.0761	↓
Deep Limestone Zone - Deeper Sandstone Zone			
MW-3D MW-3D1	134.38 134.41	-0.00090	↔
MW-15D MW-15D1	133.67 133.65	0.00050	↔

5.0 ENVIRONMENTAL CHARACTERIZATION

5.1 Subsurface Soil

Subsurface soil samples were collected from 30 DPT soil borings (Figure 3-1) to further evaluate potential source areas and the extent of previously detected soil impacts. Additionally, subsurface soil samples were collected from five background soil borings (Figure 3-2) to assess the concentrations of naturally-occurring metals in the Site vicinity.

From the DPT soil borings, 34 soil samples were collected for the analysis of VOCs by USEPA Method 8260, 30 samples were collected for the analysis of SVOCs by USEPA Method 8270, seven samples were collected for the analysis of pH by Method 9045, and 19 samples were collected for the analysis of metals, mercury and hexavalent chromium by USEPA Methods 6010, 7471, and 3060, respectively. A total of 23 soil samples were collected from the five background soil borings for the analysis of metals, mercury and hexavalent chromium by USEPA Methods 6010, 7471, and 3060, respectively. The laboratory data packages and the Data Assessment Reports (DARs) are provided in Appendix E.

Historic soil quality and results from the RI are discussed below for each area of interest. Subsurface soil sample results from DPT borings are summarized in Table 5-1. These results have been screened against the USEPA Regional Screening Levels (RSLs) for residential soil and USEPA Soil Screening Levels (SSL) for the protection of groundwater (MCL-based SSLs) (USEPA, May 2014) to identify PCOIs and their extent in soils at the areas of interest. The screening levels used for comparison are conservative. For example, residential RSLs were used because they are the most conservative values; however, the Site is expected to remain an industrial area for the foreseeable future. MCL-based SSLs are based on conservative assumptions [e.g., a dilution-attenuation factor (DAF) of one] and assume little to no attenuation of soil concentrations in the mixing zone. For these reasons, an exceedance of a screening level is not necessarily an indication of unacceptable risk or that remediation is required.

RI soil quality results for compounds that exceed one or more screening criteria are illustrated on Figures 5-1 through 5-7. Subsurface soil results for background soil samples are summarized in Table 5-2. Note: The soil sample identifications contain the depth range in feet. These depth ranges are contained within the parenthesis after the sample location [e.g., DPT-15 (2-3)].

5.1.1 Background Soil Borings

Twenty-three soil samples were collected from five background soil borings (BG-1 through BG-5) illustrated on Figure 3-2. The soil samples were selected based on the lithology types present in the borings, to ensure that the samples were representative of the various soil types encountered beneath the Site. The samples were submitted for analysis of metals, mercury and hexavalent chromium and the results are summarized in Table 5-2.

Arsenic, chromium, copper, lead, nickel and zinc were detected in all 23 background soil samples. Other compounds, such as beryllium (detected in 14 samples) and mercury (detected in 18 samples), were detected in the majority of samples. The remaining compounds, including hexavalent chromium (detected in 7 samples), selenium (detected in 5 samples), silver (detected in 2 samples) and cadmium (detected in 1 samples), were only detected occasionally. Detected concentrations of arsenic (in 12 samples) and hexavalent chromium (in seven samples) exceeded their respective residential RSLs. The MCL-based SSL values were also exceeded by concentrations of arsenic (21 samples), selenium (two samples) and mercury (1 sample).

Statistics for the results (e.g., minimum, maximum, and average of the detected values) are summarized in the inset table below. The results from these samples were used in the BRA (Section 6).

Analyte	Number of Detected Concentrations	Minimum Detected Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	Average of Detected Concentrations (mg/kg)	Number of Residential RSL Exceedances	Number of MCL-Based SSL Exceedances
Arsenic	23	0.27	3.20	0.95	12	21
Beryllium	14	0.020	0.35	0.11	0	0
Cadmium	1	0.80	0.80	0.80	0	0
Chromium	23	1.30	36.7	11.8	0	0
Copper	23	0.33	4.80	1.14	0	0
Lead	23	1.10	11.9	5.29	0	0
Nickel	23	0.26	2.50	0.80	0	0
Selenium	5	0.16	0.50	0.27	0	2
Silver	2	0.050	0.19	0.12	0	0
Zinc	23	0.54	10.6	1.98	0	0
Mercury	18	0.008	0.13	0.029	0	1
Hexavalent Chromium	7	1.40	4.70	2.60	7	0

5.1.2 Former Northern Containment, Wastewaer Treatment, and Acid Dip Areas

Historic soil borings DPT-1, DPT-2, DPT-15, DPT-16, and DPT-21 through DPT-23 were installed in the vicinity of the Former Northern Containment Area (Figures 5-1 and 5-2). Seven soil borings (DPT-28 through 34) were installed during the RI to evaluate to potential for soil impacts in the Former Northern Containment, Wastewater Treatment, and Acid Dip areas (Figures 5-1 and 5-2).

5.1.2.1 Historic Soil Quality

Concentrations of VOCs were not detected in soil samples from historic soil borings installed adjacent to the Former Northern Containment Area. However, the concentration of PCE in DPT-15 (2-3) [0.00563

milligrams per kilogram (mg/kg)] exceeded the MCL-based RSL. This exceedance was surrounded by concentrations below the detection limit (Figure 5-1).

5.1.2.2 Results from the Remedial Investigation

DPT soil borings installed during the RI in these areas were located adjacent to a manhole along the downstream sanitary sewer line (DPT-28), adjacent to the oil shed (DPT-29 and DPT-30), along the wastewater line and adjacent to the Wastewater Treatment Plant (DPT-31 through DPT-33) and adjacent to the Acid Dip Area (DPT-34). One soil sample was collected from each boring for the analysis of VOCs, SVOCs, metals, hexavalent chromium, and pH (Table 5-1).

Three VOCs, acetone, methylene chloride, and PCE, were detected in soil samples from the Former Northern Containment, Wastewater Treatment, and Acid Dip areas (Figure 5-1). Acetone and PCE were detected below screening levels in soil sample DPT-31 (5-7). The estimated concentration of methylene chloride in DPT-30 (7-9) (0.0064 J mg/kg) and the concentration of PCE in DPT-33 (6-8) (0.0228 mg/kg) and DPT-34 (8-10) (0.371 mg/kg) exceeded the MCL-based SSL. Concentrations of VOCs did not exceed the RSL for residential soil.

Concentrations of SVOCs were not detected in any soil sample from the Former Northern Containment, Wastewater Treatment, and Acid Dip areas.

Concentrations of all eleven metals and hexavalent chromium were detected in one or more soil samples from the Former Northern Containment, Wastewater Treatment, and Acid Dip areas. Detected concentrations of beryllium, cadmium, chromium, lead, nickel, silver, zinc, and mercury were below the screening levels. The detected concentration of copper in DPT-33 (6-8) (266 mg/kg) and selenium in DPT-31 (5-7) (0.42 J mg/kg) exceeded the MCL-based SSL (Figure 5-2). The MCL-based SSL was also exceeded by the detected concentrations of arsenic in all seven soil samples. Detected concentrations of arsenic in samples from borings DPT-29, -30, -31, -33, and -34 and detected concentrations of hexavalent chromium in samples from DPT-28, -29, -30, -32, and -33 exceeded their respective RSLs for residential soil (Figure 5-2). As noted in Section 5.1.1, detected concentrations of arsenic and chromium in background soils exceeded their respective residential RSLs, and detected concentrations of arsenic, selenium, and mercury exceeded their respective MCL-based SSLs.

Results for pH in soil ranged from 3.87 su in sample DPT-34 (8-10) to 4.68 su in sample DPT-32 (8-10).

5.1.3 Former PCE Degreasers

Historic soil borings DPT-3 and DPT-4 were installed within the footprint of the Former PCE Degreasers (Figure 5-3). In order to further delineate potential soil impacts in these areas, soil borings were installed

on all four sides of each degreaser during the RI for a total of eight soil borings (DPT-35 through DPT-42 on Figure 5-3).

5.1.3.1 Historic Soil Quality

Detected VOC concentrations in historic soil borings at both Former PCE degreasers exceeded screening criteria for one or more compounds (Figure 5-3). At DPT-3 (1-2) the detected concentrations of both PCE (4.82 mg/kg) and TCE (0.00337 mg/kg) exceeded the MCL-based SSL and at DPT-4 (2-3) the detected concentration of PCE (0.659) exceeded the MCL-based SSL. RI soil boring locations were selected to further delineate soil concentrations in these areas.

5.1.3.2 Results from the Remedial Investigation

Soil borings DPT-35 through DPT-38 were installed around the northern-most Former PCE Degreaser and soil borings DPT-39 through DPT-42 were installed around the southern-most PCE Degreaser (Figure 5-3). Up to two soil samples were collected from each boring for the analysis of VOCs and SVOCs (Table 5-1).

PCE was detected above the MCL-based SSL in soil samples from all RI soil borings surrounding the Former PCE Degreasers, except DPT-39 (8-10). The highest PCE concentration (85.4 mg/kg) was detected in soil sample DPT-35 (3-5) and exceeded both the MCL-based SSL and the residential RSL (Figure 5-3). Detected PCE concentrations in soil samples DPT-35 (10.5-12.5), DPT-36 (5-7), DPT-36 (12-14), DPT-37 (6-8), DPT-38 (8-10), DPT-40 (2-4), DPT-40 (9-11), DPT-41 (6-8), and DPT-42 (8-10) only exceeded the MCL-based SSL. The MCL-based SSL was exceeded by detected concentrations of 1,1-DCE, cis-1,2-DCE, and TCE in sample DPT-35 (3-5) and detected concentrations of TCE in sample DPT-35 (10.5-12.5). Detected concentrations of 1,1,1-trichloroethane (1,1,1-TCA), chloroform, and xylene were below screening criteria.

Eight SVOCs (2-methylnapthalene, benzyl alcohol, bis(2-ethylhexyl)phthalate, di-n-butyl phthalate, dibenzofuran, isophorone, naphthalene, and phenanthrene were detected in one or more soil samples from the Former PCE Degreases (Table 5-1). However, all detected concentrations of SVOCs were below their respective screening criteria.

5.1.4 Former PCE UST

Five historic soil borings (DPT-5, - 6, -7, -19 and -20) were installed in the vicinity of the Former PCE UST (Figures 5-3). During the RI, two additional soil borings were installed to the north and one additional soil boring (DPT-45) was installed to west to further delineate soil impacts in the area (Figure 5-3).

5.1.4.1 Historic Soil Quality

VOCs were detected in historic soil sample DPT-7 (4-5) and the detected concentration of PCE (5.69 mg/kg) exceeded the MCL-based SSL. This exceedance was surrounded by concentrations below the detection limit on the eastern and southern sides, but was not fully delineated to the west and north (Figure 5-3).

5.1.4.2 Results from the Remedial Investigation

Soil borings DPT-43 and DPT-44 were installed inside the building, north of the Former PCE UST, and soil boring DPT-45 was installed outside the building, west of the Former PCE UST. One to two soil samples were collected from each boring for the analysis of VOCs (Table 5-1).

Acetone, cis-1,2-DCE, PCE, and TCE were detected in one or more soil samples from the vicinity of the Former PCE UST during the RI. As shown on Figure 5-3, PCE was detected at concentrations exceeding the MCL-based SSL in soil samples DPT-43 (5-7), DPT-43 (11-12), and DPT-44 (7-9), and TCE was detected at a concentration exceeding the MCL-based SSL in soil sample DPT-43 (11-12). The detected concentrations of acetone at DPT-43 (5-7) and cis-1,2-DCE at DPT-43 (11-12) were below their respective screening criteria. None of the detected concentrations from RI soil samples in this area exceeded their respective RSL for residential soil.

5.1.5 Western Wooded Area of Interest

Groundwater impacts have been identified at MW-10 in the Western Wooded Area of Interest; however, soil impacts have not been definitively identified with the previous 18 historic soil gas samples (SG-1 through SG-5 and SG-18 through 30) and one historic soil boring (DPT-17) (Figure 5-4). Three soil borings (DPT-46 through DPT-48) were installed during the RI in the immediate vicinity of MW-10 to evaluate to potential for soil impacts in this area (Figure 5-4).

5.1.5.1 Historic Soil Quality

Historic soil gas concentrations in the Western Wooded Area of Interest ranged from non-detect to 451.5 parts per million (ppm), but VOC concentrations were not detected in historic boring DPT-17, which was located at the highest soil gas detection (Figure 5-4). Additional soil borings were installed during the RI based on groundwater impacts at MW-10 to evaluate potential soil impacts in the area.

5.1.5.2 Results from the Remedial Investigation

DPT soil borings DPT-46, DPT-47 and DPT-48 were installed north-northwest, south, and east of MW-10, respectively (Figure 5-4). One soil sample was collected from each boring during the RI for the analysis of VOCs, SVOCs, metals, and hexavalent chromium (Table 5-1).

PCE was detected in all three soil samples at concentrations ranging from 0.0026 J mg/kg to 0.0061 mg/kg (Figure 5-4). All three detected concentrations of PCE in the Western Wooded Area of Interest exceeded the MCL-based SSL but did not exceed the residential RSL. Acetone and cis-1,2-DCE were also detected at DPT-46 (1.5-3.5) and DPT-48 (7.5-9.5), respectively, but at concentrations below their respective screening criteria.

Concentrations of SVOCs were not detected in soil samples from the Western Wooded Area of Interest.

With the exception of cadmium and silver, each metal analyzed was detected in at least one soil sample from the Western Wooded Area of Interest (Table 5-1). The detected concentrations of arsenic exceeded the MCL-based SSL in all three samples from the Western Wooded Area of Interest, and the maximum detected concentration [0.9 mg/kg in soil sample DPT-46 (1.5-3.5)] also exceeded the residential RSL for arsenic (Figure 5-5). Selenium was detected in the samples from DPT-46 and DPT-47 and the concentration in soil sample DPT-46 (1.5-3.5) (0.48 J mg/kg) exceeded the MCL-based SSL. Hexavalent chromium was detected in one sample, DPT-48 (7.5-9.5), and the concentration exceeded the residential RSL (Figure 5-5). Beryllium, chromium, lead, nickel, zinc, and mercury were each detected in all three soil samples collected from the Western Wooded Area of Interest, but none of the detected concentrations exceeded their respective screening criteria. As noted in Section 5.1.1, detected concentrations of arsenic and chromium in background soils exceeded their respective residential RSLs, and detected concentrations of arsenic, selenium, and mercury exceeded their respective MCL-based SSLs.

5.1.6 Eastern Wooded Area of Interest

Recent (2012) soil and groundwater data indicate that the Eastern Wooded Area of Interest may be a potential source for impacts to soil and groundwater. Impacts to soil have not been fully delineated by the 12 soil gas samples and one DPT soil sample that were collected in 2012 (Figure 5-6). Nine DPT soil borings (DPT-49 through DPT-57) were installed during the RI to further evaluate to potential for soil impacts in this area (Figure 5-6).

5.1.6.1 Historic Soil Quality

Soil gas concentrations from the Eastern Wooded Area of Interest ranged from 0.062 ppm to 58.64 ppm in 2012 and the soil sample from 3-4 feet bgs at DPT-18 had detected concentrations of PCE and TCE

that exceeded their respective MCL-based SSLs (Figure 5-6). During the RI, additional soil borings were installed immediately surrounding DPT-18 and in the vicinity of 2012 soil gas samples to evaluate potential soil impacts in the area.

5.1.6.2 Results from the Remedial Investigation

Four soil borings (DPT-49 through DPT-52) were installed surrounding historic soil boring DPT-18 and five soil borings (DPT-53 through DPT-57) were installed south of DPT-18, in between historic soil gas sample locations (Figure 5-6). One soil sample was collected from each boring for the analysis of VOCs, SVOCs, metals, and hexavalent chromium (Table 5-1).

Acetone, cis-1,2-DCE, methylene chloride, PCE and TCE were each detected in at least one RI soil sample from the Eastern Wooded Area of Interest. Detected concentrations of PCE exceeded the MCL-based SSL in all nine soil samples, and detected concentrations of TCE exceeded the MCL-based SSL in all locations except DPT-55 and DPT-56 (Figure 5-6). The detected concentrations of PCE in samples DPT-50 (4-6) (1580 mg/kg) and DPT-51 (7-9) (36.1 mg/kg) and the detected concentrations of TCE in samples DPT-51 (7-9) (5.96 mg/kg) and DPT-52 (8-10) (1.07 J/A mg/kg) each exceeded their respective residential RSL (Figure 5-6). The MCL-based SSLs for cis-1,2-DCE and methylene chloride were exceeded by detected concentrations in soil sample DPT-51 (7-9). Detected concentrations of acetone did not exceed screening criteria.

Bis(2-ethylhexyl)phthalate was detected in soil sample DPT-50 (4-6) and DPT-51 (7-9), and 2-methylnaphthalene and phenanthrene were each detected in soil sample DPT-51 (7-9). None of the detected concentrations of SVOCs exceeded their respective screening criteria (Table 5-1).

Each metal analyzed was detected in at least one soil sample from the Eastern Wooded Area of Interest (Table 5-1). The detected concentrations of arsenic exceeded the MCL-based SSL in all samples from the Eastern Wooded Area of Interest except soil sample (DPT-51 (7-9) and the detected concentration in soil samples DPT-50 (4-6) (1.8 mg/kg), DPT-52 (8-10) (0.68 J/A mg/kg), DPT-54 (8-10) (1.7 mg/kg), DPT-55 (3-5) (0.94 J mg/kg) and DPT-56 (2-4) (1.2 mg/kg) also exceeded the residential RSL for arsenic (Figure 5-7). Selenium was detected in the samples from DPT-50, DPT-52, DPT-54, DPT-56, and DPT-57 and the concentration in soil samples DPT-50 (4-6) (0.52 J mg/kg) and DPT-54 (8-10) (0.36 J mg/kg) exceeded the MCL-based SSL. Hexavalent chromium was detected in soil samples DPT-50 (4-6) (1.7 J/B/V mg/kg), DPT-54 (8-10) (1.4 J/B/V mg.kg), and DPT-56 (2-4) (2.4 B/V mg/kg), and the concentrations exceeded the residential RSL (Figure 5-7). As noted in Section 5.1.1, detected concentrations of arsenic and chromium in background soils exceeded their respective residential RSLs, and detected concentrations of arsenic, selenium, and mercury exceeded their respective MCL-based SSLs. Beryllium, chromium, copper, lead, nickel, and zinc were each detected in all nine soil samples collected from the Eastern Wooded Area of Interest, but none of the detected concentrations exceeded their respective screening criteria.

5.2 Sub-Slab Vapor

In order to evaluate potential vapor intrusion pathways, four SSV points were installed inside the building at the locations shown on Figure 5-8. Vapor samples were collected for analysis of VOCs by USEPA Method TO-15. Per the *RI Work Plan* (H&H, 2013), SSV sample results were screened against the USEPA Industrial Air RSL [based on a hazard quotient (HQ) of 1] and a Shallow Soil Gas Standard that was calculated from the USEPA RSL using the USEPA Office of Solid Waste and Emergency Response (OSWER) attenuation for shallow soil gas of 0.1 to identify PCOIs in soil gas. The results are summarized on Table 5-3 and the laboratory data packages and the DARs are provided in Appendix E.

Twenty-four VOCs were detected in one or more SSV samples (Table 5-3). PCE was detected in all four SSV samples at concentrations exceeding both the RSL for PCE in industrial air and the calculated shallow soil gas standard for PCE (Figure 5-8). The highest concentration [821,000 micrograms per cubic meter ($\mu g/m^3$)] was detected in SSV-2, located adjacent to the northern-most Former PCE Degreaser. The detected concentration of TCE in SSV-2 (1,200 $\mu g/m^3$) exceeded both the RSL for TCE in industrial air and the calculated shallow soil gas standard for TCE. Benzene was detected in one sample (SSV-4) at a concentration above the RSL for benzene in industrial air. The remaining detected compounds were detected at concentrations below the screening criteria.

5.3 Groundwater Quality

Five shallow monitoring wells and three deeper limestone monitoring wells were installed during the RI at the locations illustrated on Figure 1-2 to further evaluate groundwater impacts. Groundwater from all new and existing monitoring wells was sampled for laboratory analysis of VOCs by USEPA Method 8260. Select monitoring wells were sampled for analysis of SVOCs by USEPA Method 8270, metals by USEPA Method 6010, mercury by USEPA Method 7470, and/or monitored natural attenuation (MNA) parameters by USEPA methods RSK 147, 9056, and 5310 in accordance with Table 13 of the *RI Work Plan* (H&H, 2013). Groundwater samples for analysis of SVOCs and metals were selected in areas most likely for detecting potential groundwater impacts (i.e., down-gradient from historic operations that might have released these constituents and in the immediate area of Facility operations). Groundwater samples for analysis of MNA parameters were selected from areas at the Facility (e.g., MW-3 and MW-3D) and down-gradient of Facility operations to evaluate potential for natural attenuation in the aquifers beneath the Site. Groundwater quality indicator parameters were collected during RI groundwater sampling and are summarized in Table 5.4.

Historic groundwater quality and results from the RI are discussed below for each aquifer zone. Groundwater sampling results were screened against USEPA MCLs (April, 2012) to identify PCOIs in groundwater and the results are summarized in Table 5.5. The laboratory data packages and the DARs are provided in Appendix E. Groundwater quality results for compounds identified as PCOIs in groundwater beneath the Site are illustrated on Figures 5-9 through 5-18.

5.3.1 Historic Groundwater Quality

5.3.1.1 Shallow Aquifer Zone

Groundwater monitoring for VOCs has been on-going at the Site since 2003. During the 2012 groundwater sampling events, nine VOCs (PCE, TCE, cis-1,2-DCE, trans,1-2-DCE, 1,1-DCE, 1,1,1-TCA, 1,2,4-trimethylbenzene, toluene, and xylenes) were detected in one or more groundwater samples from shallow aquifer zone monitoring wells [see Table 3 of the *RI Work Plan* (H&H, 2013)]. Concentrations of PCE, TCE, cis-1,2-DCE and 1,1-DCE exceeded their respective MCLs in shallow groundwater samples. PCE was the most prevalent compound detected, followed by its degradation products, TCE and cis-1,2-DCE, and a few detections of 1,1-DCE. Elevated detections of PCE and its degradation products in shallow groundwater were primarily centered around the Former Eastern PCE Secondary Containment Area and the PCE UST, with smaller magnitude higher concentrations - in the Northern Wooded Areas of Interest in the vicinity of MW-9 and MW-10 [see Figures 13 through 16 of the *RI Work Plan* (H&H, 2013)]. Concentrations of PCOIs in shallow groundwater were not fully delineated northeast of MW-9 and MW-10 and under the building on-Site based on results from 2012 groundwater samples.

Historically, groundwater samples for analysis of SVOCs and metals have not been collected at the Site.

Field geochemical parameters, including DO, ORP, pH and temperature, were collected during the May 2012 groundwater sampling event and samples for laboratory analysis of MNA parameters [i.e., total organic carbon (TOC), methane, chloride, nitrate, sulfate, and ferrous iron] have been collected from Site wells during several historic sampling events. The results of these analyses [summarized in Table 8 of the *RI Work Plan* (H&H, 2013)] provide some evidence that some anaerobic degradation of PCE may be occurring in groundwater at the Site. However, groundwater geochemical data indicates that low pH values in the shallow aquifer and low TOC may limit anaerobic biodegradation.

5.3.1.2 Deeper Aquifer Zone

Four VOCs (PCE, TCE, cis-1,2-DCE, and 1,1-DCE,) were detected in one or more groundwater samples from deeper aquifer zone monitoring wells during the May 2012 sampling event [see Figures 17 through 20 of the *RI Work Plan* (H&H, 2013)]. Of these, only PCE, and 1,1-DCE were detected at concentrations that exceeded their respective MCLs in deeper groundwater samples. Both PCE and 1,1-DCE exceeded the MCL in samples from MW-3D, down-gradient of the Former Eastern PCE Secondary Containment Area. Concentrations of PCE also exceeded the MCL in samples from down-gradient wells MW-12D and MW-13D, as well as in the sample from down-gradient off-Site well MW-14D. PCOIs in deeper aquifer groundwater were not fully delineated down-gradient of MW-12D, MW-13D, and MW-14D based on results from 2012 groundwater samples.

Groundwater samples for analysis of SVOCs and metals have not been collected from deeper aquifer zone groundwater at the Site.

Field geochemical parameters, including DO, ORP, pH and temperature, were collected during the May 2012 groundwater sampling event [see Table 8 of the *RI Work Plan* (H&H, 2013)]. However, groundwater samples for MNA analysis have not historically been collected from deeper aquifer zone groundwater at the Site. Inferences related to the occurrence of anaerobic degradation of PCE at the Site have been primarily based on results from the shallow aquifer zone groundwater at the Site.

5.3.2 Results from the Remedial Investigation

5.3.2.1 Shallow Aquifer Zone

VOCs

In the 19 groundwater samples collected from shallow aquifer zone groundwater during the RI, six VOCs (1,1-DCE, chloroform, cis-1,2-DCE, methylene chloride, PCE and TCE) were detected (Table 5-5). Of these compounds, only PCE, TCE, cis-1,2-DCE and methylene chloride 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-5, MW-8, MW-9, MW-10, MW-19, MW-20, and MW-21 (Figure 5-9). The highest concentrations were detected adjacent to the Former PCE UST at MW-21 [16,300 micrograms per liter (µg/L)] and at the northern-most Former PCE Degreaser in MW-19 (14,000 µg/L). Elevated but lower concentrations of PCE were detected in shallow aquifer groundwater in MW-9 (498 µg/L) and MW-10 (93.2 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 5-10). TCE concentrations exceeded the MCL in five groundwater samples (MW-1, MW-8, MW-9, MW-10, and MW-21), and the highest concentrations of TCE were detected at MW-21 and MW-9. Cis-1,2-DCE was detected less frequently (5 detections). Concentrations of cis-1,2-DCE exceeded the MCL at two locations, MW-21 (466 µg/L) near the Former PCE UST and MW-1 (100 J/A µg/L) near the Former PCE Secondary Containment Area (Figure 5-11).

Methylene chloride was detected in three of the 19 shallow aquifer zone groundwater samples, and detected concentrations exceeded the MCL at all three locations (Figure 5-13). The highest concentrations of methylene chloride were detected in samples from MW-19 (639 J µg/L) near the northern-most Former PCE Degreaser and MW-21 (765 J µg/L) near the Former PCE UST, and a lower concentration was detected in the vicinity of the Former PCE Secondary Containment at MW01 (69.3 J µg/L).

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

SVOCs

Ten groundwater samples from shallow aquifer zone monitoring wells were submitted for analysis of SVOCs, and four SVOCs were detected in one more samples (Table 5-5). 1,2-Dichlorobenzene was detected in samples from monitoring wells MW-19 (2.1 J µg/L) and MW-21 (9.1 µg/L). The remaining compounds (2-methylnaphthalene, fluorine, and naphthalene) were detected in the groundwater sample from MW-21 (7.4 µg/L, 0.61 J µg/L and 2.4 J µg/L, respectively). None of these detected concentrations of SVOCs in shallow aquifer zone groundwater exceeded their respective MCLs.

Metals and Mercury

During the RI, ten shallow aquifer zone groundwater samples were collected for the analysis of metals and mercury. Eight metals compounds (arsenic, beryllium, chromium, copper, lead, nickel, selenium, and zinc) and mercury were detected in one or more samples (Table 5-5). Zinc was detected in all ten samples at concentrations ranging from 4.7 J µg/L (MW-8) to 18.4 µg/L (MW-6). Copper was detected in four samples (MW-1, MW-9, MW-19, and MW-20) and nickel was detected in two samples (MW-19 and MW-20). The remaining compounds (arsenic, beryllium, chromium, lead, selenium, and mercury) were detected in one sample each (Table 5-5). Detected concentrations did not exceed their respective MCLs for metals or mercury in any shallow aquifer zone groundwater sample.

MNA

Groundwater quality indicator parameters were collected at all shallow monitoring wells during groundwater sampling activities and are summarized on Table 5.4. Five shallow wells (MW-1, MW-3, MW-9, MW-10 and MW-16) 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 5-5.

The range of detected values for the MNA parameters 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 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 shallow aquifer groundwater.

Analysis	Minimum	Maximum	Average	Optimal Range for Anaerobic Biodegradation Processes*
pH (S.U.)	3.33	5.13	4.12	5 < pH < 9 - Optimal range for reductive pathway 5 > pH >9 - Outside optimal range for reductive pathway
Dissolved Oxygen (mg/L)	0.026	10.3	4.57	<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)	87.2	489	203.8	<50 millivolts (mV) - Reductive pathway possible <-100mV - Reductive pathway likely
Chloride (µg/L)	2,300	7,000	3,840	>2X background - Daughter product of organic chlorine
Nitrate (µg/L)	50	560	350	<1,000 µg/L - At higher concentrations may compete with reductive pathway
Nitrite (µg/L)	ND	ND	ND	
Sulfate (µg/L)	1,500	5,400	3,820	<20,000 µg/L - At higher concentrations may compete with reductive pathway
TOC (µg/L)	420	2,300	1,046	>20,000 µg/L - Carbon and energy source; drives dechlorination; can be natural or anthropogenic
Methane (µg/L)	7.6	209	49.6	<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

5.3.2.2 Deeper Aquifer Zone

VOCs

Thirteen groundwater samples collected from deeper aquifer zone groundwater during the RI, resulting in 10 VOCs (1,1,1-TCA, 1,1-DCE, bromodichloromethane, carbon disulfide, chloroform, cis-1,2-DCE, dibromochloromethane, methylene chloride, PCE and TCE) that were detected in one or more samples (Table 5-5). Of these compounds, only PCE, TCE, 1,1,-DCE, methylene chloride, and chloroform 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 all of these samples (Figure 5-14). Detected PCE concentrations were highest in the deeper limestone aquifer immediately down-gradient from the Former PCE UST (283 µg/L at MW-21D) and Former PCE Secondary Containment Area (204 µg/L at MW-3D). PCE concentrations exceeded the MCL in off-Site down-gradient wells MW -14D (81.5 µg/L) and MW-22D (99.8 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 one concentration (6 µg/L at MW-3D) exceeded the MCL (Figure 5-15). TCE was also detected in off-Site down-gradient wells MW-14D and MW-22D, but at low, estimated concentrations below the MCL. Chloroform was detected in three samples from deeper aquifer zone groundwater during the RI. Two detected concentrations (131 µg/L at MW-21D and 180 µg/L at MW-22D) exceeded the MCL for chloroform.

The concentration of 1,1-DCE (10.4 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 5-17). Methylene chloride was also detected in one well (MW-21D) at a concentration (13.3 µg/L) that exceeded the MCL. Methylene chloride was not detected in the remaining samples from the deeper aquifer (Figure 5-18). Other than PCE, the POCI 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).

SVOCs

One deeper aquifer zone monitoring well, MW-21D, was sampled for analysis of SVOCs during the RI. No SVOCs were detected in this sample.

Metals and Mercury

During the RI, one deeper aquifer zone groundwater sample was collected for the analysis of metals and mercury. Three metals compounds (chromium, selenium, and zinc) were detected (Table 5-5); however the detected concentrations did not exceed their respective MCLs.

MNA

Groundwater indicator parameters were collected at all deeper aquifer monitoring wells during groundwater sampling activities and are summarized on Table 5.4. Five deeper wells (MW-3D, MW-12D, MW-13D, MW-14D and MW-16D) 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 5-5.

The range of detected values for the MNA parameters 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 and methane concentrations are favorable for anaerobic degradation in the deeper aquifer zone. However, low pH and 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.)	6.31	11.22	8.01	5 < pH < 9 - Optimal range for reductive pathway 5 > pH >9 - Outside optimal range for reductive pathway
Dissolved Oxygen (mg/L)	0.16	8.37	3.91	<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)	-94.2	721.7	182.9	<50 millivolts (mV) - Reductive pathway possible <-100mV - Reductive pathway likely
Chloride (µg/L)	5,100	14,000	9,680	>2X background - Daughter product of organic chlorine
Nitrate (µg/L)	280	2,200	1,496	<1,000 µg/L - At higher concentrations may compete with reductive pathway
Nitrite (µg/L)	ND	ND	ND	
Sulfate (µg/L)	660	3,900	2,212	<20,000 µg/L - At higher concentrations may compete with reductive pathway
TOC (µg/L)	260	1,100	495	>20,000 µg/L - Carbon and energy source; drives dechlorination; can be natural or anthropogenic
Methane (µg/L)	7.5	7.6	7.6	<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

5.4 Investigation Derived Waste

Five composite IDW soil samples were collected for analysis TCLP VOCs, TCLP SVOCs and TCLP metals and four composite IDW water samples were collected for analysis of total VOCs, SVOCs, and RCRA metals plus copper and zinc. 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 5-6. 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 handled the disposal of IDW generated during the RI.

5.5 Quality Assurance / Quality Control

5.5.1 Data Validation

The analytical data (Appendix E) associated with the RI were validated in accordance with the procedures outlined in the *RI Work Plan* (H&H, 2013). QA/QC data are provided in Table 5-7 and any data qualifiers that were added to the analytical data as a result of the validation process are defined in Table 5-8. The DARs (Appendix E) 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 FA12815 - the non-detected results of the SVOCs benzoic acid, 4-nitrophenol, and phenol in samples associated with preparatory batch OP50659, and the non-

detected results of SVOC benzoic acid in samples associated with preparatory batch OP50665 were qualified "/R/c" due to laboratory control sample percent recovery below the established criteria of 25-150% (11, 18, 23, and 14%, respectively). These qualifiers indicate the non-detections are biased low and should be rejected;

- In analytical data package FA12855 - the non-detected results of SVOC benzoic acid in samples associated with preparatory batch OP50725 were qualified "/R/c" due to laboratory control sample percent recovery below the established criteria of 25-150% (7%). These qualifiers indicate the non-detections are biased low and should be rejected;
- In analytical data package FA12959 - the non-detected results of SVOC benzoic acid in samples associated with preparatory batch ST563 were qualified "/R/c" due to laboratory control sample percent recovery below the established criteria of 20-155% (7%). These qualifiers indicate the non-detections are biased low and should be rejected;
- In analytical data package FA13018 - the non-detected results of benzoic acid and 4-nitrophenol in samples associated with preparatory batch SX1583 were qualified "/R/c" due to laboratory control sample percent recovery below the established criteria of 25-150% (14 and 22%, respectively). These qualifiers indicate the non-detections are biased low and should be rejected;
- In analytical data package FA13051 - the non-detected results of benzoic acid and 4-nitrophenol in samples associated with preparatory batch SX1583 were qualified "/R/c" due to laboratory control sample percent recovery below the established criteria of 25-150% (14 and 22%, respectively). These qualifiers indicate the non-detections are biased low and should be rejected;
- In analytical data package FA13147 - the non-detected results of benzoic acid and 4-nitrophenol in samples associated with preparatory batch SX1586 were qualified "/R/c" due to laboratory control sample percent recovery below the established criteria of 25-150% (19 and 23%, respectively). These qualifiers indicate the non-detections are biased low and should be rejected;
- In analytical data package FA13211 - the non-detected results of the SVOCs benzoic acid and 4-nitrophenol in samples associated with preparatory batch SX1586, and the non-detected results of SVOC benzoic acid in samples associated with preparatory batch SL3419 were qualified "/R/c" due to laboratory control sample percent recovery below the established criteria of 25-150% (19, 23, and 15%, respectively). The non-detected phenolic SVOCs in sample MW-21D were qualified "/R/G" due to surrogate recovery below 10% (0% for 2-flouorphenol and phenol-d5). These qualifiers indicate the non-detections are biased low and should be rejected; and
- In analytical data package FA13258 - the non-detected results of SVOC benzoic acid in samples associated with preparatory batch SX1587 were qualified "/R/c" due to laboratory control sample percent recovery below the established criteria of 25-150% (7%). These qualifiers indicate the non-detections are biased low and should be rejected.

These rejected compounds are not known to have been used at the Site and therefore, the rejection of the data for these few compounds should not have any impact on the RI. The remaining data associated with this sampling event should be considered compliant and adequate for its intended use.

5.5.2 QA/QC Sample Results

Per the *RI Work Plan*, QA/QC samples collected include field duplicate samples, equipment rinsate blank samples, trip blank samples, and MS/MSD samples. The results of these samples are discussed in the following sections.

All duplicate, equipment rinsate blank, MS/MSD, and trip blank samples were analyzed by Accutest Laboratories located in Orlando, Florida with the exception of the SSV duplicate sample, which was analyzed by Accutest Laboratories located in Dayton, New Jersey.

5.5.2.1 Field Duplicates

Duplicate samples, designated with an "-a" suffix, were collected at the frequency of one per ten primary samples for soil, groundwater, and soil gas samples. The results of the primary and field duplicate soil samples and the results of the primary and field duplicate groundwater samples are provided in Table 5-7. Instances of the relative percent difference (RPD) between the primary and field duplicate samples exceeding the established criteria are notated by qualifications ("/J/A") on the primary sample.

5.5.2.2 Field/Equipment Rinsate Blanks

Equipment rinsate blank samples, designated with a "-d" suffix, were collected at a frequency of one per twenty primary samples for soil samples. The results of the equipment rinsate blank samples are provided in Table 5-7. Any instances of detected compounds in the equipment rinsate blank samples are indicated with bold font. Primary sample results were marked with a "/B/V" flag in Tables 5-1 and 5-2 if the analyte was found in an associated blank as well as in the sample and these instances are explained in the DARs included as Appendix E.

5.5.2.3 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 5-7. There were no analytes detected in trip blank samples and, therefore, no flags were added to primary samples in Table 5-3 based on the trip blank analyses.

5.5.2.4 Matrix Spike/Matrix Spike Duplicates (MS/MSD)

MS/MSD samples were also 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 a "/M/M"or "M/m", flag in Tables 5-1, 5-2, and 5-5 if the percent recovery in the associated matrix spike sample was outside the established criteria. In addition, the primary results were marked with a "/M/D" if the relative percent difference between the matrix spike and matrix spike duplicate samples was outside the established criteria. The flags related to the MS/MSD results are defined in Table 5-8 and results associated with the MS/MSD samples are explained in the DARs included as Appendix E.

6.0 BASELINE RISK ASSESSMENT

6.1 Introduction

This Section presents a BRA for the Site. A BRA is an essential and integral part of remedial response programs designed to protect human health and ecological resources from current and potential future environmental threats (USEPA, December 1989). It provides a basis for determining whether remedial action is necessary and the levels and extent of cleanup needed to reduce potential risk. The principal components of the BRA are a Human Health Risk Assessment (HHRA) and an Ecological Risk Assessment (ERA). The results of this BRA can be used to determine if additional data or additional steps in the BRA process are needed and to identify remediation levels protective of receptors determined to be at risk.

This BRA is presented in the three sub-sections below. Section 6.2 describes Data Collection and Evaluation, including the data used for the BRA, how it was grouped by location and medium, and how it was evaluated for use in the BRA. Section 6.3 is the HHRA, and Section 6.4 is the ERA. Note: The Site description is presented in Section 1.2 and the Site hydrogeology is presented in Section 4.2 of this RI Report.

6.2 Data Collection and Evaluation

6.2.1 Data Collection

Data used in this BRA were collected in February and March 2014 and during previous investigations and include data obtained from analysis of groundwater, surface and subsurface soil, surface water, and soil gas samples. Sample locations are shown on Figures 1-2, 3-1 and 3-2 of this RI Report. The chemicals discussed in the following sections were identified as potentially Site-related chemicals during previous investigations.

Groundwater data used in this BRA were collected from 21 on-Site and 11 off-Site locations in February and March 2014. Constituents analyzed included VOCs; SVOCS; metals; natural attenuation parameters (chloride, nitrate, nitrite, and sulfate); TOC; and three inert gases (methane, ethane, and ethene). The natural attenuation constituents, TOC, and inert gases were not evaluated in the BRA. When results from multiple sampling events were available for groundwater, the results from the most recent event were used for each analyte so that the concentrations are representative of current conditions.

Soil gas data were collected in March 2014 from four locations underneath the main manufacturing building in the center of the Site and analyzed for VOCs.

Surface soil data were collected from seven locations in 2012 from depths of 0-1, 1-2, and 1-3 feet bgs.

Subsurface soil data were collected from 30 locations in February and March 2014 down to a maximum depth of 12.5 feet. A subset of this data were used in this BRA as explained in Section 6.2.2.1 (eight locations in February and March 2014 from depths ranging from 1.5 feet to 5 feet bgs). Constituents analyzed included VOCs, SVOCs, and metals. Soil samples were collected from depths ranging from 1 to 5 feet bgs from five locations outside the Facility fence, which are considered background locations. These samples were analyzed only for metals.

Surface water data were collected from one location four times between 2003 and 2010.

6.2.2 Data Evaluation

The analytical data obtained from the 2014 RI-related sampling efforts at the Site, as well as previous investigations, were evaluated prior to use in the BRA. The steps involved in evaluation and aggregation of data are common to both the human health and ecological risk assessments. The goal of data evaluation is to select data that are valid for use in the BRA and to identify chemicals that potentially are Site-related. The initial steps in identifying human health chemicals of potential concern (COPCs) and chemicals of potential ecological concern (COPECs) involve evaluation and aggregation of data. These steps are common to both the HHRA and ERA.

6.2.2.1 Step A.1: Sort the Data into Exposure Groups

After the analytical data were compiled, they were sorted based on medium, depth interval, and exposure area to form data groups for evaluation in the BRA. An exposure area is a geographical area over which receptors are likely to average their exposures, based on observed or assumed patterns of receptor behavior and the patterns and extent of contamination. The data groups for each medium were sorted based on exposure areas to form exposure groups to be used in evaluating risk.

Groundwater

Groundwater was evaluated using data from shallow and deep monitoring wells on and in the vicinity of the Site. As discussed in Section 6.3.2.2, the only potentially complete groundwater exposure pathway under current conditions is vapor intrusion, in which VOCs volatilize from shallow groundwater and enter buildings on the Site. The soil gas data collected from beneath the floor of the on-Site manufacturing building was defined as the exposure group for modeling indoor air concentrations and evaluating current and future risk to industrial workers from vapor intrusion.

Vapor intrusion also is a potentially complete groundwater pathway for a hypothetical future on-Site resident. In this scenario, future residents could be exposed to groundwater VOCs as a result of vapor intrusion, as described above for industrial workers. In the absence of soil gas data for such a scenario, indoor air concentrations were modeled based on current sub-slab soil gas concentrations measured

beneath the on-Site manufacturing building. The vapor intrusion pathway is of concern only for VOC contamination in shallow groundwater within 100 feet of an occupied building. It was assumed that under future conditions a house could be constructed and occupied by residents anywhere on the Site.

Also under future conditions, it was assumed that additional groundwater exposure pathways potentially could be complete for a hypothetical future on-Site resident. To be conservative, it was assumed that the residents' potable water could be obtained from a well installed at any location in the core of each contaminant plume on the Site and screened at any depth. Under this scenario, an on-Site resident could be exposed through direct ingestion of and dermal contact with groundwater and inhalation of vapors during showering and other household uses of groundwater. For each groundwater COPC, a single groundwater exposure group for evaluating risk to future on-Site residents was developed for the Site based on data from within each plume. To evaluate risk to a future off-Site resident, a single groundwater exposure group similarly was developed for each COPC in off-Site groundwater based on data from within each off-Site plume.

Subsurface Soil

Subsurface soil samples were collected at the Site from February to March 2014, including 34 samples from 30 DPT soil borings and 23 samples from five background soil borings. For DPT borings, intervals for soil sampling were selected by the AECOM geologist based on PID headspace screening results and olfactory and visual observations. For background soil borings, sample intervals were collected based on collecting representative samples from each soil type in the subsurface beneath the Site. Evaluation of subsurface soil in an HHRA typically assumes exposure to the interval from 2 feet to 4 feet bgs. However, based on the sample depth intervals collected at the Site, soil samples collected at intervals between 1.5 feet and 5 feet bgs were used for evaluating exposure to subsurface soil.

Surface Soil

Surface soil samples were collected at the Site in 2012, and results were reported in Table 2 of the *RI Work Plan* (H&H, 2013). Of the seven samples collected from depth intervals that included surficial soil depths (i.e., 0-1, 1-2, or 1-3 feet bgs), six VOCs were detected in one or more of four samples.

Surface Water

For surface water, historical samples from one location on the unnamed tributary to Halfmoon Branch near the northwest corner of the Site provided data for evaluating the potential effects of the Site on surface water quality. Surface water has been sampled at SW-1 [see Figure 2 of the *RI Work Plan* (H&H, 2013)] four times (in 2003, 2008, 2009, and 2010). One analyte was detected in 2003 (cis-1,2-DCE), and none were detected subsequently. The results are summarized in Table 5 of the *RI Work Plan* (H&H, 2013).

6.2.2.2 Step A.2: Eliminate Non-detected Analytes

Those analytes not detected in any samples in a particular medium or exposure group were eliminated from the data set.

6.2.2.3 Step A.3. Evaluate Duplicate Samples

Field duplicate samples collected and analyzed during the sampling events were evaluated for inclusion in the data set of detected concentrations. Each duplicate sample result was compared to the corresponding primary sample result to determine the most appropriate concentration to represent the sample location:

a) If either the primary sample or the duplicate sample was a detect and the other was a non-detect, the detect was kept, and the non-detect was deleted from the data set.

b) If both the primary sample and the duplicate sample were detects and neither result or both results were qualified, the values were averaged. If one sample result was qualified and the other was not, the value for the unqualified sample result was used, and the other result was deleted from the data set

c) If both the primary sample and the duplicate sample were non-detects, the lab detection limits were averaged.

6.2.2.4 Step A.4: Determine Data Parameters

For each analyte in each exposure group, the following data parameters are presented in Tables 6-1 through 6-3: minimum and maximum detected concentrations, location of the maximum detected concentration, detection frequency, and range of lab detection limits.

After the completion of Steps A.1 through A.4, separate procedures were used for COPC/COPEC selection for human health and ecological receptors. These procedures are discussed below in Sections 6.3 and 6.4, respectively.

6.3 Human Health Risk Assessment

The purpose of the HHRA portion of a BRA is to characterize the potential for carcinogenic risk and noncarcinogenic hazard to human receptors exposed to Site-related contaminants under current and hypothetical future land use conditions if no remedial action is performed. The preliminary steps of an HHRA include an evaluation of exposure setting, development of a preliminary conceptual Site model and associated exposure pathway diagram (EPD), and conservative screening of existing data. Contaminants determined to have the potential to pose risk or hazard to human receptors are identified

as human health COPCs. Information from the preliminary steps of the HHRA supports risk management decisions regarding the need for additional data or additional steps of the HHRA at the Site.

The HHRA was conducted in accordance with the following USEPA guidance documents:

- *Risk Assessment Guidance for Superfund (RAGS), Volume I, Human Health Evaluation Manual (Part A), Interim Final* (USEPA, December 1989);
- *RAGS, Volume I, Human Health Evaluation Manual (Part D, Standardized Planning, Reporting, and Review of Superfund Risk Assessments), Final* (USEPA, December 2001);
- *RAGS, Volume I, Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment), Final* (USEPA, July 2004);
- *RAGS, Volume I, Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment), Final* (USEPA, January 2009);
- *Region 4 Human Health Risk Assessment Supplemental Guidance, Draft Final* (USEPA, January 2014).

6.3.1 Identification of Chemicals of Potential Concern

The selection of COPCs is a step-wise process that evaluates appropriate analytical data in order to identify those chemicals that are likely to be Site-related (i.e., not present at the Site due to natural conditions or detected in samples due to field or laboratory error) and that have the potential to pose risk or hazard to human receptors. If a chemical is selected as a COPC, it does not imply that the chemical poses a health risk or that it will contribute to a significant risk in an environmental medium. COPCs are merely those chemicals that need to be further evaluated for their potential human health effects.

The COPC selection process used for the HHRA is described in Steps B.1 through B.4 below. The rationale and criteria used to identify COPCs follow USEPA Region 4 guidance (USEPA, January 2014).

The analytes that passed through the data evaluation procedure described in Section 6.2.2 (Steps A.1 – A.4) were evaluated to identify COPCs.

6.3.1.1 Step B.1: Compare Analyte Concentrations to Risk-based Screening Levels

Screening Level Sources

An analyte is eliminated as a COPC if its maximum detected concentration is less than its risk-based screening level. The chemical-specific screening levels for each medium are from the following sources:

- Groundwater - USEPA RSLs for tap water, at a risk level of 10-6 or a HQ of 0.1 (USEPA, May 2014), based on exposure of residents via direct contact.
- Soil - USEPA RSLs for residential exposure to soil, at a risk level of 10-6 or an HQ of 0.1 (USEPA, May 2014), based on exposure via direct contact.
- Surface Water - USEPA National Recommended Water Quality Criteria (NRWQC) – Human Health, based on consumption of water and organisms (USEPA, August 2013a); and South Carolina water quality numeric criteria for the protection of human health, based on consumption of water and organisms (SCDHEC, June 2012).

Vapor Intrusion Screening

Risk-based screening levels for sub-slab soil gas concentrations based on the indoor air exposure pathway were derived using the USEPA Vapor Intrusion Screening Level (VISL) Calculator, Version 3.2 (USEPA, December 2013), which uses current USEPA inhalation toxicity data in its calculations. Screening concentrations were derived for both a commercial/industrial and residential exposure scenarios using a target risk of 1 x 10-6 for carcinogens and a target HQ of 0.1 for noncarcinogens. The VISL Calculator includes those chemicals that are sufficiently volatile and toxic to potentially pose risk; that is, screening levels are calculated for chemicals that would volatilize from groundwater into indoor air and that have been identified as potentially causing carcinogenic risk or noncarcinogenic hazard through the inhalation pathway. Such VOCs evaluated in the VISL calculator were those detected in sub-slab soil gas samples from beneath the main building.

A VOC was eliminated as a vapor intrusion COPC if its maximum detected concentration was less than its VISL sub-slab soil gas screening target concentration. The VISL calculator for commercial/industrial and residential exposure scenarios is presented in Appendix F as Tables F-1 and F-2, respectively, and the vapor intrusion COPCs are presented in Table 6-4.

Surface Soil Screening

Soil samples collected at the Site in 2012 were screened against both industrial and residential RSLs for soil in Table 2 of the *RI Work Plan* (H&H, 2013). Of the seven samples collected from depth intervals that included surficial soil depths (i.e., 0-1, 1-2, or 1-3 feet bgs), VOCs were detected in four samples. All of the detected concentrations were well below the relevant industrial and residential RSLs. Accordingly, no COPCs were identified in surface soil, and it was not retained as a medium of concern for human health risk.

Surface Water Screening

Surface water has been sampled at SW-1 four times since 2003. The results were summarized in Table 5 of the *RI Work Plan* (H&H, 2013). A single analyte, cis-1,2-DCE, was detected in the sample from 2003 and was not detected subsequently. No other compounds were detected in the surface water samples. Because water quality criteria were not available for cis-1,2-DCE, trans-1,2-dichloroethylene (trans-1,2-DCE) was used as a surrogate for the screening of cis-1,2-DCE in Table 5 of the *RI Work Plan* (H&H, 2013). The cis-1,2-DCE concentration of 1.0 µg/L was well below the USEPA NRWQC (for consumption of water and organism) and the SCDHEC water quality criteria for trans-1,2-DCE of 100 µg/L. Accordingly, no COPCs were identified in surface water, and it was not retained as a medium of concern for human health risk.

6.3.1.2 Step B.2: Evaluate Frequency of Detection

In order to address sporadically detected chemicals, a frequency of detection screening is performed for each data set. For those data sets containing 20 or more samples, chemicals that were detected in less than 5% of the samples are eliminated as COPCs and not considered further in the HHRA. A chemical is not eliminated as a COPC if the maximum concentration is greater than 10 times the risk-based screening level. No chemicals were eliminated as COPCs from any media based on the frequency of detection evaluation.

6.3.1.3 Step B.3: Compare Analyte Concentrations to Background Levels

An analyte is eliminated as a COPC if its maximum detected concentration is less than its background concentration. No Site-specific background data for inorganics in groundwater were available for comparison. Background data were available for subsurface soil.

Subsurface soil background concentrations were calculated as two times the mean concentration from locations BG-1 (1-2 feet bgs), BG-2 (1.5-2.5 feet bgs) and (4-5 feet bgs), BG-3 (0.5-1.5 feet bgs) and (2-3 feet bgs), BG-4 (1-3 feet bgs), and BG-5 (1-3 feet bgs) and (3-5 feet bgs), using one-half the lab detection limit as a surrogate concentration for non-detects. Background results were available only for inorganics. Arsenic was eliminated as a COPC in subsurface soil based on background. Cadmium, chromium, copper, mercury, and zinc were eliminated as COPCs in subsurface soil based on both background and screening levels.

6.3.1.4 Step B.4: Delete Media and/or Exposure Groups

In this step, it is determined whether any COPCs remain for each medium and exposure group. If not, the medium and/or exposure group is dropped from consideration in the HHRA. COPCs remained in groundwater (on-Site and off-Site exposure groups), subsurface soil (on-Site), and soil gas (on-Site).

6.3.1.5 Step B.5: Define COPCs and Exposure Groups

The chemicals remaining in each medium and exposure group after the completion of Steps A.1 to A.4 and B.1 to B.4 constitute the human health COPCs. The COPCs identified through the methods and rationale described above are presented in Tables 6-1 through 6-3 for on-Site groundwater, off-Site groundwater, and subsurface soil, respectively. These tables list the analytes detected in the exposure group, their occurrence (maximum and minimum detected concentrations, location of maximum concentration), frequency of detection, range of laboratory detection limits, and screening value, and they indicate which analytes are COPCs and the rationale for their selection or deletion. Table 6-4 presents the COPCs identified in soil gas for both industrial/commercial and residential scenarios.

6.3.2 Exposure Assessment

This section of the HHRA addresses the potential pathways by which human populations could be exposed to the COPCs identified in Section 6.3.1. In identifying primary pathways of exposure, both current and plausible, hypothetical, future land uses of the Site and surrounding area were considered. The exposure assessment describes exposure scenarios, develops information on exposure pathways, estimates the concentrations of COPCs at points of human exposure, and calculates receptor intakes.

6.3.2.1 Characterization of Exposure Setting

This section describes the overall exposure setting in terms of the natural environment and land use. The description of the exposure setting provides information pertinent to the identification of potential human exposure pathways and the estimation of exposure factors for current and hypothetical future human receptors.

Natural Environment

The Delavan Spray Technologies Site encompasses approximately 20 acres (Figure 1-2). The developed area in the central part of the Site is surrounded by wooded buffers to the north, west, and south. The eastern portion of the Site and areas immediately surrounding the paved areas and buildings are covered by grass lawns that are regularly mowed. The on-Site wooded areas are dominated by pine trees and are contiguous with off-Site forests that extend to the north and transition to bottomland forest to the west. A man-made ditch follows the northern property line and drains to an unnamed creek that flows through the area immediately north and northwest of the Site, eventually entering Halfmoon Branch approximately 300 feet west of the Site. On the other side of the creek, the spray fields of the Bamberg WWTP are located approximately 200 feet from the Site perimeter. Shallow groundwater in the northern part of the Site flows in multiple directions and in the southwest part of the Site flows toward Halfmoon Creek. Horizontal deeper groundwater flow is to the southwest, consistent with regional topography and drainage.

Land Use

The Delavan Spray Technologies Site is an active manufacturing facility. The buildings and paved parking lots are within a fenced area, and Site access is limited to the entrance on Main Highway south of the main building. Properties to the east and southeast across Main Highway (U.S. Highway 301 South) include two small businesses and a sparsely populated residential area. Remaining acreage to the south across Main Highway is undeveloped and used for growing pine trees. Residential properties and the County of Bamberg Rhodes Senior Center are located across Log Branch Road northeast of the Site. Properties adjacent to the Site to the southwest include a sparsely populated residential area, a junk yard, and a machinery shop (Figure 1-2).

Current land use on and adjacent to the Site ranges from industrial to rural with scattered small residential and commercial properties. The Site and surrounding properties are under either Bamberg County or City of Bamberg zoning. The Site and the commercial businesses to the east of the Site are zoned Industrial by Bamberg County. The Bamberg WWTP facilities and spray fields to the west and northwest of the Site are zoned Industrial by the City of Bamberg. Properties to the north of the Site are zoned R-15 (Residential) by the City of Bamberg. Properties to the northeast, east, southeast, south, and southwest are zoned Rural District by Bamberg County (H&H, 2013).

Potential receptors most likely to exist under current conditions are industrial workers who work indoors at the facility. The reasonably anticipated future land use at the Site is expected to remain industrial, and industrial workers and construction workers are considered to be the potential future receptors on the Site. Future receptors also may include off-Site residents, and on-Site residents may be future receptors in the unlikely event that land use changes from industrial to residential.

6.3.2.2 Identification of Human Health Exposure Pathways

Potential human exposure pathways were identified for the Delavan Spray Technologies Site based on current and potential future land uses as well as the extent and distribution of COPCs at the Site. A complete pathway includes: (1) a chemical source and release mechanism, (2) a transport or retention medium, (3) an exposure point where human contact with the contaminated medium occurs, and (4) a route of intake for the contaminant into the body at the exposure point. If any of these elements is missing, the pathway is considered incomplete and is not considered further in the HHRA. An exposure pathway diagram has been developed to illustrate the potential exposure pathways for the Site (Figure 6-1). In the diagram, the potentially complete pathways to be quantitatively evaluated in the HHRA are indicated by an "X." A box without an "X" indicates an incomplete pathway, which occurs when at least one of the pathway elements is missing.

Current Land Use Scenario

Under current conditions, the environmental media with the potential to contain Site-related chemicals include groundwater, soil, and surface water. Current industrial workers have a potential for exposure to Site-related chemicals in groundwater. Potential groundwater exposure routes involving direct contact are incomplete under current conditions because potable water used at the facility is not obtained from Site groundwater. However, exposure to groundwater contaminants via vapor intrusion is a potentially complete pathway for workers in buildings located above or near (within approximately 100 feet horizontally or vertically) VOCs in shallow groundwater (i.e., the uppermost saturated zone) (USEPA, November 2002). Indoor workers potentially can be exposed to volatile groundwater contaminants by inhaling indoor air containing vapor that has infiltrated the buildings in which they work.

Future Land Use Scenarios

Future land use at the Site is expected to remain industrial, so future industrial workers have the potential for exposure to Site-related chemicals. The future scenario assumes that the current manufacturing building at the Site will remain and that additional buildings may be constructed. A future industrial worker is assumed to have the same exposure route as under current conditions: inhalation of vapors migrating from surficial groundwater to soil gas to indoor air as a result of vapor intrusion. It is assumed that potable water will continue to be obtained from an off-Site source and that no potable water supply wells will be installed on the Site.

A future construction worker is another receptor that may be exposed on the Site under a future industrial scenario. A construction worker involved in outdoor excavation activities such as installing footings or underground utilities potentially could be exposed to Site-related contaminants in subsurface soil. Potential exposure routes for soil exposure include ingestion and dermal absorption. The construction worker is not expected to perform excavation activities at depths that would result in contact with groundwater.

For an unlikely future scenario in which on-Site land use would change to residential, it is conservatively assumed that direct exposures to Site groundwater could occur through the use of an on-Site well as a potable water source for on-Site residents (adult and child). Future residents living off-Site but in the vicinity of the Site and down-gradient of the Site with regard to groundwater flow also may be exposed to Site-related groundwater contaminants through the use of an off-Site well as a potable water source. Potentially complete groundwater exposure pathways for a future on-Site or off-Site resident include groundwater ingestion, dermal absorption while bathing, and inhalation of vapors from showering and other household uses of groundwater. In order to evaluate risk to a resident from a reasonable maximum exposure, a residential well was assumed to be located within the core of each of the chemical-specific plumes, and the exposure concentration of each chemical was based on the concentrations detected in all groundwater layers.

In addition to these pathways involving direct use of groundwater, inhalation of vapors migrating from groundwater into indoor air also may be a potentially complete exposure pathway for a future on-Site resident due to the presence of VOCs in the shallow groundwater layer on the Site. This vapor intrusion pathway would not have the potential to be complete for off-Site residents because off-Site groundwater contamination is present or expected only in the deeper groundwater layers, where it would not contribute to vapor intrusion.

6.3.2.3 Exposure Point Concentrations

Human exposures were evaluated based on a reasonable maximum exposure (RME), which is the maximum exposure that is reasonably expected to occur at a Site. The RME is a conservative exposure case that is within the range of possible exposures for each potentially complete pathway (USEPA, December 1989). Sampling data collected at the Site were used to calculate exposure point concentrations (EPCs). The media evaluated in the HHRA are groundwater, soil, and soil gas. While all subsurface soil and soil gas locations were used, only groundwater locations from the core area of the plume for each COPC were used. The RME EPCs for the COPCs in these media are presented in Table 6-5 (on-Site groundwater used as potable water – future), Table 6-6 (vapors from on-Site groundwater used as potable water – future), Table 6-7 (off-Site groundwater used as potable water – future), Table 6-8 (vapors from off-Site groundwater used as potable water – future) Table 6-9 (subsurface soil – future), and Table 6-10 (vapors migrating from soil gas into indoor air – current and future).

To determine the RME concentrations of COPCs in on-Site groundwater and subsurface soil, USEPA's ProUCL Version 5.0.00 software (Singh et al., 2011) was used. This program determines the upper confidence level (UCL) computation that best fits the analytical data for each COPC. ProUCL is designed to test the normality of a data set and compute a conservative and stable UCL of the true population mean while considering sample size, the distribution of the data, and the skewness of the data. ProUCL calculates UCLs of the arithmetic mean with a specific confidence level (95% or greater) using 15 computational methods for full data sets without any non-detected results and several computation methods for data sets containing non-detects, and it recommends the most appropriate UCL(s) based on the data. In identifying the appropriate data for use with ProUCL, non-detects and estimated concentrations below the laboratory detection limit were reported. ProUCL output for each COPC in groundwater used as potable water and in subsurface soil is provided in Attachment F-1 of Appendix F.

Because of the uncertainty associated with any estimate of an EPC, the 95% UCL is generally used as the RME concentration. In cases where the 95% UCL exceeds the maximum detected concentration, the maximum detected concentration was used to estimate the RME concentration, in accordance with USEPA guidance (USEPA, December 1989). Also, in cases where the 95% UCL could not be calculated (e.g., due to too few detected concentrations), the maximum concentration was used to estimate the RME concentration. For soil gas, due to the small sample size, the arithmetic mean of the sample results was used to estimate the RME concentration. The EPC tables (Tables 6-5 through 6-10) list the following for each COPC: the arithmetic mean and 95% UCL (if calculated); the maximum detected concentration and

data qualifiers; and the EPC value, EPC statistic (95% UCL or maximum), and the rationale for use of the cited statistic.

Analytical data are not available for two potential exposure points that involve the transfer of contaminants from one medium to another: vapors in shower air from groundwater used as potable water and vapors in indoor air from migration of VOCs in soil gas via vapor intrusion. Therefore, appropriate modeling techniques were used to estimate EPCs for these exposure points, as described below:

Vapors in Shower Air while Showering with Groundwater

EPCs in indoor air for VOCs that volatilize from water into air while showering (presented in Table F-3) were estimated using the Foster-Chrostowski model (Foster and Chrostowski, 1987), as modified by USEPA Region III (see below). Although VOCs may gain access to ambient air from most typical household uses of groundwater, such as dishwashing, laundering, and cooking, showering may represent the upper bound because the warm water temperature of a shower facilitates volatilization and the VOCs released are contained in a relatively small space with the receptor.

The Foster-Chrostowski model is a kinetic model that estimates the rate of VOC generation into shower air, including the build-up of VOCs in shower room air during showering and the decay of VOCs once the shower is turned off. The VOC generation rate used in the Foster-Chrostowski model is estimated using a two-film gas-liquid mass transfer theory. The build-up and decay of VOCs in shower room air is modeled using a simple one-box indoor air pollution model, which assumes instantaneous mixing of shower room air (Foster and Chrostowski, 1987).

The Foster-Chrostowski model provides an inhalation exposure (E_{inh}) or dose per showering event. However, to estimate risk in accordance with USEPA RAGS Part F (USEPA, January 2009), the Foster-Chrostowski model was modified by USEPA Region III to provide an EPC in shower air rather than to estimate a receptor dose. The derivation of concentrations in shower air is presented in Table F-3.

Vapors from Migration of Volatiles into Indoor Air

EPCs for vapors in indoor air were estimated for VOCs in soil gas using the Johnson and Ettinger vapor intrusion model. The vapor intrusion pathway was evaluated for the current industrial worker and the future industrial worker and resident through use of the advanced (detailed, Site-specific) version of the Johnson and Ettinger model. EPCs in indoor air for soil gas-derived vapors were calculated using the SG-ADV spreadsheet program. Soil gas data collected under the main manufacturing building on Site were used as inputs to the model. Printouts from the model runs, including input and result sheets, are provided in Attachment F-2 of Appendix F. The values input to the model appear on the “Data Entry Sheet” and the EPCs for indoor air predicted by the Johnson and Ettinger model, termed the “Building Concentration,” appears on the “Intermediate Calculation Sheet” in the printouts.

Site-specific values were used as inputs for the model variables to the extent possible, with USEPA-defined default values used where Site data were not available. The Site-specific values used as input to the SG-ADV spreadsheet program are: soil gas concentration, depth below grade to bottom of enclosed space floor, soil gas sampling depth below grade, thickness of soil stratum A, soil stratum A SCS soil type, enclosed space floor length, enclosed space floor width, and enclosed space height. The arithmetic means of detected concentrations in the four soil gas samples for each VOC were used as model inputs.

6.3.2.4 Development of Chemical Intakes

Chemical-specific intakes, or doses, were calculated for the receptors and exposure pathways identified for quantitative evaluation in Section 6.3.2.2. The development of chemical intakes is based on USEPA methodology presented in RAGS Part A, Part E, and Part F (USEPA, December 1989; USEPA, July 2004; USEPA, January 2009) and the OSWER Directive 9285.6-03 (USEPA, March 1991).

An RME estimate of intake was developed for each exposure pathway. The RME estimate is the highest exposure that is reasonably expected to occur in a small but definable "high-end" segment of a potentially exposed population. It is derived using upper-bound values for a few of the most sensitive exposure parameters (e.g., contact rate, exposure frequency and duration) and average values for the remaining parameters (USEPA, March 1991).

The estimates of intake and dose were based on the EPCs for COPCs and on Site-specific exposure assumptions developed using USEPA guidance such as RAGS Part A, Part E, and Part F (USEPA, December 1989; USEPA, July 2004; USEPA, January 2009), the Exposure Factors Handbook (USEPA, August 1997), USEPA Region 4 Supplemental Guidance to RAGS (USEPA, May 2000, January 2014), and OSWER Directive 9200.1-120 (February 2014). The exposure factors used to estimate intake and dose for the current industrial worker and the future industrial and construction workers and on-Site resident, as well as the equations required to calculate intake and dose, are presented and defined in Tables F-4 through F-7. The equations and parameters used to derive absorbed dose (DA_{event}) for COPCs in groundwater, which is a component of the dermal intake calculation, are provided in Tables F-8 through Table F-14.

Chemical-specific intakes were developed for the potentially complete exposure pathways and are presented with the risk and hazard calculations (see Section 6.3.4, Risk Characterization).

Intake Parameters

The values used for the RME exposure parameters and the guidance on which they are based are presented in Tables F-4 through F-7 for all human receptors. Some exposure parameters, such as body weight and averaging time, have general application in all intake estimations. Other parameters, such as ingestion rate and skin surface area, are specific to the exposure pathway. Three parameters are used to

estimate the total time a receptor may be exposed to a contaminated medium. Exposure frequency (EF) is the number of days per year that the exposure occurs, exposure duration (ED) is the number of years over which exposure occurs, and exposure time (ET) is the number of hours per day that a receptor may be exposed to a contaminated medium.

Most of the exposure parameters are standard values that are available in the risk assessment guidance documents (as referenced in Tables F-4 through Table F-7). These include such factors as ingestion rate, residential EF and duration, body weight, and averaging time. However, some parameters are derived from Site-specific information and professional judgment regarding the specific exposure scenario. These scenario-specific exposure parameters are discussed below for each of the receptors identified.

Current and Future Industrial Worker

Under the current/future land use scenario, the industrial worker is assumed to be an adult who works in an existing building above or near the plumes of volatile groundwater contaminants. This receptor could be exposed to these compounds only via vapor intrusion. The exposure parameters used for the worker, including ET, EF, and ED, are the RME default values developed by USEPA for an occupational scenario (see Table F-7).

Future Construction Worker

The future construction worker is assumed to be an adult who works performing excavation activities under the future land use scenario. Most of the exposure parameters used for the construction worker are the RME default values developed by USEPA for a standard construction scenario. The ED of one year is based on one year of work on construction activities at the Site. See Table F-6 for the values used for the construction worker exposure parameters.

Future Resident

Under the future residential land use scenario, receptors are assumed to be both on-Site and off-Site resident adult and child, age birth to 6 years. The values used for the exposure parameters are the USEPA standard default values for the residential RME (see Tables F-4 and F-5).

Intake Equations

Equations for calculating chemical intakes based on exposures to groundwater and subsurface soil and for calculating exposure concentrations based on exposure to air were obtained from RAGS Part A, Part E, and Part F (USEPA, December 1989; USEPA, July 2004; USEPA, January 2009). The equations are presented in Tables F-4 through F-7. The equations that were used for the calculation of chemical

intakes include those for: estimation of exposure concentrations via inhalation (used for groundwater vapors and soil gas vapors), ingestion of chemicals in drinking water (groundwater), and dermal contact with chemicals in water (groundwater); and ingestion of chemicals in subsurface soil and dermal contact with chemicals in subsurface soil.

6.3.3 Toxicity Assessment

The following section provides an overview of the human health toxicity of those chemicals identified as COPCs for the Delavan Spray Technologies Site. The objective of the toxicity assessment is to weigh available evidence regarding the potential for each chemical to cause adverse health effects in exposed individuals and to provide, where possible, an estimate of the relationship between the extent of exposure and the severity of the adverse effects (USEPA, December 1989).

Based on USEPA guidance (USEPA, December 2003), the most current toxicity values (slope factors [SFs], inhalation unit risks [IURs], reference doses [RfDs], and reference concentrations [RfCs]) were obtained from the following hierarchy of sources: (1) USEPA Integrated Risk Information System (IRIS), (2) USEPA Provisional Peer-Reviewed Toxicity Values (PPRTV) Database, and (3) California Environmental Protection Agency (CalEPA) values, Health Effects Assessment Summary Tables (HEAST) (USEPA, July 1997), Agency for Toxics Substances and Disease Registry (ATSDR) Minimal Risk Levels, and other peer reviewed sources. Toxicological data for the COPCs, including carcinogens and noncarcinogens, are presented in Table 6-11 through Table 6-14.

6.3.3.1 Carcinogens

The toxicity criterion used to evaluate potential carcinogens in a risk assessment is the cancer potency slope (potency factor). A potency factor is defined as the "plausible upper-bound estimate of the probability of a response (i.e., cancer) per unit intake of a chemical over a lifetime" (USEPA, December 1989). Potency factor values are specific to the route of exposure (i.e., ingestion or inhalation). The oral potency factor is the SF, which is "an upper bound, approximating a 95% confidence limit, on the increased cancer risk from a lifetime exposure to an agent. This estimate [is] usually expressed in units of proportion (of a population) affected per mg/kg-day [milligrams per kilogram per day]..." (USEPA, May 2011). The inhalation potency factor, the IUR, is "the upper bound excess lifetime cancer risk estimated to result from continuous exposure to an agent at a concentration of 1 µg/m^3 in air" (USEPA, May 2011). The interpretation of IUR would be as follows: if unit risk = 2 × 10-6 per µg/m^3, this means that an individual could have, at most, a 2 in one million chance of developing cancer if exposed daily over a 70-year lifetime to 1 µg of the chemical per m^3 of air. Oral and inhalation carcinogenic toxicity data, including the SF and IUR and weight-of-evidence classification, for the COPCs are summarized in Table 6-11 and Table 6-12, respectively.

When toxicity information for a chemical was not available from IRIS, other sources were searched. Oral SFs for chloroform (CalEPA) and hexavalent chromium (New Jersey) were used as well as IURs from CalEPA for bromodichloromethane, dibromochloromethane, and naphthalene. It should be noted that the chromium concentrations in groundwater on which chromium risk is based were conservatively assumed to consist entirely of hexavalent chromium due to the lack of hexavalent chromium data in groundwater and the identification of hexavalent chromium as a COPC in subsurface soil.

The USEPA weight-of-evidence classification system (USEPA, September 1986) assigns each chemical to one of the following classes based on the strength of evidence that it exhibits carcinogenic effects in humans:

- A - Human carcinogen
- B1 - Probable human carcinogen – limited human data are available
- B2 - Probable human carcinogen – sufficient evidence in animals and inadequate or no evidence in humans
- C - Possible human carcinogen
- D - Not classifiable as a human carcinogen.

For some chemicals, USEPA has assigned a weight-of-evidence classification based on the revised *Guidelines for Carcinogen Risk Assessment* (USEPA, March 2005). Under this classification system, potential carcinogens are assigned to one of the following classes:

- Carcinogenic to Humans
- Likely to Be Carcinogenic to Humans
- Suggestive Evidence of Carcinogenic Potential
- Inadequate Information to Assess Carcinogenic Potential
- Not Likely to Be Carcinogenic to Humans.

Seven of the 12 COPCs are classified as potential carcinogens for the oral route and assigned to a carcinogenicity weight-of-evidence group by USEPA or Cal EPA (Table 6-11). Seven of the 10 VOC COPCs are classified as potential carcinogens for the inhalation route and assigned to a carcinogenicity weight-of-evidence group (Table 6-12). TCE and arsenic are the only COPCs categorized as Group A (human carcinogens) or Known (carcinogenic to humans). Exposure to TCE is associated with kidney cancer through all routes of exposure. Arsenic has been shown to cause increases in mortality from lung and multiple internal organ cancer and increased incidences in skin cancer in human populations.

6.3.3.2 Noncarcinogens

For exposure to noncarcinogens through ingestion, the dose-response information is presented by USEPA in the form of a RfD. The RfD is defined as "an estimate (with uncertainty spanning perhaps an order of magnitude) of a daily oral exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime" (USEPA, May 2011). For exposure to noncarcinogens through inhalation, the dose-response information is presented by USEPA in the form of a RfC. The RfC is defined as "an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime" (USEPA, May 2011). Oral and inhalation noncancer toxicity data available for the COPCs, including target organ(s), are summarized in Tables 6-13 and 6-14, respectively. A target organ is the organ (or system) typically most affected by the toxic effects of a chemical. The affected organs are often influenced by the route of exposure to a chemical.

When toxicity information for a chemical was not available from IRIS, other sources were searched. Provisional values from the PPRTV database were used for 1,2,4-trimethylbenzene (RfC), and values obtained from ATSDR were used for chloroform (RfC).

6.3.3.3 Dermal Toxicity Values

Few toxicology studies have focused on the dermal exposure route; therefore, it is often necessary to use oral toxicity values for dermal toxicity values. However, most oral toxicity values are derived from critical studies that use an administered dose, while a dermal toxicity value should reflect the fact that dermal exposure is a measure of an absorbed dose. Consequently, and consistent with USEPA risk assessment guidance, oral toxicity values should be adjusted from administered to absorbed doses for use in evaluating dermal toxicity.

When appropriate, oral SFs and RfDs derived from a critical study that used an administered dose were adjusted using the gastrointestinal (GI) absorption efficiency (percent absorbed by the GI tract following oral intake). If the GI absorption of the chemical (from a medium similar to the one used in the toxicity value critical study) is less than 50%, its oral absorption efficiency (percent absorbed) was used to calculate an adjusted SF or RfD. For a chemical whose absorption is greater than 50%, a default value of 100% (complete oral absorption) was used. Adjusted SF and RfD values, based on USEPA recommendations of chemicals to adjust as well as their absorption efficiencies provided in RAGS, Part E (USEPA, July 2004), are provided in Table 6-12 and Table 6-14. The oral SF was adjusted by dividing it by the oral absorption efficiency to derive the absorbed SF for dermal. The oral RfD was adjusted by multiplying it by the oral absorption efficiency to derive the absorbed RfD.

6.3.3.4 Assessing Early-Life Exposure to Carcinogens

Based on the *Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens* (USEPA, March 2005), risk assessors should consider lifestage differences in both exposure and dose-response when assessing cancer risk resulting from early-life exposures. Age-dependent adjustment factors (ADAFs) in dose response (i.e., slope factors) have been developed by USEPA and are combined with age-specific exposure estimates when assessing cancer risks. ADAFs are only to be used for agents with a mutagenic mode of action for carcinogenesis when chemical-specific data are absent. For all modes of action, when chemical-specific data are available for early-life exposure, those data are used in this HHRA instead of ADAFs. Two of the chemicals identified as COPCs for the Site (methylene chloride and TCE) have been designated by USEPA as having a mutagenic mode of action for carcinogenesis (USEPA, February 2013).

This is a departure from the way cancer risks have historically been based upon the premise that risk is proportional to the daily average of lifetime dose. The *Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens* (USEPA, March 2005) recommends an integrative approach that can be used to assess total lifetime risk resulting from lifetime or less-than-lifetime exposure during a specific portion of a lifetime.

To calculate lifetime risk for a population with average life expectancy of 70 years, the lifetime risks associated with each of the three relevant time periods are summed:

- Risk during the first 2 years of life (where the ADAF = 10);
- Risk for ages 2 through < 16 years (ADAF = 3); and
- Risk for ages 16 until 70 years (ADAF = 1).

For the HHRA, potential risks to 26-year receptors (i.e., residents) are estimated for less than lifetime exposures. To estimate these risks, age specific exposures were estimated separately for three relevant time periods: birth up to 2 years of age, 2 up to 16 years, and 16 up to 26 years. ADAFs were applied to the age specific exposures to estimate cancer risk for each receptor exposure pathway for chemicals with a mutagenic mode of action for carcinogenesis when chemical-specific data are absent. The following provides an example of ADAFs applied to oral exposures:

- Risk during the first 2 years of life (ADAF = 10)
    - Daily Intake for Child (0 to 2 years) x 10 (ADAF) x SF
- Risk for ages 2 through 16 (ADAF = 3)
    - Daily Intake for Child (2 to 16 years) x 3 (ADAF) x SF
- Risk for ages 16 through 26 (ADAF = 1)

- Daily Intake for Adult (16 to 26 years) x 1 (ADAF) x SF

Risks associated with inhalation exposure to carcinogens that act via a mutagenic mode of action are calculated in similar fashion by applying the appropriate ADAF(s) along with the corresponding inhalation unit risk estimate, using pertinent estimates of exposure concentration.

The equations and parameters used to derive absorbed dose (DA_{event}) for COPCs with a mutagenic mode of action for carcinogenesis in groundwater, which is a component of the dermal intake calculation, are provided in Tables F-15 through F-19. Potential risks estimated via the above methodology are provided in the mutagenic risk tables (F-20 through F-23). The exposure factors used to estimate age-specific exposures for receptors are also provided in these same risk tables in Appendix F.

6.3.4 Risk Characterization

This section presents the results of the HHRA. These results include estimates of the potential for excess lifetime cancer risks and noncancer health effects for the current land use and hypothetical future land use scenarios for the Delavan Spray Technologies Site. Cancer risk and/or noncancer hazard estimates are calculated for each COPC for which toxicity values are available, the significance of the calculated risks and hazards are characterized, and the uncertainties associated with these estimates are described. Chemical-specific RME risks and hazards for each pathway are presented in Table F-24 through Table F-29 (the risk and hazard calculation tables). Risk estimation tables for chemicals with a mutagenic mode of action for carcinogenesis when chemical-specific data are absent are provided in Tables F-20 through F-23.

Excess lifetime cancer risks reflect the incremental upper bound probability of an individual developing cancer over a 70-year lifetime from continuous, pathway-specific exposure to potentially carcinogenic chemicals. The excess lifetime cancer risk for the ingestion and dermal pathways was calculated by multiplying the chronic daily intake by the cancer SF. For the inhalation pathway, the excess lifetime cancer risk was calculated by multiplying the inhalation exposure concentration (EC) by the IUR. The carcinogenic risk estimate is generally an upper-bound estimate because the SF and IUR are typically derived as the upper 95^{th} percentile confidence limit of the probability of response based on experimental animal data (USEPA, May 2011; USEPA, December 1989). Thus, USEPA is reasonably confident that the "true risk" will not exceed the risk estimate derived through use of the SF and IUR and is likely to be less than that predicted (USEPA, December 1989). The estimation of daily intakes and exposure concentrations (averaged over a lifetime) is described in Section 6.3.2.4, Development of Chemical Intakes. Excess lifetime cancer risks were calculated for each COPC and were also summed to calculate total risks for the ingestion, dermal, and inhalation exposure pathways for groundwater and the inhalation pathway for soil gas.

The excess lifetime cancer risk is typically expressed in exponential form (i.e., 1×10^{-6}, meaning one in one million), which describes the increased probability of an individual developing cancer from the evaluated exposure scenario over a 70-year lifetime. USEPA Region 4 has generally indicated that risks falling within the range of one in one million (1×10^{-6}) to 100 in one million (1×10^{-4}) should be evaluated to determine if risk reduction is feasible. Risk levels less than 1×10^{-6} generally are considered acceptable. Risks greater than 1×10^{-4} generally are considered significant (USEPA, January 2014). SCDHEC considers risks greater than $1E^{-6}$ to be potentially significant. Thus, COPCs identified during the risk characterization as contributing significantly (chemical-specific risk of 1×10^{-6} or greater) to a pathway with a cancer risk greater than 1×10^{-6} were identified as human health chemicals of concern (COCs) and are further discussed in the risk characterization section.

Noncancer hazards were evaluated by comparing the estimated intake or exposure level over a specified time period to an RfD or RfC derived for a similar exposure period. The value derived is a chemical-specific HQ. HQs were calculated by dividing the oral or dermal intake by the oral or dermal RfD, and dividing the inhalation EC by the RfC. Thus, the oral/dermal HQ is a ratio of the chronic daily intake to the RfD and the inhalation HQ is a ratio of the estimated chronic daily EC to the RfC. If the intake or EC exceeds the RfD or RfC (HQ exceeds 1), there may be concern for potential noncancer adverse health effects from that chemical.

The HQs for individual chemicals were summed for each exposure pathway to calculate a pathway-specific hazard index (HI) for each exposure route, point, and medium. As a conservative first step, the HQs were summarized across all COPCs, regardless of the target organs potentially affected by the COPCs. If the HI was greater than 1 using this approach, the summation was recalculated for groups of COPCs with similar types of target organs (USEPA, December 1989). Generally, as the HQ or HI increases above 1, the level of concern for adverse health effects similarly increases. If a particular COPC was determined to contribute significantly (HQ of 0.1 or greater) to a total cumulative target organ HI greater than 1 for a particular pathway, it was identified as a human health COC (USEPA, January 2014). HQs and HIs less than or equal to 1 generally indicate no human health concerns.

Four exposure groups (on-Site groundwater, off-Site groundwater, subsurface soil, and soil gas) and four exposure scenarios (current/future industrial worker, future construction worker, and future on-Site and off-Site residents) were evaluated for the Site. A summary across pathways and media, presenting the medium-specific risks and hazards for each receptor, is provided in Table 6-15.

6.3.4.1 Current/Future Land Use

Under the current/future land use scenario, carcinogenic risks and noncarcinogenic hazards from exposure to COPCs were characterized for workers in buildings above or near VOC groundwater plumes exposed to groundwater vapors in indoor air. Estimates of total excess lifetime cancer risk and noncancer hazard for the current/future worker from soil gas are shown in Table F-30. The risk assessment results show that exposures to VOC COPCs in soil gas via vapor intrusion to indoor air do

not pose health risks to workers. The total excess lifetime cancer risk for exposure to soil gas vapors in indoor air through inhalation is 2×10^{-7}, which is below the USEPA target risk range of 1×10^{-6} to 1×10^{-4} and the SCDHEC benchmark of 1×10^{-6}. The total cumulative noncancer HI for the current/future worker is 0.05. This is less than the USEPA noncancer hazard benchmark of 1, indicating that adverse noncancer health effects would not occur based on the exposure concentrations in indoor air modeled from VOC concentrations measured in soil gas.

Therefore, no carcinogenic or noncarcinogenic COCs were identified for the current/future industrial worker scenario based on exposure to VOCs in soil gas that may migrate to indoor air.

6.3.4.2 Future Land Use

Under the future land use scenario, carcinogenic risks and noncarcinogenic hazards from exposure to COPCs were characterized for a construction worker exposed to subsurface soil via ingestion and dermal contact, an on-Site adult and child resident exposed to groundwater and soil gas, and an off-Site adult and child resident exposed to groundwater.

Future Construction Worker

Under the future land use scenario, carcinogenic risks and noncarcinogenic hazards from exposure to COPCs were characterized for construction workers working in excavations at the Site and exposed to subsurface soil via ingestion and dermal absorption of COPCs. Estimates of total excess lifetime cancer risk and noncancer hazard for the future construction worker from subsurface soil are shown in Table F-31, and the results show that exposures to COPCs in subsurface soil do not pose health risks to workers. The total excess lifetime cancer risk for exposure to subsurface soil through ingestion and dermal contact is 7×10^{-8}, which is below the USEPA target risk range of 1×10^{-6} to 1×10^{-4} and the SCDHEC benchmark of 1×10^{-6}. The total cumulative noncancer HI for the future construction worker is 0.04. This is less than the USEPA noncancer hazard benchmark of 1, indicating that adverse noncancer health effects would not occur based on the exposure concentrations in subsurface soil.

Therefore, no carcinogenic or noncarcinogenic COCs were identified for the future construction worker scenario based on exposure to COPCs in subsurface soil.

Future On-Site Resident

Total excess lifetime cancer risk and noncancer hazard estimates for a hypothetical future adult resident (representing an age-adjusted childhood through adulthood exposure) assumed to live on the Site is summarized in Table F-32. Potentially complete groundwater exposure pathways for an on-Site resident include groundwater ingestion, dermal absorption while bathing, and inhalation of vapors from showering

and other household uses of groundwater. Additionally, inhalation of vapors migrating from soil gas into indoor air is considered a potentially complete exposure pathway.

Total cumulative excess lifetime cancer risks for hypothetical future on-Site adult resident exposure to groundwater used as potable water is 2×10^{-3} and for exposure to soil gas in indoor air is 1×10^{-5}, for a total of 2×10^{-3} (Table F-32). This risk exceeds the USEPA target risk range of 1×10^{-6} to 1×10^{-4} and the SCDHEC benchmark of 1×10^{-6}. Bromodichloromethane, chloroform, dibromochloromethane, methylene chloride, naphthalene, PCE, TCE, arsenic, and chromium are the carcinogenic COCs identified for the adult on-Site resident in groundwater. PCE is the carcinogenic COC identified in soil gas. It should be noted that the chromium concentrations in groundwater on which chromium risk is based were assumed to consist entirely of hexavalent chromium (for conservatism due to the lack of hexavalent chromium data in groundwater and the identification of hexavalent chromium as a COPC in subsurface soil).

The total cumulative noncancer HI for exposure of a future on-Site adult resident to groundwater used as potable water is 211 and for exposure to soil gas vapors in indoor air is 3, for a total of 213. This HI is above the USEPA benchmark of 1. Following evaluation of the target organ HIs, the noncarcinogenic COCs identified for a future on-Site adult resident were chloroform, cis-1,2-DCE, methylene chloride, PCE, and TCE in on-Site groundwater and PCE in soil gas (Table F-32).

The total cumulative HI for the future on-Site resident child is considered separately from the age-adjusted childhood through adulthood exposure (Table F-33). The total cumulative noncarcinogenic HI for the on-Site resident child exposure to groundwater is 234, which exceeds the USEPA benchmark of 1. Six noncarcinogenic COCs in groundwater (chloroform, cis-1,2-DCE, dibromochloromethane, methylene chloride, PCE, and TCE) were identified for the future child on-Site resident scenario.

Future Off-Site Resident

Total excess lifetime cancer risk and noncancer hazard estimates for a hypothetical future off-Site adult resident (representing an age-adjusted childhood through adulthood exposure) at the Site is summarized in Table F-34. Potentially complete groundwater exposure pathways for an off-Site resident include groundwater ingestion, dermal absorption while bathing, and inhalation of vapors from showering and other household uses of groundwater.

Total cumulative excess lifetime cancer risks for exposure of a hypothetical future off-Site adult resident assumed to use off-Site groundwater as potable water is 2×10^{-4} (Table F-34), which exceeds the USEPA target risk range of 1×10^{-6} to 1×10^{-4} and the SCDHEC benchmark of 1×10^{-6}. Bromodichloromethane, chloroform, dibromochloromethane, PCE, and TCE are the carcinogenic COCs identified for the adult off-Site resident in groundwater.

The total cumulative noncancer HI for exposure of a future off-Site adult resident assumed to use off-Site groundwater used as potable water is 2, which is above the USEPA benchmark of 1. Following evaluation of the target organ HIs, however, no noncarcinogenic COCs were identified (Table F-34).

The total cumulative HI for the future off-Site resident child is considered separately from the age-adjusted childhood through adulthood exposure (Table F-35). The total cumulative noncarcinogenic HI for exposure of an off-Site resident child to groundwater is 2, which exceeds the USEPA benchmark of 1. Following evaluation of the target organ HIs, however, no noncarcinogenic COCs were identified (Table F-35).

6.3.4.3 Chemicals of Concern

Cancer risk levels less than 1×10^{-6} generally are considered acceptable by USEPA Region 4 and risks that exceed 1×10^{-4} are generally considered significant. Therefore, COPCs determined to contribute significantly (chemical-specific risk of 1×10^{-6} or greater) to a total cumulative risk greater than 1×10^{-6} were identified as COCs. An HI of 1 (per critical health effect) has been defined by USEPA (USEPA, December 1989) as the level of concern for potential adverse noncarcinogenic effects. Individual COPCs determined to contribute significantly (HQ of 0.1 or greater) to a target organ HI greater than 1 were identified as COCs.

The receptors with a total risk greater than 1×10^{-6} and/or an HI greater than 1 are the future adult and child on-Site and off-Site residents assumed to use groundwater as potable water. The COCs for these resident receptors were identified in Section 6.3.4.2 and are shown on Tables F-36 through F-38.

6.3.4.4 Uncertainty

The evaluation of chemical risks to human health is, by necessity, based on a number of assumptions with inherent uncertainties. This section provides a discussion of the uncertainties associated with key Site-related variables and major assumptions used in the HHRA in order to address their potential effect on the resulting identification of COCs.

Uncertainty in Data Evaluation and COPC Selection

The sampling data collected at locations at the Site are inevitably a limited subset of the nearly unlimited quantity of data that potentially could be collected, and as such, may not be completely representative of Site contaminant levels. However, samples were not collected on a random basis (e.g., sampling focused in potential source areas) and are likely to be biased toward overestimation of chemical concentrations. The samples used in the BRA data set (32 groundwater, four soil gas, eight subsurface soil, seven surface soil, and four surface water samples) are considered to be representative of the suspected source areas associated with the Site.

Those analytes not detected in any samples in a particular medium or exposure group were eliminated from the data set. There is the possibility that some chemicals thus eliminated actually may be present at levels below their detection limit, and that these levels may be above criteria or risk-based screening levels for the chemical. The laboratory methods used in analyzing the samples provide essentially the lowest detection limits and reporting limits practicable. Therefore, the occurrence of such a situation for certain chemicals is a possibility and may result in underestimation of risks in the HHRA. However, the significance of such chemicals at consistently low concentrations (never above the detection limit) to the overall risk posed by chemicals at a Site is expected to be minimal.

Uncertainty also is inherent in the selection of Site-related COPCs. Uncertainty in contaminant identification is considered low because sampling protocols generally target appropriate analytes based on historical information and guidance. Eliminating contaminants in the COPC screening process can lead to lower estimates of potential health effects than would inclusion of all analytes. However, the chemicals excluded from the risk evaluation (i.e., not identified as final COPCs) were those detected at concentrations below conservative risk-based screening levels based on the most current USEPA guidance or those for which readily available lines of evidence indicated that their potential to pose significant risk was negligible.

The lack of risk-based screening levels for some of the analytes detected at the Site increases the uncertainty in COPC identification. Surrogate screening values from chemicals with similar chemical structures and toxicological effects on humans were used for two analytes in on-Site groundwater and four analytes in subsurface soil. The use of these surrogate screening values may overestimate or underestimate risk. Also, the RSLs for methylene chloride, PCE, and TCE in on-Site groundwater, PCE and TCE in off-Site groundwater, and PCE in subsurface soil based on carcinogenic effects were replaced with the more conservative RSLs based on an HQ of 0.1.

There is uncertainty associated with use of the VISL Calculator. The calculator is based on assumptions about the Site, including homogenous vadose zone soil and a building with a poured concrete foundation (USEPA, November 2013). The VISL calculator uses generic attenuation factors developed by USEPA that assume vapor concentrations will be reduced as they migrate upward from the groundwater and that concentrations will be further reduced as they mix with air in the buildings. The attenuation factors were derived to be highly conservative. Factors that may not support use of the VISL Calculator include: very shallow groundwater (e.g., less than 5 feet below the foundation) or buildings with significant openings to the subsurface (e.g., unlined crawlspace). These factors need to be considered in determining if the generic attenuation factors are appropriate for a particular Site.

Uncertainty in Exposure Assessment

Factors that contribute to uncertainty in the exposure assessment include the identification of exposure pathways, assumptions for scenario development, intake parameters, and exposure point concentrations.

The identification of potential exposure pathways and receptors was based on Site-specific, plausible, current, and hypothetical future land use scenarios. Site-specific receptors were identified to the extent possible in order to minimize uncertainty in the postulated exposure scenarios. The exposure parameters are generally based on conservative assumptions and would tend to overestimate rather than underestimate risk. In accordance with USEPA Region 4 guidance, future residential exposure scenarios were included. The on-Site residential scenario is highly unlikely given that the expected future land use at the Site will likely remain industrial, similar to current conditions.

Values assumed for exposure parameters (e.g., ingestion rate and EF) used in calculations of intakes were based primarily on USEPA guidance (USEPA, March 1991; July 2004; September 2011; and February 2014). These assumptions might result in underestimating or overestimating the intakes calculated for specific receptors, depending on the accuracy of the assumptions relative to actual Site conditions and land uses.

The maximum detected concentration was used as the exposure point concentration when calculating risk and hazard for seven of the 10 COPCs in on-Site groundwater (used for ingestion and dermal exposure); six of nine on-Site groundwater COPCs used for inhalation exposure; all five off-Site groundwater COPCs used for ingestion/dermal and inhalation exposure; and one of two subsurface soil COPCs. This conservative default value was used because the 95% UCL could not be calculated for those COPCs. The use of maximum detected concentrations as exposure point concentrations most likely resulted in elevated risk and hazard levels and increased uncertainty for these exposure groups and the associated receptors evaluated in the HHRA.

Modeling was used to estimate the transfer of contaminants from one medium to another for indoor air concentrations resulting from volatilization from groundwater (used as potable water) into air while showering (Foster-Chrostowski model) and for indoor air concentrations resulting from vapor intrusion from soil gas (Johnson and Ettinger model).

The Foster-Chrostowski showering model (Foster and Chrostowski, 1987) is based on two major assumptions. First, the model assumes that shower water disaggregates into equal-sized droplets, which are only available for volatilization while in motion in the air. This assumption may be considered an underestimate of volatilization from water running down nearby surfaces/receptors or from water draining at the shower floor. Second, the model assumes that shower room air mixes upon release from the faucet with no immediate decay. This assumption may also be an underestimate of indoor air concentrations and exposures in the shower room because air concentrations may actually be highest in the area surrounding the receptor.

In addition to model assumptions, certain input variables, such as air exchange rate and water temperature, can greatly affect the model's outputs. Specifically, as water temperature increases and as the air exchange rate decreases, indoor air levels increase. Similarly, user-defined input assumptions about the receptor and shower conditions also introduce uncertainty to the modeling effort. Specifically,

the time in the shower and shower room, the shower droplet time, the shower flow rate, and shower room volume were all user-defined assumptions. If any of these input assumptions do not adequately characterize future hypothetical conditions, the model's ability to predict indoor air levels is diminished. Default input variables developed in conjunction with USEPA Region 3 were used in the model, so that resulting exposure point concentrations in shower room air approximate potential future RME conditions.

The Johnson and Ettinger model for subsurface vapor intrusion into buildings is based on a number of assumptions and has certain inherent limitations/uncertainties. Major model assumptions and limitations are outlined in Section 5.0 of the *User's Guide* (USEPA, February 2004). Site-specific values were used as input for the model variables to the extent possible, with USEPA-defined default values used where Site data were not available (refer to Appendix F, Attachment F-2 input sheets from the model runs, for a summary of input parameters used). The use of default input parameters is a source of Site-specific uncertainties because default/assumed building conditions may not accurately represent actual future conditions at those sites evaluated for future industrial and residential use. For example, a default value of 15 centimeters was used in the model as the depth below grade to bottom of enclosed space floor for the future residential scenario. The use of this value assumed that buildings would be constructed on a slab instead of with a basement. This may overestimate or underestimate risk.

Uncertainty in Toxicity Assessment

Uncertainty is inherent in the toxicity values utilized in evaluating the carcinogenic and noncarcinogenic risks. Such uncertainty is chemical-specific and is incorporated into the toxicity value during its development. For example, an uncertainty factor may be applied for interspecies and intrahuman variability, for extrapolation from subchronic to chronic exposures, or for epidemiological data limitations. Application of uncertainty factors is expected to overestimate risks.

A CalEPA oral SF was used for chloroform and CalEPA IURs were used for bromodichloromethane, dibromochloromethane, and naphthalene. A New Jersey oral SF was used for hexavalent chromium. A provisional value from PPRTV for 1,2,4-trimethylbenzene (RfC) and from ATSDR for chloroform (RfC) also were used. The use of provisional values contributed uncertainty that may overestimate or underestimate risk.

The absence of toxicity values for some of the COPCs may tend to underestimate risks and hazards. An inhalation RfC was not available for four COPCs (2-methylnaphthalene, bromodichloromethane, cis-1,2-DCE, and dibromochloromethane).

There is uncertainty in the identification of toxicity values for the dermal route of exposure. Toxicity information was not available for dermal exposure; hence, several assumptions for adjustment of the exposure estimate from an administered to an absorbed dose (based on the GI absorption rates of the

COPCs) were made in order to calculate dermal adjusted SFs and RfDs, which may overestimate or underestimate risk.

Risk Characterization

Uncertainties in the exposure and toxicity assessments are reflected in the quantitative risk estimates developed for the COPCs in the risk characterization. Some of the procedures used and uncertainties inherent in the HHRA process may tend to underestimate potential risk. Overall, however, the numerous conservative assumptions built into this HHRA, including dose additivity for multiple substance exposure and combining of risk across pathways, are considered more likely to overestimate rather than underestimate potential risks.

6.3.5 Human Health Risk Summary

An HHRA was conducted for the Delavan Spray Technologies Site to evaluate chemicals detected in Site-related media, including groundwater, soil gas, surface and subsurface soils, and surface water. Based on previous evaluations, surface water and surface soil were not retained as media of concern for human health risk. Potential risks to human health under current and future land use scenarios were quantitatively evaluated. An industrial worker was evaluated as the current receptor and was assumed to come in contact with VOCs in soil gas via vapor intrusion to indoor air. An industrial worker, a construction worker, and adult and child residents assumed to live on the Site and off the Site were evaluated as future receptors. The industrial worker was assumed to be exposed to VOCs in soil gas via vapor intrusion to indoor air. The construction worker was assumed to be exposed to subsurface soil. Both the on-Site and off-Site resident were evaluated based on exposure to groundwater used as potable water, while the on-Site resident was also evaluated for exposure to soil gas via vapor intrusion.

COCs were identified in the Risk Characterization based on the risk and hazard calculations. The human health COCs identified for each receptor are the following:

- Current and Future Industrial Worker – no COCs identified.
- Future Construction Worker – no COCs identified.
- Future On-Site Resident (Adult) – bromodichloromethane, chloroform, cis-1,2-DCE, dibromochloromethane, methylene chloride, naphthalene, PCE, TCE, arsenic, and chromium (based on the assumption that the chromium is entirely hexavalent) in groundwater; and PCE in soil gas.
- Future On-Site Resident (Child) – chloroform, cis-1,2-DCE, dibromochloromethane, methylene chloride, PCE, and TCE in groundwater.

- Future Off-Site Resident (Adult) – bromodichloromethane, chloroform, dibromochloromethane, PCE, and TCE in groundwater.
- Future Off-Site Resident (Child) – no COCs identified.

It should be noted that COCs were identified only for a hypothetical future on-Site resident, a scenario which is unexpected and very unlikely, and for an off-Site resident assumed to regularly consume and use groundwater, which is less likely to occur due to the availability of municipal water in the Site vicinity.

6.4 ECOLOGICAL RISK ASSESSMENT

6.4.1 The ERA Process

The ERA component of a BRA evaluates whether unacceptable risks are posed to ecological receptors from chemical stressors in the environment. The ERA identifies contaminant levels that would not pose unacceptable ecological risks and provides information necessary for risk management decisions regarding the need for and extent of potential remedial action (USEPA, November 2001). The process followed in performing the ERA was based on the current USEPA model for conducting ecological risk assessment, as described in the *Ecological Risk Assessment Guidance for Superfund* (ERAGS): *Process for Designing and Conducting Ecological Risk Assessments* (USEPA, June 1997) and *The Role of Screening-Level Risk Assessments and Refining Contaminants of Concern in Baseline Ecological Risk Assessments* (USEPA, June 2001). Additional risk assessment guidance considered in developing the ERA process includes the *Guidelines for Ecological Risk Assessment* (USEPA, April 1998) and the *USEPA Region 4 Ecological Risk Assessment Bulletins – Supplement to RAGS* (USEPA, November 2001).

The ERAGS process is the principal model for ERAs used in USEPA Region 4. The eight steps of the ERAGS process in Region 4 are as follows:

- Screening-Level Ecological Risk Assessment (SLERA)
    - Step 1: Initial Problem Formulation and Effects Evaluation
    - Step 2: Exposure Estimation and Risk Calculation
- Baseline Ecological Risk Assessment
    - Step 3: Baseline ERA Problem Formulation
        - Step 3a: Problem Formulation and Refinement Screening
        - Step 3b: Additional Problem Formulation
    - Step 4: Study Design and Data Quality Objectives Process
    - Step 5: Field Verification of Sampling Design

- Step 6: Site Investigation and Data Analysis
- Step 7: Risk Characterization
- Step 8: Risk Management

A diagram of the process is provided in Figure 6-2. In conjunction with these steps, the ERAGS process also requires interim decisions and deliverables following several steps in the process. These scientific/management decision points (SMDPs) are defined as points in the process at which the risk managers evaluate the work completed to a given step and either approve the work and the planned approach or redirect additional work (i.e., decide whether or not the ERA should continue to the next step in the process). Up to six SMDPs potentially may be incorporated into the eight-step ERAGS process, depending on the number of ERA steps required at a particular Site and circumstances specific to the Site. SMDPs typically occur after Steps 2, 3, 4, and 7 of the ERAGS process, with a possible SMDP within Step 3 and another after Step 5 if approval is required for needed changes to the sampling design. This ERA concludes with SMDP 1.

6.4.2 Screening-Level Ecological Risk Assessment

The purpose of the SLERA is to provide an initial screening to eliminate detected chemicals that are expected to pose essentially no risk to ecological receptors. The ERA consists of two phases, the SLERA followed by the Baseline ERA. In the SLERA, preliminary COPECs are identified from among the analytes detected in exposure media at the Site. The SLERA is intended to address the overall protection of the habitats and associated species within the study area based on comparison of maximum detected concentrations in Site media to conservative ecological screening values (ESVs). ESVs are chemical-specific media concentrations intended to be protective of a range of sensitive ecological receptors.

The SLERA serves to focus the ERA on preliminary COPECs that may have the potential to pose ecological risk so that those contaminants then may be evaluated more closely in the context of current and future conditions. The SLERA is designed to be a very conservative, screening-level evaluation so that if the assessment indicates there is no ecological risk there can be a high degree of certainty associated with this conclusion. The SLERA includes Steps 1 and 2 of the ERA process, which are described below. At the conclusion of these initial steps, a decision is made at SMDP 1 about whether additional ecological assessment is warranted to address possible ecological concerns identified by the SLERA.

6.4.2.1 Step 1: Initial Problem Formulation and Effects Evaluation

The initial Problem Formulation step of the SLERA includes the evaluation and aggregation of the data collected at the Site, and the identification of conservative ESVs for use in the risk calculation in Step 2.

Data Evaluation and Aggregation

As described in Section 6.2, Site data were evaluated to determine their usability and applicability for the ERA. The potential exposure medium at the Site through which ecological receptors potentially could be exposed to Site-related contaminants is surface water, as discussed below. This is the medium for which conservative screening values protective of a variety of ecological receptors were identified.

Identification of ESVs

The medium through which ecological receptors potentially may be exposed to Site-related contaminants is surface water. In accordance with current USEPA Region 4 guidance (USEPA, November 2001), the latest version of the USEPA Region 4 *Ecological Risk Assessment Bulletins* (USEPA, November 2001) was considered a preferred source for surface water ESVs to be used in the SLERA screening. The single chemical detected in historical surface water samples at the Site was cis-1,2-DCE. A surface water ESV is not available for cis-1,2-DCE from USEPA Region 4. However, a surrogate ESV available for the isomer trans-1,2-DCE is 1350 µg/L (USEPA, November 2001). This surrogate value was used as the ESV for cis-1,2-DCE in surface water. This ESV is a chronic value, which is intended to be protective of long-term exposures of ecological receptors and is more conservative than acute screening values.

USEPA Region 4 guidance indicates that groundwater contaminant concentrations should be screened using surface water ESVs if groundwater discharges to surface water nearby (USEPA, November 2001). There are no nearby, down-gradient surface water bodies to which groundwater impacted by Site-related contaminants is expected to discharge. Accordingly, the screening of groundwater concentrations against surface water ESVs was not warranted.

6.4.2.2 Step 2: Exposure Estimation and Risk Calculation

The second step of the SLERA includes an estimation of the potential for exposure of ecological receptors to Site-related contaminants, including description of the ecological setting and development of a preliminary ecological CSM. To ensure that possible contributors to risk are not overlooked, the preliminary COPEC screening (risk calculation) is based on consistently conservative assumptions regarding exposure, in accordance with USEPA guidance (USEPA, June 1997). For example, the concentrations used in screening are the maximum detected concentrations in a given medium, the receptors assumed to be exposed are organisms with the greatest potential for contact with the exposure medium, and the detected concentrations of chemicals are assumed to be completely bioavailable.

Ecological Setting

Ecological Communities

The ecological study area at the Site comprises the terrestrial habitats on and immediately adjacent to the 20-acre Site property, including the small stream adjacent to the northern Site boundary. The study area encompasses two main ecological communities: (1) a mowed grass community within the developed area of the facility, consisting principally of mowed grass lawns; and (2) a forest community covering the western and northern areas of the Site and along the northeast property line.

The mowed grass community is dominated by a turf of warm-season grasses and includes a few large specimen hardwood trees and shrubs. Because this community is within an active, industrial facility, the grass is maintained at a low height, and the vegetation has very limited diversity, the fauna of this community is also very limited. Terrestrial wildlife species that potentially may utilize the area include mainly birds such as the mockingbird, American robin, and common grackle; reptiles such as lizards; and terrestrial amphibians such as toads.

The forest community within the study area is contiguous with off-Site, pine-dominated forests that extend to the north and transition to bottomland forest to the west. This community is part of the extensive area of Mill Creek floodplain forest and wetlands. The on-Site forest has a canopy dominated by pines, with a mix of hardwoods in the midstory and a relatively open understory that includes vines and shrubs. The diversity of vegetation and habitats in this community is limited, and as a result, it is likely to support a relatively limited fauna of common species. Mammals that may occur in this community include the gray squirrel, opossum, and southeastern shrew. Birds likely to utilize these habitats include the American robin, brown thrasher, and Carolina wren. Reptiles that may be present include the black rat snake, fence lizard, and green anole. Amphibians potentially occurring in this community include the gray frog and southern toad.

Threatened and Endangered Species

A Site-specific search for known occurrences of threatened and endangered (T&E) species in and adjacent to the project area was initiated through resources made available on the internet by the South Carolina Heritage Trust in conjunction with the SCDNR. The list of T&E as well as other rare species ranked and tracked by the Heritage Trust that are known to occur in Bamberg County includes two species with a federal listing status and three species with a state listing status. Known occurrences of T&E species and other species tracked by the Heritage Trust and their approximate locations are denoted on 7.5-minute quadrangle maps. The most recent update of the occurrence information on the website occurred on January 17, 2006.

The project area falls within the Bamberg quadrangle. Tracked species, assemblages, or communities have been documented to occur at nine locations within this quadrangle. None of these locations are within approximately 2 miles of the Site. None of the tracked species with recorded occurrences in this quadrangle are federally listed; one is state listed as endangered (Rafinesque's big-eared bat), with two occurrences recorded 4 miles north of the Site near the Edisto River. None of the federally or state-listed species known to occur in Bamberg County have been observed at the Delavan Spray Technologies Site. Based on the known ranges and the habitat requirements of these species, their occurrence in the ecological study area on or adjacent to the facility is unlikely.

Ecological CSM

The ecological CSM for the Site is illustrated in the EPD (Figure 6-1), which shows the potential contaminant migration and exposure pathways through which ecological receptors may be exposed to Site-related contaminants. Ecological receptors in the EPD are represented by two general categories, terrestrial receptors (considered to be organisms that breathe air, including those that feed on aquatic food chains) and aquatic receptors (organisms that do not breathe air). Potentially complete pathways that would not result in significant exposure or warrant quantitative evaluation are identified in the diagram by an asterisk. Potentially complete exposure pathways that are considered to be significant and to possibly warrant evaluation in the ERA are identified in the diagram by an "X."

Terrestrial receptors potentially could be exposed to Site-related contaminants in surface soil, principally through incidental ingestion while foraging or grooming. Although animal exposure pathways based on inhalation (of VOCs from soil) and dermal absorption (from skin contact with contaminated soil) also may be considered potentially complete, these pathways usually are negligible contributors to chemical intakes compared to ingestion pathways and are difficult to quantify (USEPA, February 2005). Based on sample intervals collected at this Site in 2012, surface soil was considered to include sample intervals from between 0 and 2 feet bgs. All five samples from this surface interval were located in the highly developed central area of the facility among the buildings and pavement. Given the lack of habitat for ecological receptors in these areas, the potential for exposure is negligible, and surface soil was not considered to warrant quantitative evaluation.

Exposures to subsurface soil (greater than 2 feet bgs) as a result of burrowing in on-Site areas with subsurface soil contamination may be a potentially complete pathway for a few small mammals in peripheral areas of the Site. However, the potential for such exposures is minimal and the likelihood that they could have significant ecological effects is sufficiently low that they are not considered to warrant evaluation.

Migration of contaminants from source media to exposure media at the Site may involve transport mechanisms that include: (1) leaching from subsurface soil to groundwater, followed by discharge of groundwater to surface water; and (2) uptake of chemicals from soil or surface water by plants and animals and transfer through the food chain. As discussed above with regard to groundwater screening,

there are no nearby, down-gradient surface water bodies to which groundwater containing Site-related contaminants is expected to discharge. Surface water samples from the small stream adjacent to the northern corner of the Site detected only one compound in 2003 and none in three subsequent yearly samples, and it is unlikely that surface water provides a complete pathway for exposure to groundwater contaminants. Also, based on the low bioaccumulation potential of the chemicals detected in soil and surface water, food chain exposures are predicted to be insignificant and are not considered to warrant quantitative evaluation.

Screening-Level Risk Calculation

A concentration less than or equal to a conservative screening level generally indicates that a chemical is unlikely to pose significant risk to ecological receptors in the area sampled and does not warrant further evaluation in the ERA. If the concentration is greater than the screening level, or a screening level is not available, the chemical is initially identified as a preliminary COPEC in that medium. HQs are calculated by dividing the maximum detected concentration of a chemical by an ESV for that chemical and medium. Chemicals with HQs greater than 1, as well as chemicals that lack an ESV for use in calculating an HQ, are identified as preliminary COPECs.

The risk calculation for surface water was based on the surrogate ESV identified in Step 1 for cis-1,2-DCE in surface water and the single concentration of cis-1,2-DCE detected in 2003 in surface water at the Site:

$$HQ = \text{Concentration} / \text{ESV} = (1.0\ \mu/L) / (1350\ \mu/L) = 0.0007$$

Because the HQ for cis-1,2-DCE in surface water is less than 1, cis-1,2-DCE does not warrant designation as a preliminary COPEC.

6.4.2.3 Uncertainty

Uncertainty is inherent in the risk assessment process. The principal activities performed in an ERA can be grouped into three components: exposure assessment, effects assessment, and risk characterization. The uncertainties associated with this SLERA are discussed below based on these components.

Among the sources of uncertainty in exposure assessment is the detection of chemicals and their concentrations in environmental media. Those analytes not detected in any sample in a particular medium or exposure group were eliminated from the data set for the SLERA. There is the possibility that a chemical thus eliminated actually may be present at levels below its detection limit. This is a concern only if the detection limit is higher than the level at which the chemical causes toxicity, which potentially could result in the underestimation of risk from that chemical. Many of the analytes detected by standard analytical methods do not have established toxicity levels (ESVs) in each medium.

Uncertainty in exposure assessment in a SLERA is minimized by making conservative assumptions throughout the process. The receptors selected for evaluation as representatives of the ecological assessment endpoints were considered to be maximally exposed and to provide a conservative representation of the range of exposures that may be experienced by other species not evaluated. Exposure concentrations used in screening are based on maximum detected concentrations and conservatively assumed 100 percent bioavailability. The use of conservative exposure assumptions and concentrations provide confidence that the screening in the SLERA does not underestimate the potential for receptor populations to be affected by exposures to chemicals at the Site.

Uncertainty in toxicity assessment may result from many sources. There is a moderate level of uncertainty associated with screening against ESVs from the literature. For example, there is uncertainty associated with the performance of the toxicity tests on which ESVs are based and with the relevance of specific toxicity values to native organisms at the Site. However, conformance by laboratories using standard methods and sensitive test species reduces uncertainty of the test results on which ESVs are based, and ESVs are derived to be conservative values that are protective of a range of ecological receptors. The conservatism of the ESVs used in calculating HQs in the SLERA increases confidence that any potential risks of adverse toxicological effects on ecological receptors are not underestimated.

Uncertainty in the risk calculation and identification of preliminary COPECs is affected by the methodologies employed in the preceding sections of the SLERA. The conservative approach used in identifying the exposure concentrations and ESVs for calculation of HQs are intended to minimize the possibility of underestimating risk while not significantly overestimating risk.

6.4.2.4 Ecological Risk Summary

The results of the risk calculation in conjunction with other lines of evidence regarding the minimal potential for exposure and risk to ecological receptors support the conclusion that there are no chemicals in Site media that warrant identification as COPECs at this Site.

6.4.2.5 Scientific/Management Decision Point 1

Scientific/Management Decision Point 1 follows the completion of Steps 1 and 2 of the SLERA and determines whether there is justification to continue to the next step of the ERA process. The results of the SLERA are evaluated at this point to determine whether Site-related chemicals pose negligible ecological risk (thereby providing a basis for recommending no further action with regard to ecological risk at the Site) or have the potential to pose significant ecological risk (thereby providing a basis for recommending continuation of the ERA, additional field study, or an interim action). The evaluation determined that there are no chemicals in Site media with the potential to pose significant risk to ecological receptors. Therefore, none of the chemicals in Site media warrant designation as COPECs, and further evaluation of ecological risk in a Baseline ERA is not needed.

7.0 SUMMARY AND CONCLUSIONS

7.1 Site Hydrogeology

The Site lies within the western portion of the South Carolina Coastal Plain Province. Groundwater flow in deeper confined aquifer units is typically to the south and southeast toward the coast. Locally, the water-table surface can subtly mimic land surface topography, with recharge of shallow unconfined aquifers occurring from direct infiltration of precipitation in upland areas and discharge occurring within nearby creeks and streams.

The Site geology has been subdivided into three general geologic zones. The upper zone consists of undifferentiated sands, clayey sands, sandy clays, and silts. 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.

Groundwater flow beneath the northern portion of the facility tends to vary between northward and southward flow directions, with local groundwater highs at MW-4 and MW-5. Groundwater levels appear depressed along a line from MW-18, MW-8, MW-1 MW-21, and MW-3. This phenomenon was previously recognized and characterized as a “groundwater trough”. The inferred direction of horizontal groundwater flow in the deep limestone aquifer zone is to the south southwest and is consistent with regional topography, drainage and findings from prior investigations conducted at the Site.

Prior testing provided estimates of the horizontal hydraulic conductivity of 0.13 ft/day in the shallow zone and 28 ft/day in the deeper limestone aquifer zone. Using the gradient from the potentiometric surface maps generated as part of the RI, the horizontal groundwater seepage velocity in the shallow aquifer zone was estimated to be 0.0026 ft/day or about 1 ft/year. The horizontal groundwater seepage velocity in the deeper (limestone) zone was estimated to be 0.101 ft/day or about 37 ft/year.

A downward gradient exists between the shallow aquifer zone and the underlying deep aquifer zone. However, clays and silts encountered at depth in the upper zone may limit the vertical flow between these two zones in the northern portion of the Site. There is a negligible gradient between the deep limestone zone and the deeper sandstone zone. Thus, groundwater can be inferred to move laterally in the fossiliferous limestone aquifer zone, which is the primary zone of groundwater transport in the Site area.

7.2 Environmental Quality

Samples of environmental media (soil, groundwater, and sub-slab vapors) were collected and analyzed during the RI to further characterize the Site and determine risk to potential receptors.

7.2.1 Subsurface Soils

Subsurface soil was collected to further evaluate potential source areas and establish background concentrations of naturally occurring constituents. The summary below is limited to PCOIs that exceeded the preliminary screening criteria (MCL-based SSLs and Residential RSLs) and the COCs identified in the BRA.

7.2.1.1 Northern Containment, Wastewater Treatment, and Acid Dip

Detected concentrations of methylene chloride, PCE, arsenic, copper and selenium exceeded the MCL-based SSL in one or more samples. Arsenic and hexavalent chromium exceeded their respective RSLs for residential soil. SVOCs were not detected in any soil sample from these three areas.

7.2.1.2 Former PCE Degreasers

PCE exceeded both the MCL-based SSL and the residential RSL. The MCL-based SSL was also exceeded by detected concentrations of 1,1-DCE, cis-1,2-DCE and TCE. All detected concentrations of SVOCs were below their respective screening criteria.

7.2.1.3 Former PCE UST

The VOCs PCE and TCE were detected at concentrations that exceeded their respective MCL-based SSLs. None of the detected concentrations exceeded their respective residential RSLs.

7.2.1.4 Western Wooded Area of Interest

PCE concentrations exceeded the MCL-based SSL but did not exceed the residential RSL. SVOCs were not detected in the soil samples. Concentrations of arsenic and selenium exceeded the MCL-based SSL and concentrations of arsenic and hexavalent chromium exceeded the residential RSL.

7.2.1.5 Eastern Wooded Area of Interest

PCE and TCE both exceeded their respective MCL-based SSL and residential RSL. Detected concentrations of cis-1,2-DCE and methylene chloride exceeded their MCL-based SSLs. Detected concentrations of SVOCs did not exceed their screening criteria. Arsenic and selenium concentrations exceeded the MCL-based SSL. Detected concentrations of arsenic and hexavalent chromium exceeded the residential RSL.

7.2.2 Soil Gas

Sub-slab vapor was collected and analyzed for VOCs from four SSV points installed inside the main manufacturing building. The results of the vapor analyses were screened against the USEPA Industrial Air RSL and a calculated shallow soil gas standard to identify PCOIs in soil gas.

PCE and TCE concentrations exceeded both their RSLs for industrial air and their calculated shallow soil gas standards. Benzene was detected at a concentration above the RSL for benzene in industrial air. The remaining detected VOCs were detected at concentrations below their respective screening criteria.

7.2.3 Groundwater

Five shallow monitoring wells and three deeper limestone monitoring wells were installed during the RI to further evaluate groundwater impacts. Groundwater from all new and existing monitoring wells was sampled for laboratory analysis of VOCs and select monitoring wells were sampled for analysis SVOCs, metals and MNA parameters. Analytical results were screened against MCLs to identify PCOIs in groundwater beneath the Site.

7.2.3.1 Shallow Aquifer Zone

Concentrations of PCE, TCE, cis-1,2-DCE and methylene chloride exceeded their respective MCLs in one or more samples of shallow groundwater. All of these exceedances were from shallow monitoring wells constructed on Site. There were no exceedances of VOC MCL in groundwater collected from off-Site wells screened in the shallow aquifer zone.

None of the detected concentrations of SVOCs or metals in shallow aquifer zone groundwater exceeded their respective MCLs.

7.2.3.2 Deep Limestone Aquifer Zone

PCE, TCE, cis-1,2-DCE, 1,1-DCE, methylene chloride and chloroform exceeded their respective MCLs in one or more samples of deep aquifer zone groundwater. Of these compounds, only chloroform and PCE exceed the respective MCL in groundwater from off-Site locations. Concentrations of SVOCs and metals did not exceed their respective MCLs.

7.2.3.3 Deeper Sandstone Aquifer Zone

None of the VOC, SVOC or metals analytes were detected above their respective MCLs in this aquifer unit.

7.2.3.4 Monitored Natural Attenuation Parameters

Groundwater quality indicator parameters were collected at all monitoring wells during sampling. Groundwater samples from 10 wells were submitted for laboratory analysis of MNA parameters to evaluate degradation potential in the aquifer zones beneath the Site.

Concentrations of sulfate and methane are favorable for anaerobic degradation in groundwater beneath some areas of the Site. However, low pH and TOC concentrations and limited areas with favorable DO and ORP may inhibit natural degradation processes.

Although daughter products of PCE (TCE and cis-1,2-DCE) have been detected in Site groundwater, ethene and ethane were not detected in groundwater samples collected during the RI.

7.3 Baseline Risk Assessment

7.3.1 Human Health Risk Assessment

An HHRA was conducted for the Delavan Spray Technologies Site to evaluate potentially Site-related chemicals detected in environmental media. Potential risks to human health under current and future land use scenarios were quantitatively evaluated. COCs were identified in the Risk Characterization based on the risk and hazard calculations. The human health COCs identified for each receptor are the following:

- Current and Future Industrial Worker – no COCs identified.
- Future Construction Worker – no COCs identified.
- Future On-Site Resident (Adult) – bromodichloromethane, chloroform, cis-1,2-DCE, dibromochloromethane, methylene chloride, naphthalene, PCE, TCE, arsenic, and chromium (based on the assumption that the chromium is hexavalent) in groundwater; and PCE in soil gas.
- Future On-Site Resident (Child) – chloroform, cis-1,2-DCE, dibromochloromethane, methylene chloride, PCE, and TCE in groundwater.
- Future Off-Site Resident (Adult) – bromodichloromethane, chloroform, dibromochloromethane, PCE, and TCE in groundwater.
- Future Off-Site Resident (Child) – no COCs identified.

Human health COCs were identified only for a hypothetical future on-Site resident, which is a very unlikely scenario, and for an off-Site resident assumed to regularly consume and use groundwater, which also is a less likely scenario due to the availability of municipal water.

7.3.2 Ecological Risk Assessment

An ERA was performed to evaluate whether potentially Site-related chemicals in the environment pose unacceptable risks to ecological receptors. None of the chemicals in Site media warrant designation as COPECs, and further evaluation of ecological risk and a baseline ERA is not needed.

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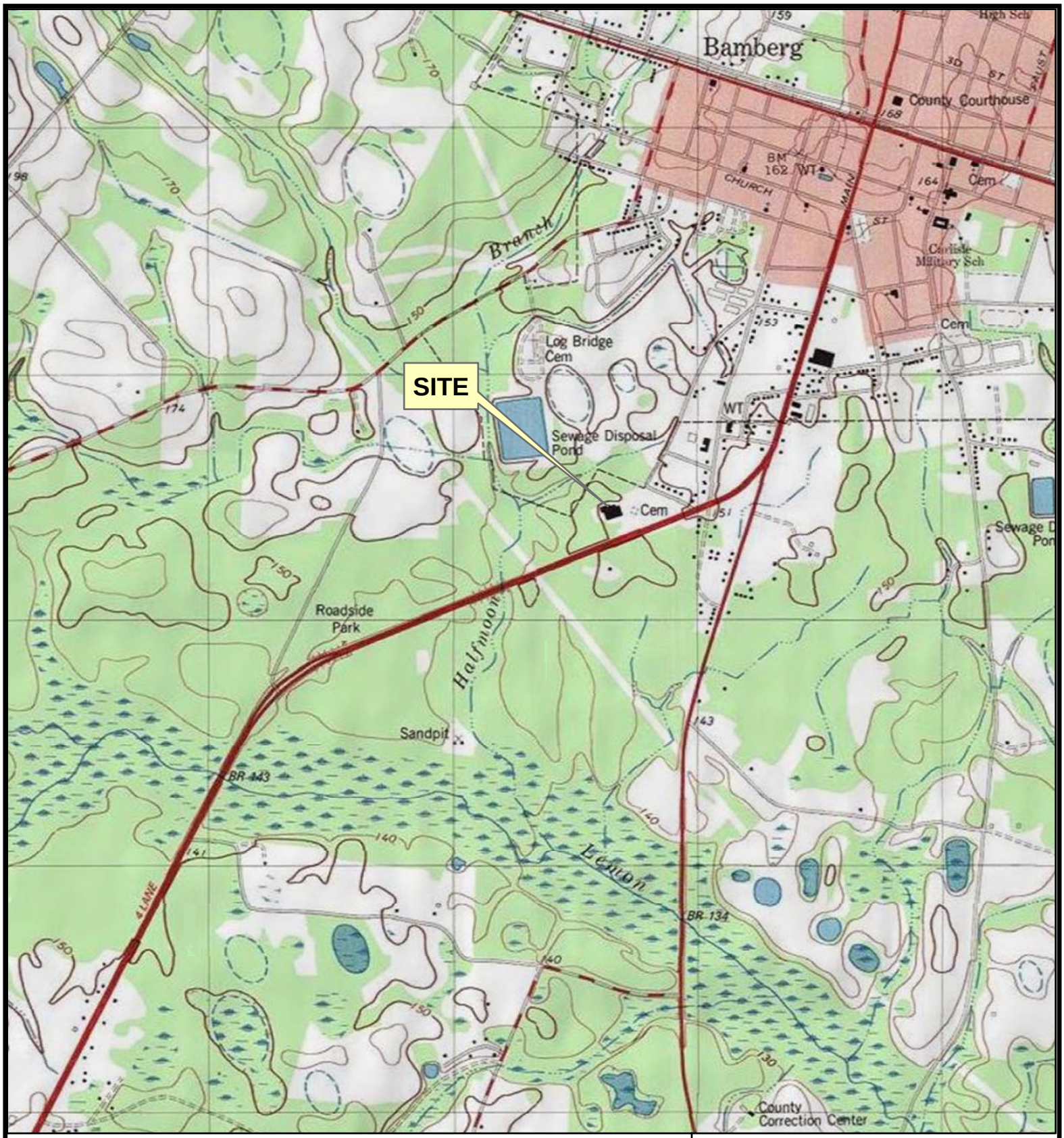
www.weatherbase.com for Bamberg, South Carolina.

FIGURES



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

N

U.S.G.S. QUADRANGLE MAP

BAMBERG, SC 1979 (PHOTO REVISED 1987)

QUADRANGLE
7.5 MINUTE SERIES (TOPOGRAPHIC)

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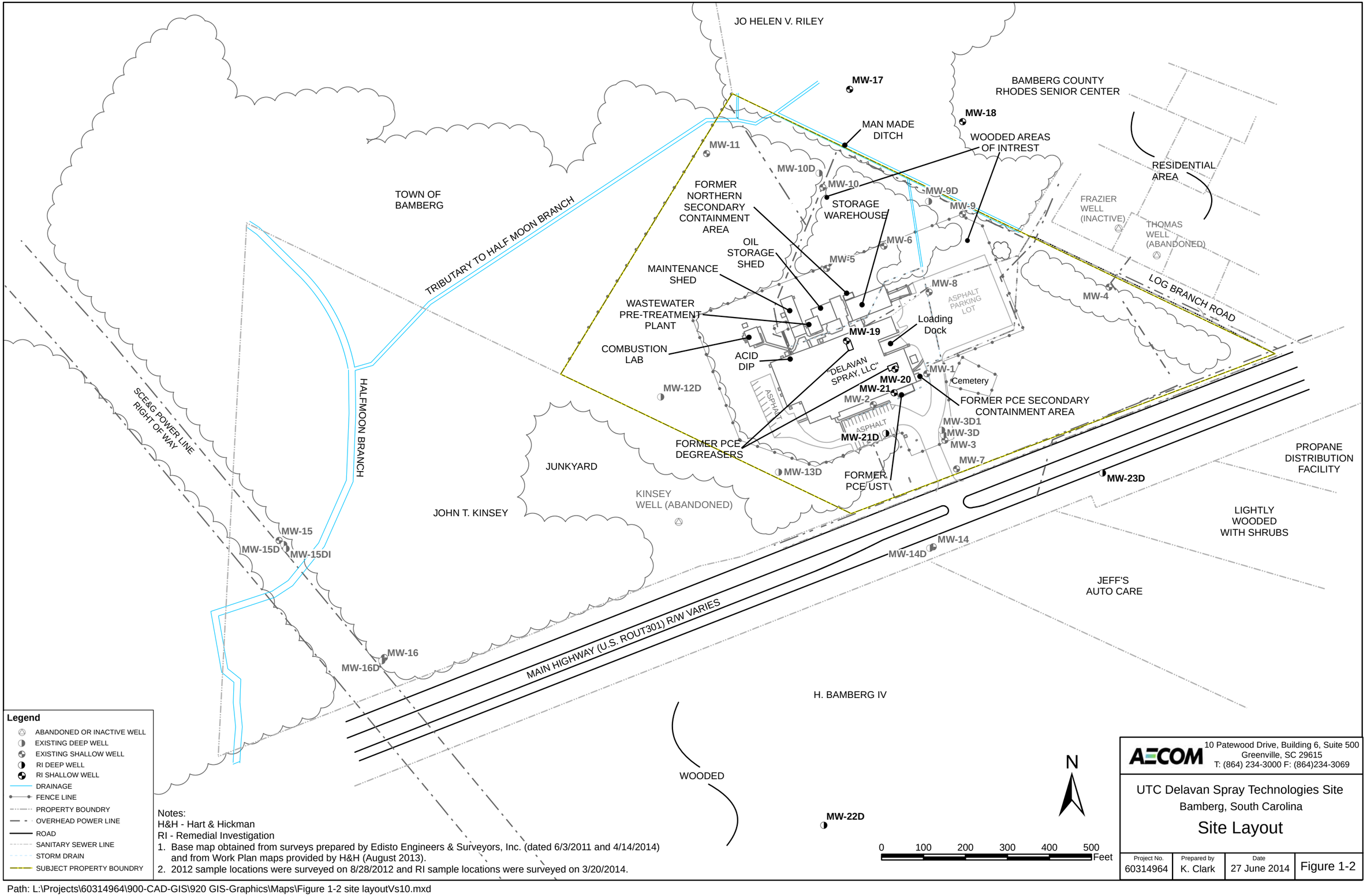
UTC Delavan Spray Technologies Site
Bamberg, South Carolina

Site Location Map

Project No.	Prepared by	Date	
60314964	K. Clark	8 May 2014	Figure 1-1

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



Legend

- ABANDONED OR INACTIVE WELL
- EXISTING DEEP WELL
- EXISTING SHALLOW WELL
- RI DEEP WELL
- RI SHALLOW WELL
- DRAINAGE
- FENCE LINE
- PROPERTY BOUNDRY
- OVERHEAD POWER LINE
- ROAD
- SANITARY SEWER LINE
- STORM DRAIN
- SUBJECT PROPERTY BOUNDRY

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.

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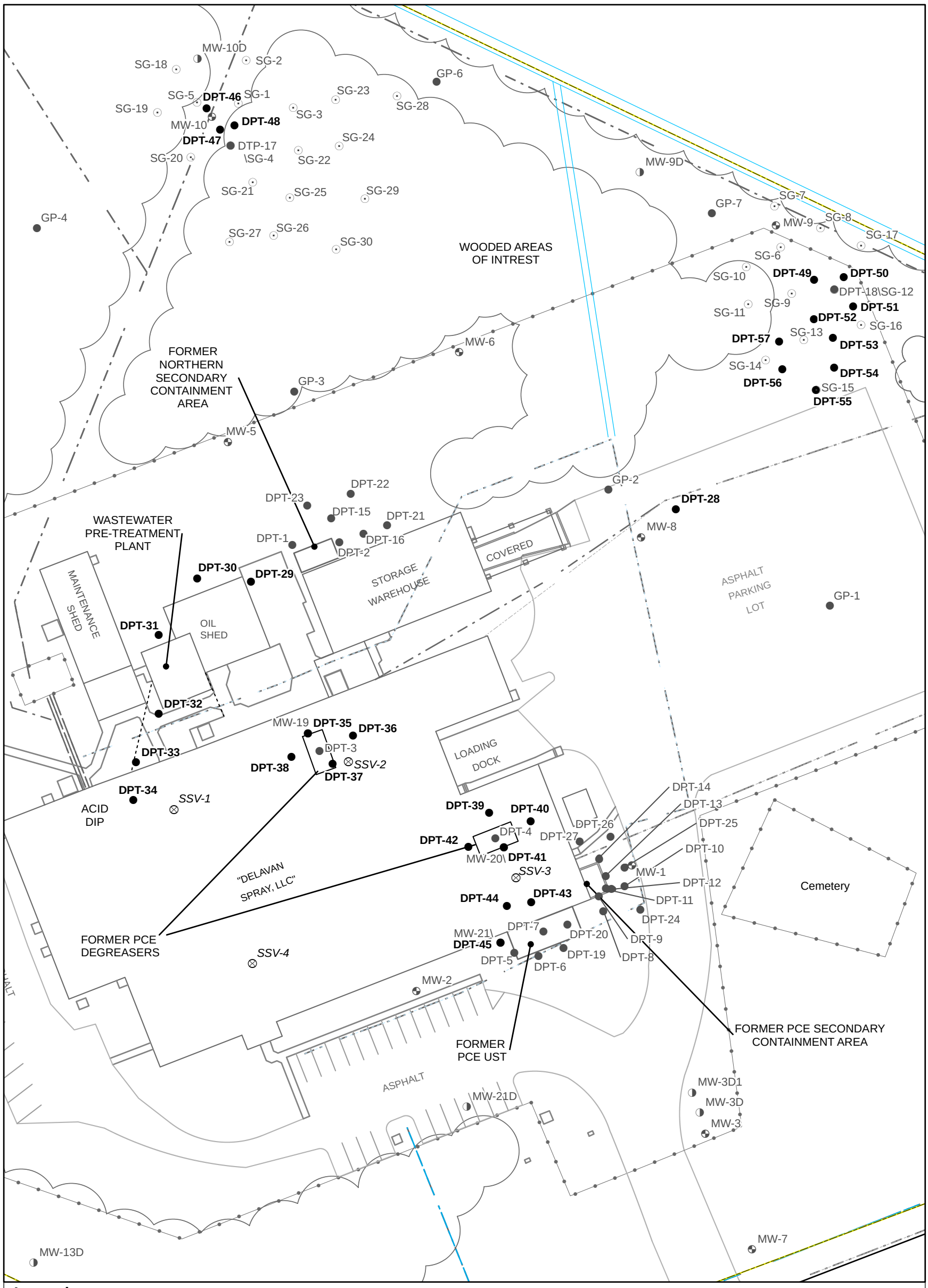
Site Layout

Project No.	Prepared by	Date	
60314964	K. Clark	27 June 2014	Figure 1-2

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 1-2 site layoutVs10.mxd



Legend

- 2012 SOIL BORING LOCATION
- 2012 SOIL GAS SAMPLE LOCATION
- SSV SAMPLE LOCATION
- RI SOIL BORING LOCATION
- ABANDONED OR INACTIVE WELL
- DEEP WELL
- SHALLOW WELL
- FENCE LINE
- OVERHEAD POWER LINE
- SUBJECT PROPERTY BOUNDRY
- PROPERTY BOUNDRY
- DRAINAGE
- STORM DRAIN
- SANITARY SEWER LINE
- WASTEWATER LINE
- WATER LINE

N

0 60 120

Feet

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.
3. 2012 soil borings were sampled by H&H in August 2012. RI soil borings were sampled by AECOM in February/March 2014.

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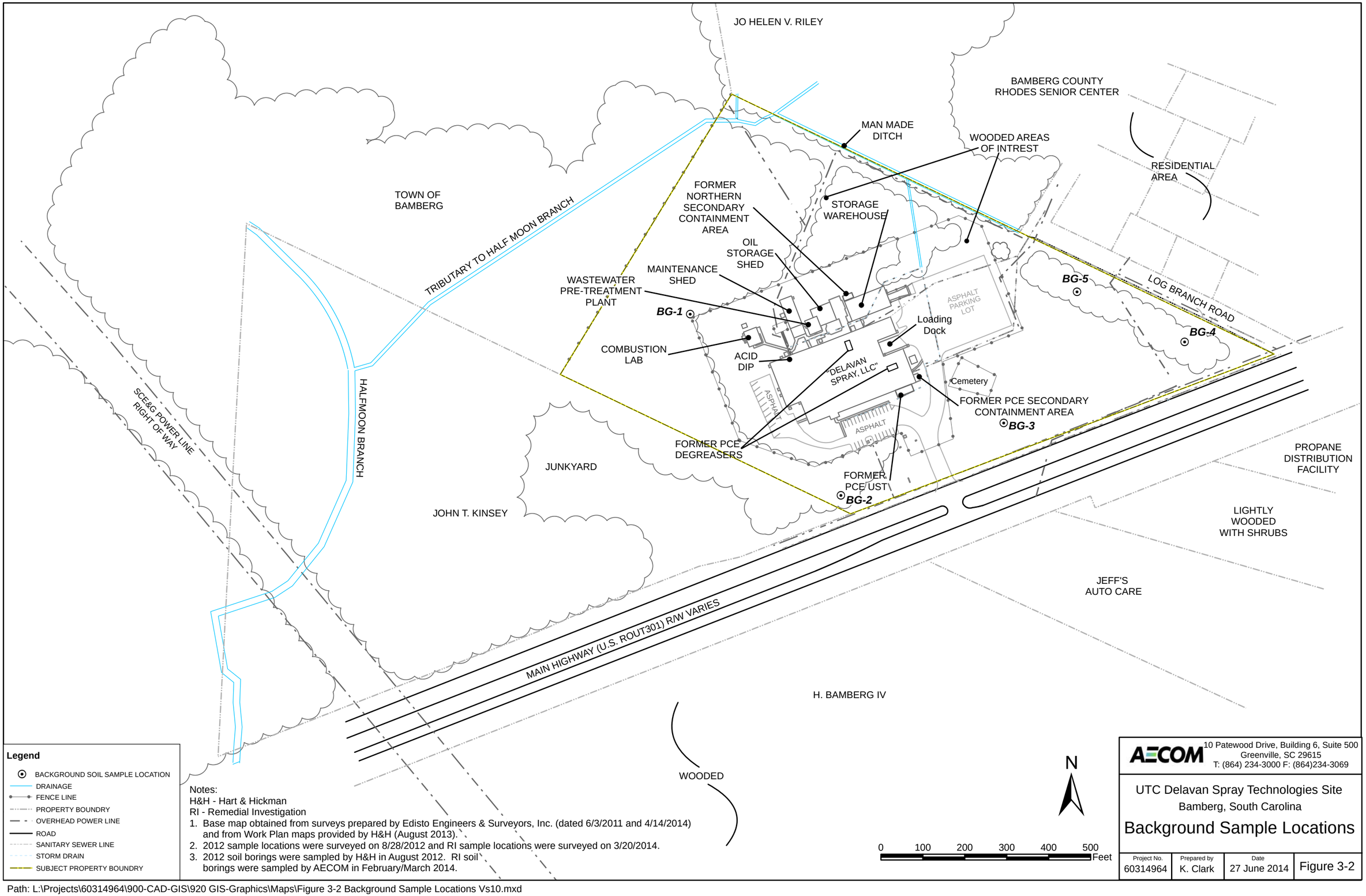
Soil Boring and Sub-Slab Vapor Sample Location Map

Project No.	Prepared by	Date	
60314964	K. Clark	11 June 2014	Figure 3-1

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 3-1 SoilBoring&Slab-Vapor size11x17.mxd



Legend

- BACKGROUND SOIL SAMPLE LOCATION
- DRAINAGE
- FENCE LINE
- PROPERTY BOUNDRY
- OVERHEAD POWER LINE
- ROAD
- SANITARY SEWER LINE
- STORM DRAIN
- SUBJECT PROPERTY BOUNDRY

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.
3. 2012 soil borings were sampled by H&H in August 2012. RI soil borings were sampled by AECOM in February/March 2014.

N

0 100 200 300 400 500 Feet

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Background Sample Locations

Project No.	Prepared by	Date	
60314964	K. Clark	27 June 2014	Figure 3-2

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 3-2 Background Sample Locations Vs10.mxd

JO HELEN V. RILEY

TOWN OF BAMBERG

TRIBUTARY TO HALF MOON BRANCH

HALFMOON BRANCH

SCE&G POWER LINE RIGHT OF WAY

JUNKYARD

JOHN T. KINSEY

KINSEY WELL (ABANDONED)

BAMBERG COUNTY RHODES SENIOR CENTER

RESIDENTIAL AREA

FRAZIER WELL (INACTIVE)

THOMAS WELL (ABANDONED)

LOG BRANCH ROAD

"DELAVAN SPRAY, LLC"

ASPHALT PARKING LOT

ASPHALT

Cemetery

PROPANE DISTRIBUTION FACILITY

LIGHTLY WOODED WITH SHRUBS

JEFF'S AUTO CARE

H. BAMBERG IV

WOODED

MAIN HIGHWAY (U.S. ROUT301) R/W VARIES

MW-17 139.76

MW-18 136.34

MW-11 136.77

MW-10 139.56

MW-9 139.02

MW-6 140.18

MW-5 140.70

MW-8 135.39

MW-4 142.33

MW-19 136.87

MW-20 137.08

MW-1 136.17

MW-21 136.55

MW-2 137.38

MW-3 135.96

MW-7 137.16

MW-15 134.02

MW-16 135.76

MW-14 136.41

134.5 135 135.5 136 136.5 137 137.5 138 138.5 139 139.5 140 140.5 141 141.5

Legend

- 135.7 GROUNDWATER ELEVATION MARCH 20, 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 3/20/2014.

N

0 100 200 300 400 500 Feet

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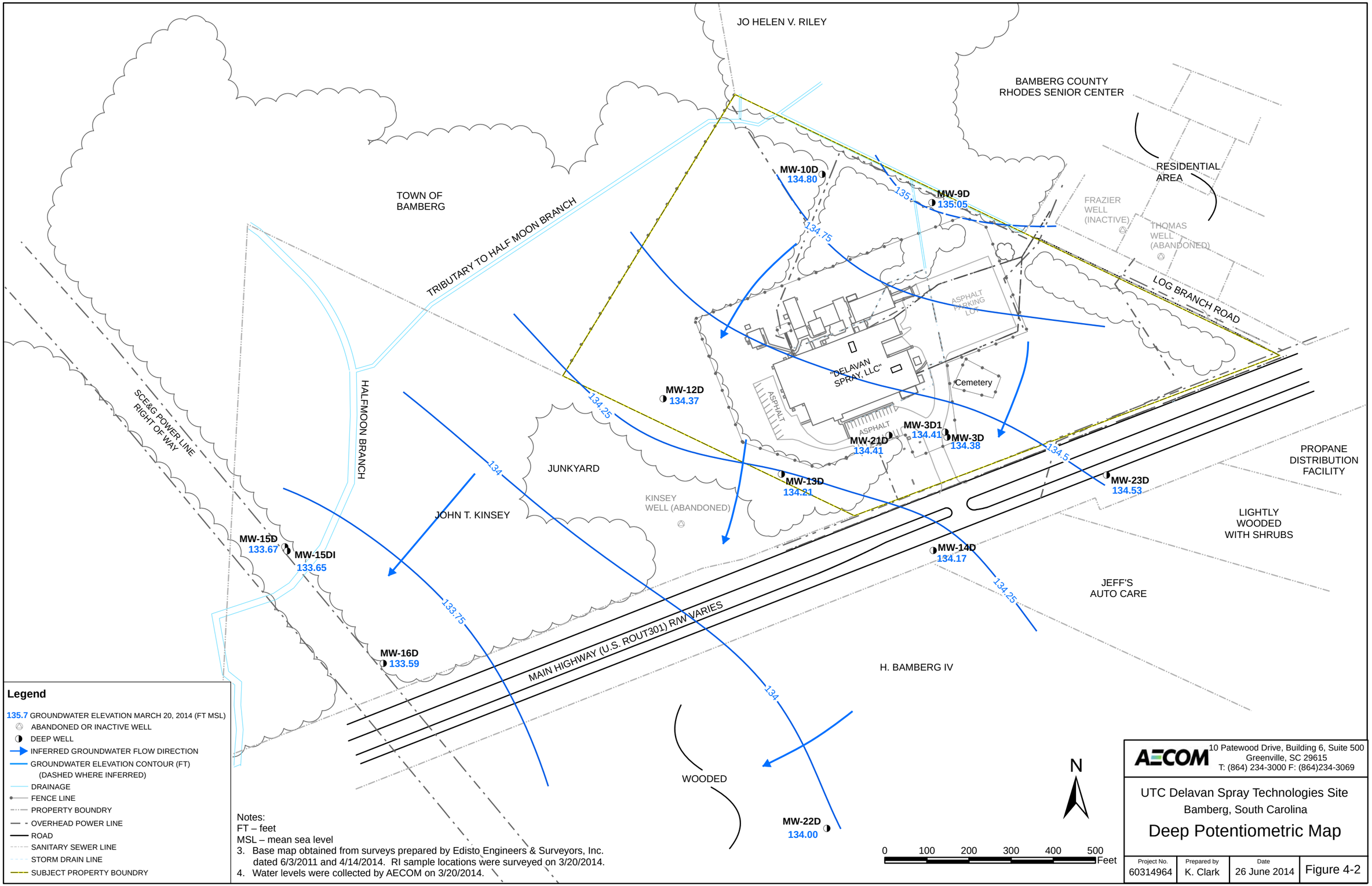
Shallow Potentiometric Map

Project No.	Prepared by	Date	
60314964	K. Clark	27 June 2014	Figure 4-1

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 4-1 ShallowPotVs10.mxd



Legend

- 135.7 GROUNDWATER ELEVATION MARCH 20, 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
3. 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.
4. Water levels were collected by AECOM on 3/20/2014.

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Deep Potentiometric Map

Project No.	Prepared by	Date	
60314964	K. Clark	26 June 2014	Figure 4-2

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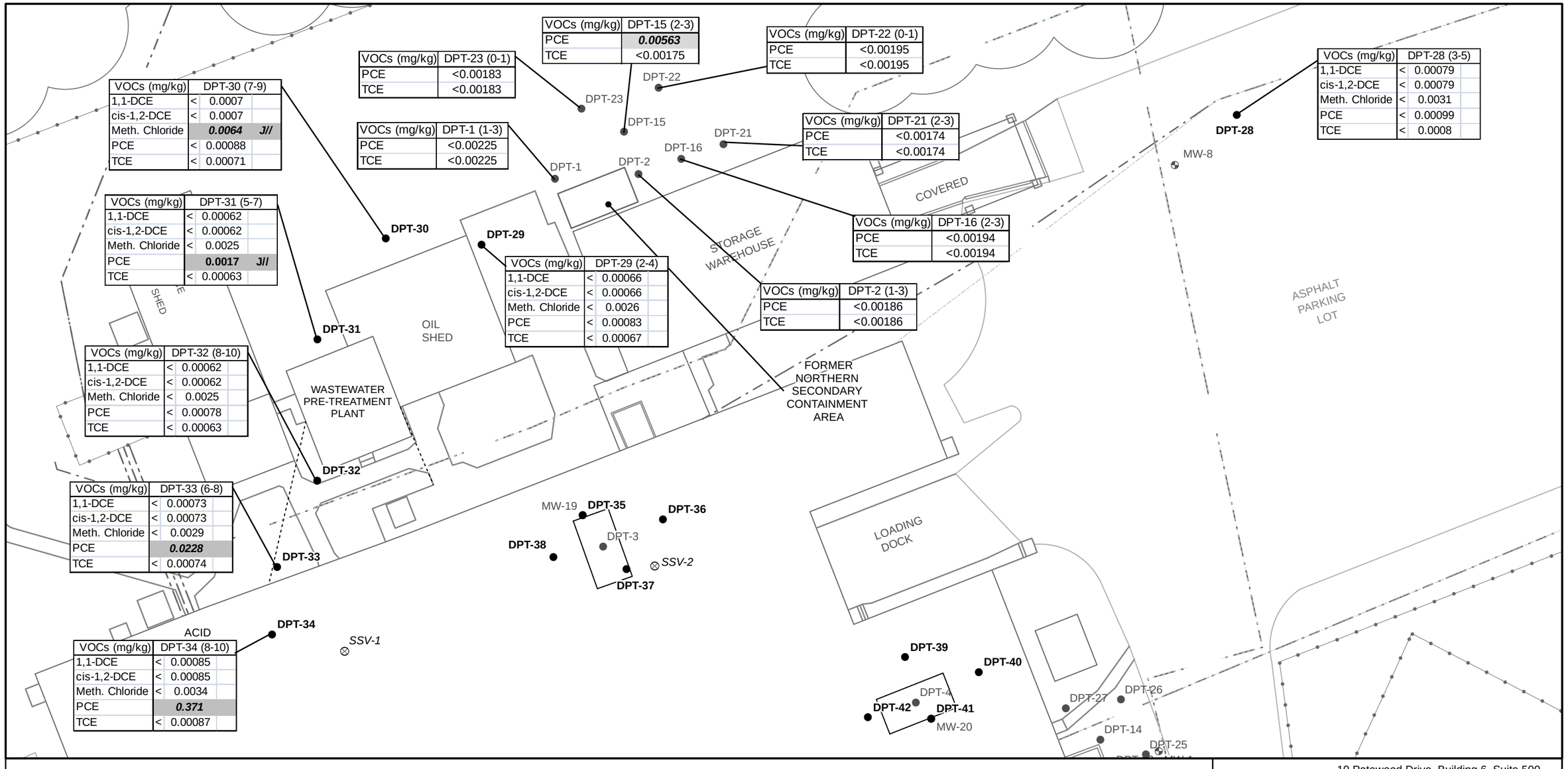

Legend

- 2012 SOIL BORING LOCATION
- 2012 SOIL GAS SAMPLE LOCATION
- SSV SAMPLE LOCATION
- RI SOIL BORING LOCATION
- SHALLOW WELL
- WASTE WATERLINES
- OVERHEAD POWER LINE
- SANITARY SEWER LINE
- STORM DRAIN

Notes:
1,1-DCE - 1,1-Dichloroethylene
cis-1,2-DCE - cis-1,2-Dichloroethylene
H&H - Hart & Hickman
MCL - Maximum Contaminant Level
Meth. Chloride - Methylene Chloride
mg/kg - milligram per kilogram
PCE - Tetrachloroethylene
RI - Remedial Investigation
RSL - Regional Screening Level
SSL - Soil Screening Level
TCE - Trichloroethylene
VOCs - Volatile Organic Compounds

1. Base map obtained from surveys prepared by Edisto Engineers & Surveyors, Inc. dated 6/3/2011 and 4/14/2014. 2012 sample locations were surveyed on 8/28/2012 and RI sample locations were surveyed on 3/20/2014.
2. 2012 soil borings were sampled by H&H in August 2012. RI soil borings were sampled by AECOM in February/March 2014.
3. Only compounds detected above the residential RSLs and the MCL-based SSLs are shown.
4. Residential RSL is from the USEPA RSL Table, based on risk of 10 -6 for carcinogens and hazard quotient of 0.1 for noncarcinogens (May 2014). MCL-Based SSL is from the USEPA Table (May 2014), based on a dilution attenuation factor of 1.
5. Bold font and shading indicate the concentration is detected. Italics indicates the concentration exceeds the MCL-Based SSL. Bold outline indicates the concentration exceeds the Residential RSL.
6. Sample depth (in feet) is indicated by the numbers in parentheses in the sample identification.

0 30 60 Feet

N

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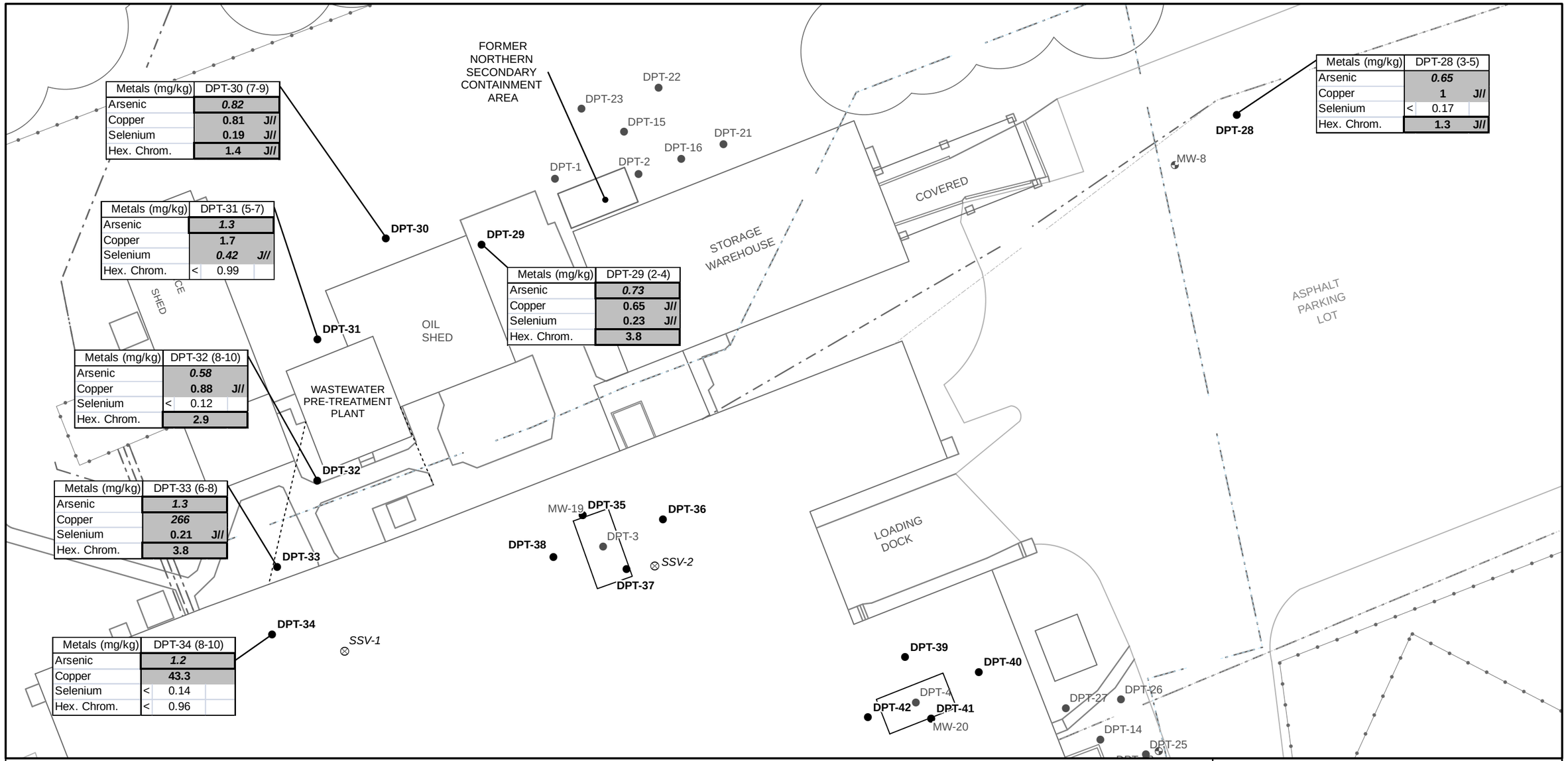
Sample Results for VOCs in Soil Former Nothern Containment, Wastewater Treatment, and Acid Dip Areas

Project No.	Prepared by	Date	
60314964	K. Clark	11 June 2014	Figure 5-1



Metals (mg/kg)	DPT-30 (7-9)	
Arsenic	***0.82***	
Copper	**0.81**	**J//**
Selenium	**0.19**	**J//**
Hex. Chrom.	**1.4**	**J//**

Metals (mg/kg)	DPT-31 (5-7)	
Arsenic	***1.3***	
Copper	**1.7**	
Selenium	***0.42***	***J//***
Hex. Chrom.	< 0.99	

Metals (mg/kg)	DPT-29 (2-4)	
Arsenic	***0.73***	
Copper	**0.65**	**J//**
Selenium	**0.23**	**J//**
Hex. Chrom.	**3.8**	

Metals (mg/kg)	DPT-32 (8-10)	
Arsenic	***0.58***	
Copper	**0.88**	**J//**
Selenium	< 0.12	
Hex. Chrom.	**2.9**	

Metals (mg/kg)	DPT-33 (6-8)	
Arsenic	***1.3***	
Copper	***266***	
Selenium	**0.21**	***J//***
Hex. Chrom.	**3.8**	

Metals (mg/kg)	DPT-34 (8-10)	
Arsenic	***1.2***	
Copper	**43.3**	
Selenium	< 0.14	
Hex. Chrom.	< 0.96	

Metals (mg/kg)	DPT-28 (3-5)	
Arsenic	***0.65***	
Copper	**1**	**J//**
Selenium	< 0.17	
Hex. Chrom.	**1.3**	**J//**

Legend

- 2012 SOIL BORING LOCATION
- 2012 SOIL GAS SAMPLE LOCATION
- SSV SAMPLE LOCATION
- RI SOIL BORING LOCATION
- SHALLOW WELL
- WASTE WATERLINES
- OVERHEAD POWER LINE
- SANITARY SEWER LINE
- STORM DRAIN

Notes:
H&H - Hart & Hickman
Hex. Chrom. - Hexavalent Chromium
MCL - Maximum Contaminant Level
mg/kg - milligram per kilogram
RI - Remedial Investigation
RSL - Regional Screening Level
SSL - Soil Screening Level
VOC – Volatile Organic Compound

1. Base map obtained from surveys prepared by Edisto Engineers & Surveyors, Inc. dated 6/3/2011 and 4/14/2014.
2. RI soil borings were sampled by AECOM in February/March 2014. 2012 soil borings were sampled by H&H in August 2012 but samples were analyzed for VOCs only, therefore, there are no results for metals in soil from 2012.
3. Only compounds detected above the residential RSLs and the MCL-based SSLs are shown.
4. Residential RSL is from the USEPA RSL Table, based on risk of 10 -6 for carcinogens and hazard quotient of 0.1 for noncarcinogens (May 2014). MCL-Based SSL is from the USEPA Table (May 2014), based on a dilution attenuation factor of 1.
5. Bold font and shading indicate the concentration is detected. Italics indicates the concentration exceeds the MCL-Based SSL. Bold outline indicates the concentration exceeds the Residential RSL.
6. Sample depth (in feet) is indicated by the numbers in parentheses in the sample identification.

0 30 60 Feet

N

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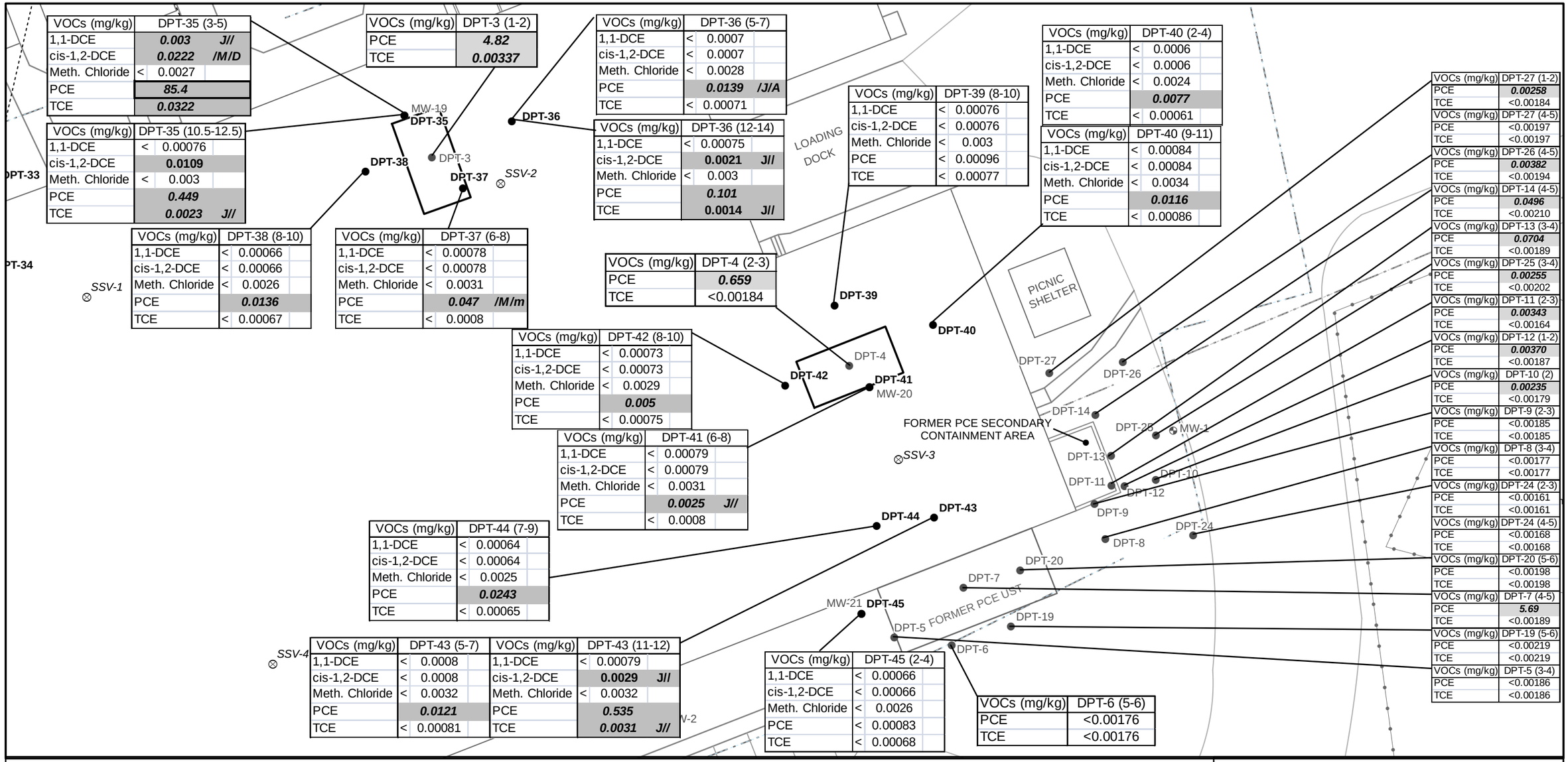
Sample Results for Metals in Soil Former Nothern Containment, Wastewater Treatment, and Acid Dip Areas

Project No.	Prepared by	Date	
60314964	K. Clark	6 June 2014	Figure 5-2



Legend

- 2012 SOIL BORING LOCATION
- 2012 SOIL GAS SAMPLE LOCATION
- SSV SAMPLE LOCATION
- RI SOIL BORING LOCATION
- SHALLOW WELL
- WASTE WATERLINES
- OVERHEAD POWER LINE
- SANITARY SEWER LINE
- STORM DRAIN

Notes:
1,1-DCE - 1,1-Dichloroethylene
cis-1,2-DCE - cis-1,2-Dichloroethylene
H&H - Hart & Hickman
MCL - Maximum Contaminant Level
Meth. Chloride - Methylene Chloride
mg/kg - milligram per kilogram
PCE - Tetrachloroethylene
RI - Remedial Investigation
RSL - Regional Screening Level
SSL - Soil Screening Level
TCE - Trichloroethylene
UST - Underground Storage Tank
VOCs - Volatile Organic Compounds

1. Base map obtained from surveys prepared by Edisto Engineers & Surveyors, Inc. dated 6/3/2011 and 4/14/2014. 2012 sample locations were surveyed on 8/28/2012 and RI sample locations were surveyed on 3/20/2014.
2. 2012 soil borings were sampled by H&H in August 2012. RI soil borings were sampled by AECOM in February/March 2014.
3. Only compounds detected above the residential RSLs and the MCL-based SSLs are shown.
4. Residential RSL is from the USEPA RSL Table, based on risk of 10 -6 for carcinogens and hazard quotient of 0.1 for noncarcinogens (May 2014). MCL-Based SSL is from the USEPA Table (May 2014), based on a dilution attenuation factor of 1.
5. Bold font and shading indicate the concentration is detected. Italics indicates the concentration exceeds the MCL-Based SSL. Bold outline indicates the concentration exceeds the Residential RSL.
6. Sample depth (in feet) is indicated by the numbers in parentheses in the sample identification.

Feet
0 25 50

N

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Sample Results for VOCs in Soil PCE Degreasers and PCE UST

Project No.	Prepared by	Date	
60314964	K. Clark	11 June 2014	Figure 5-3

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 5-3 VOCs PEC degreasers & UST Vs10.mxd

VOCs (mg/kg)	DPT-46 (1.5-3.5)	
1,1-DCE	< 0.00063	
cis-1,2-DCE	< 0.00063	
Meth. Chloride	< 0.0025	
PCE	***0.0042***	***/J/A***
TCE	< 0.00064	

VOCs (mg/kg)	DPT-47 (5-7)	
1,1-DCE	< 0.00071	
cis-1,2-DCE	< 0.00071	
Meth. Chloride	< 0.0028	
PCE	***0.0026***	***J//***
TCE	< 0.00072	

VOCs (mg/kg)	DPT-48 (7.5-9.5)	
1,1-DCE	< 0.00063	
cis-1,2-DCE	**0.0148**	
Meth. Chloride	< 0.0025	
PCE	***0.0061***	
TCE	< 0.00064	

VOCs (mg/kg)	DPT-17 (3-4)
PCE	<0.00197
TCE	<0.00197

MW-10D
SG-2 8.038
SG-18 20.89
SG-5 346:5
DPT-46
SG-1 2.041
SG-3 38.92
SG-23 22.20
SG-28 33.27
SG-19 39.66
MW-10
DPT-48
DPT-47
DTP-17 \SG-4 451.50
SG-22 55.40
SG-24 58.20
SG-20 0.00
SG-21 195.30
SG-25 83.43
SG-29 37.81
WOODED AREAS OF INTREST
SG-26 16.87
SG-27 24.75
SG-30 8.028

Legend

- 39.66 2012 SOIL GAS RESULTS (ppm)
- 2012 SOIL BORING LOCATION
- 2012 SOIL GAS SAMPLE LOCATION
- RI SOIL BORING LOCATION
- DEEP WELL
- SHALLOW WELL
- DRAINAGE
- OVERHEAD POWER LINE
- SANITARY SEWER LINE
- STORM DRAIN

Notes:
1,1-DCE - 1,1-Dichloroethylene
cis-1,2-DCE - cis-1,2-Dichloroethylene
H&H - Hart & Hickman
MCL - Maximum Contaminant Level
Meth. Chloride - Methylene Chloride
mg/kg - milligram per kilogram
PCE - Tetrachloroethylene
PPM - Parts Per Million
RI - Remedial Investigation
RSL - Regional Screening Level
SSL - Soil Screening Level
TCE - Trichloroethylene
VOCs - Volatile Organic Compounds

1. Base map obtained from surveys prepared by Edisto Engineers & Surveyors, Inc. dated 6/3/2011 and 4/14/2014. 2012 sample locations were surveyed on 8/28/2012 and RI sample locations were surveyed on 3/20/2014.
2. 2012 soil borings were sampled by H&H in August 2012. RI soil borings were sampled by AECOM in February/March 2014.
3. Only compounds detected above the residential RSLs and the MCL-based SSLs are shown.
4. Residential RSL is from the USEPA RSL Table, based on risk of 10⁻⁶ for carcinogens and hazard quotient of 0.1 for noncarcinogens (May 2014). MCL-Based SSL is from the USEPA Table (May 2014), based on a dilution attenuation factor of 1.
5. Bold font and shading indicate the concentration is detected. Italics indicates the concentration exceeds the MCL-Based SSL. Bold outline indicates the concentration exceeds the Residential RSL.
6. Sample depth (in feet) is indicated by the numbers in parentheses in the sample identification.
7. 2012 soil gas results collected by H&H using a handheld photo-ionization detector.

Feet
0 25 50

N

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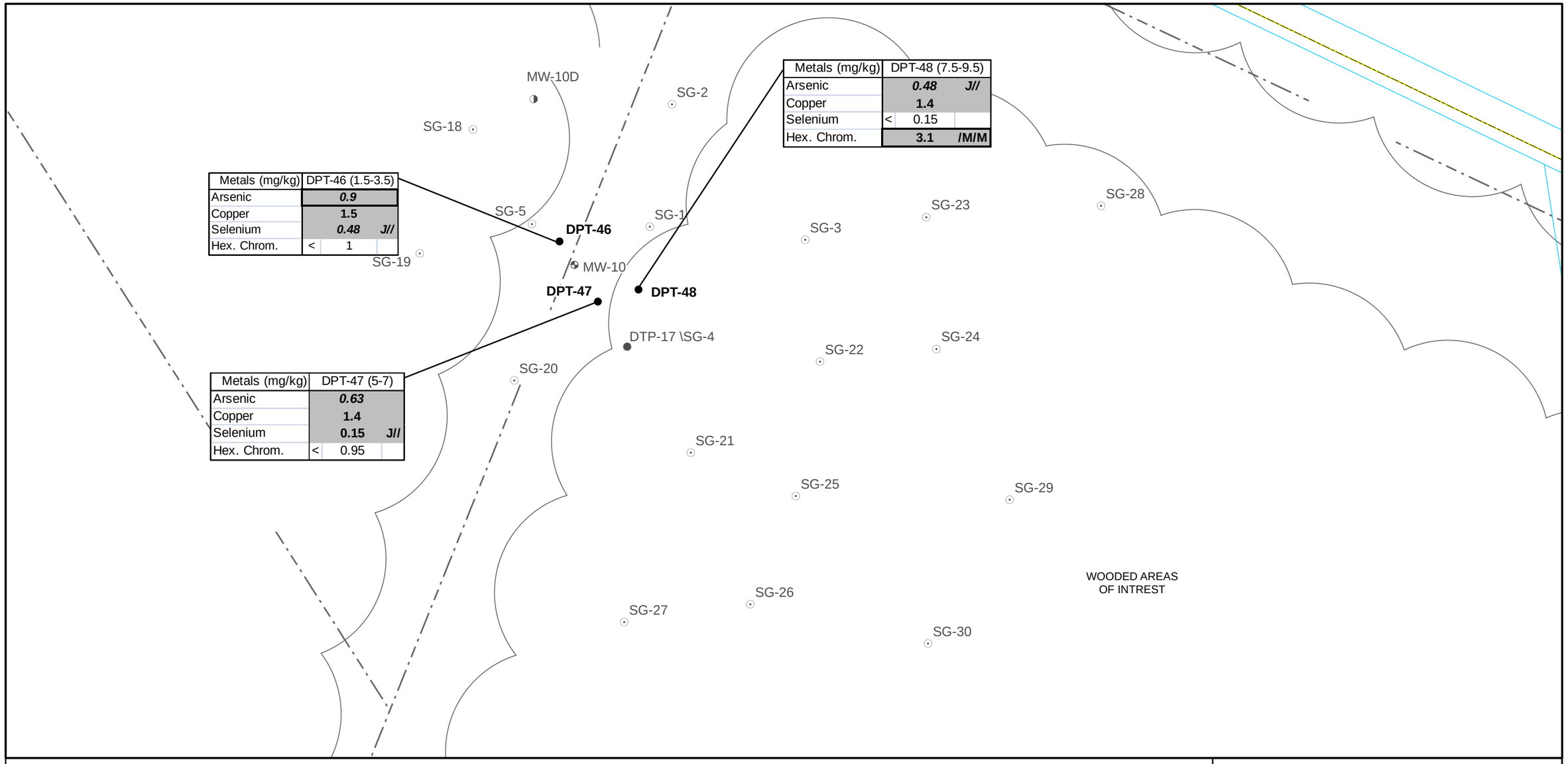
Sample Results for VOCs in Soil Western Wooded Area of Interest

Project No.	Prepared by	Date	
60314964	K. Clark	11 June 2014	Figure 5-4

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 5-4 VOCs Western Woods Vs10.mxd



Metals (mg/kg)	DPT-46 (1.5-3.5)	
Arsenic	***0.9***	
Copper	**1.5**	
Selenium	***0.48***	***J//***
Hex. Chrom.	< 1	

Metals (mg/kg)	DPT-47 (5-7)	
Arsenic	***0.63***	
Copper	**1.4**	
Selenium	**0.15**	***J//***
Hex. Chrom.	< 0.95	

Metals (mg/kg)	DPT-48 (7.5-9.5)	
Arsenic	***0.48***	***J//***
Copper	**1.4**	
Selenium	< 0.15	
Hex. Chrom.	**3.1**	**/M/M**

Legend

- 2012 SOIL BORING LOCATION
- 2012 SOIL GAS SAMPLE LOCATION
- RI SOIL BORING LOCATION
- DEEP WELL
- SHALLOW WELL
- DRAINAGE
- OVERHEAD POWER LINE
- SANITARY SEWER LINE
- STORM DRAIN

Notes:
H&H - Hart & Hickman
Hex. Chrom. - Hexavalent Chromium
MCL - Maximum Contaminant Level
mg/kg - milligram per kilogram
RI - Remedial Investigation
RSL - Regional Screening Level
SSL - Soil Screening Level
VOC – Volatile Organic Compound

1. Base map obtained from surveys prepared by Edisto Engineers & Surveyors, Inc. dated 6/3/2011 and 4/14/2014.
2. RI soil borings were sampled by AECOM in February/March 2014. 2012 soil borings were sampled by H&H in August 2012 but samples were analyzed for VOCs only, therefore, there are no results for metals in soil from 2012.
3. Only compounds detected above the residential RSLs and the MCL-based SSLs are shown.
4. Residential RSL is from the USEPA RSL Table, based on risk of 10 -6 for carcinogens and hazard quotient of 0.1 for noncarcinogens (May 2014). MCL-Based SSL is from the USEPA Table (May 2014), based on a dilution attenuation factor of 1.
5. Bold font and shading indicate the concentration is detected. Italics indicates the concentration exceeds the MCL-Based SSL. Bold outline indicates the concentration exceeds the Residential RSL.
6. Sample depth (in feet) is indicated by the numbers in parentheses in the sample identification.

Feet
0 25 50

N

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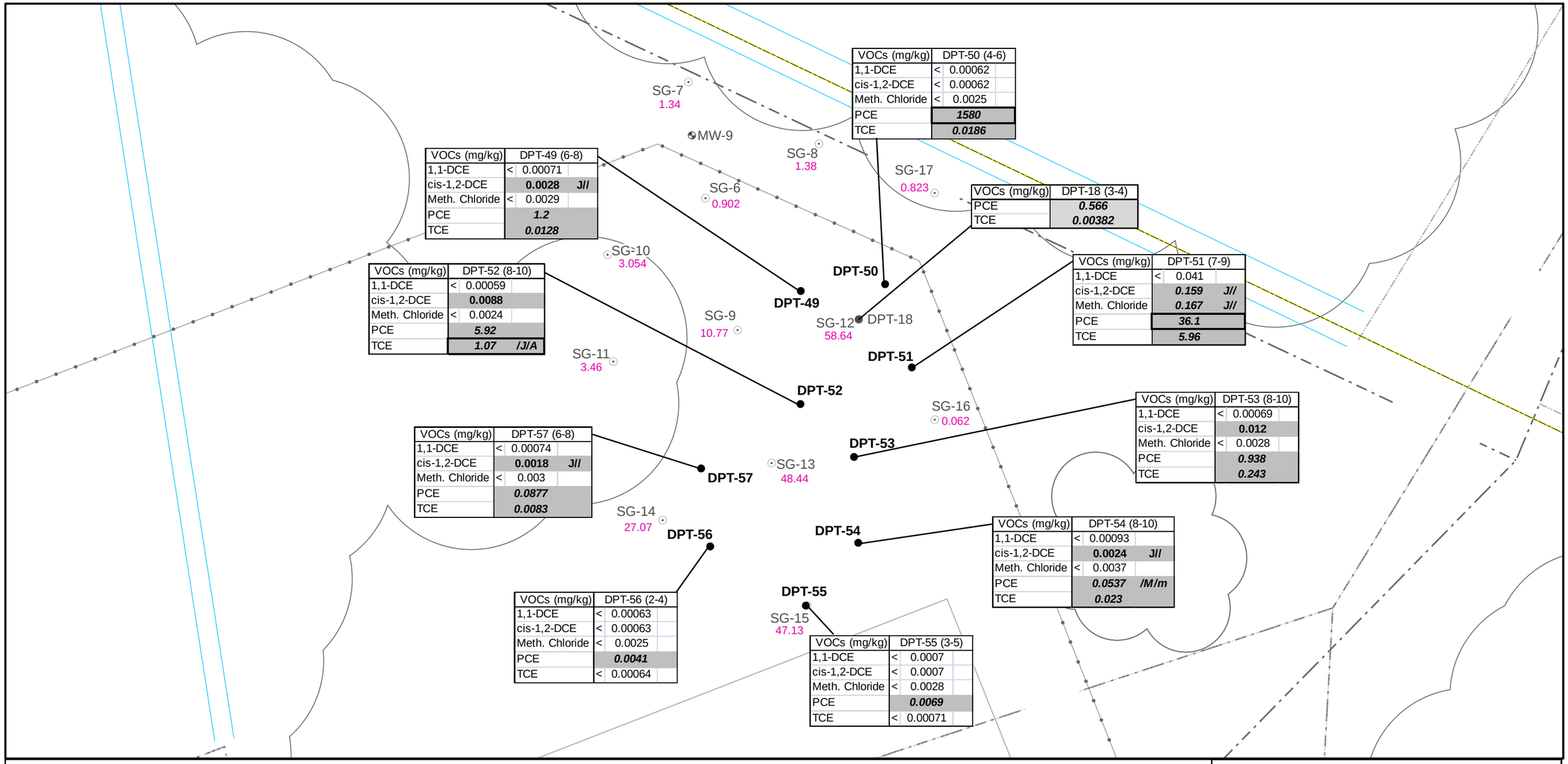
Sample Results for Metals in Soil Western Wooded Area of Interest

Project No.	Prepared by	Date	
60314964	K. Clark	11 June 2014	Figure 5-5



VOCs (mg/kg)	DPT-50 (4-6)	
1,1-DCE	< 0.00062	
cis-1,2-DCE	< 0.00062	
Meth. Chloride	< 0.0025	
PCE	***1580***	
TCE	***0.0186***	

VOCs (mg/kg)	DPT-49 (6-8)	
1,1-DCE	< 0.00071	
cis-1,2-DCE	**0.0028**	**J//**
Meth. Chloride	< 0.0029	
PCE	***1.2***	
TCE	***0.0128***	

VOCs (mg/kg)	DPT-18 (3-4)
PCE	***0.566***
TCE	***0.00382***

VOCs (mg/kg)	DPT-52 (8-10)	
1,1-DCE	< 0.00059	
cis-1,2-DCE	**0.0088**	
Meth. Chloride	< 0.0024	
PCE	***5.92***	
TCE	***1.07***	***/J/A***

VOCs (mg/kg)	DPT-51 (7-9)	
1,1-DCE	< 0.041	
cis-1,2-DCE	***0.159***	***J//***
Meth. Chloride	***0.167***	***J//***
PCE	***36.1***	
TCE	***5.96***	

VOCs (mg/kg)	DPT-53 (8-10)	
1,1-DCE	< 0.00069	
cis-1,2-DCE	**0.012**	
Meth. Chloride	< 0.0028	
PCE	***0.938***	
TCE	***0.243***	

VOCs (mg/kg)	DPT-57 (6-8)	
1,1-DCE	< 0.00074	
cis-1,2-DCE	**0.0018**	**J//**
Meth. Chloride	< 0.003	
PCE	***0.0877***	
TCE	***0.0083***	

VOCs (mg/kg)	DPT-54 (8-10)	
1,1-DCE	< 0.00093	
cis-1,2-DCE	**0.0024**	**J//**
Meth. Chloride	< 0.0037	
PCE	***0.0537***	***/M/m***
TCE	***0.023***	

VOCs (mg/kg)	DPT-56 (2-4)	
1,1-DCE	< 0.00063	
cis-1,2-DCE	< 0.00063	
Meth. Chloride	< 0.0025	
PCE	***0.0041***	
TCE	< 0.00064	

VOCs (mg/kg)	DPT-55 (3-5)	
1,1-DCE	< 0.0007	
cis-1,2-DCE	< 0.0007	
Meth. Chloride	< 0.0028	
PCE	***0.0069***	
TCE	< 0.00071	

Legend

- 39.66 2012 SOIL GAS RESULTS (ppm)
- 2012 SOIL BORING LOCATION
- 2012 SOIL GAS SAMPLE LOCATION
- RI SOIL BORING LOCATION
- SHALLOW WELL
- DRAINAGE
- OVERHEAD POWER LINE
- SANITARY SEWER LINE
- SUBJECT PROPERTY BOUNDRY
- STORM DRAIN

Notes:
1,1-DCE - 1,1-Dichloroethylene
cis-1,2-DCE - cis-1,2-Dichloroethylene
H&H - Hart & Hickman
MCL - Maximum Contaminant Level
Meth. Chloride - Methylene Chloride
mg/kg - milligram per kilogram
PCE - Tetrachloroethylene
PPM - Parts Per Million
RI - Remedial Investigation
RSL - Regional Screening Level
SSL - Soil Screening Level
TCE - Trichloroethylene
VOCs - Volatile Organic Compounds

1. Base map obtained from surveys prepared by Edisto Engineers & Surveyors, Inc. dated 6/3/2011 and 4/14/2014. 2012 sample locations were surveyed on 8/28/2012 and RI sample locations were surveyed on 3/20/2014.
2. 2012 soil borings and soil gas locations were sampled by H&H in August 2012. RI soil borings were sampled by AECOM in February/March 2014.
3. Only compounds detected above the residential RSLs and the MCL-based SSLs are shown.
4. Residential RSL is from the USEPA RSL Table, based on risk of 10 -6 for carcinogens and hazard quotient of 0.1 for noncarcinogens (May 2014). MCL-Based SSL is from the USEPA Table (May 2014), based on a dilution attenuation factor of 1.
5. Bold font and shading indicate the concentration is detected. Italics indicates the concentration exceeds the MCL-Based SSL. Bold outline indicates the concentration exceeds the Residential RSL.
6. Sample depth (in feet) is indicated by the numbers in parentheses in the sample identification.
7. 2012 soil gas results collected by H&H using a handheld photo-ionization detector.

Feet
0 25 50

N

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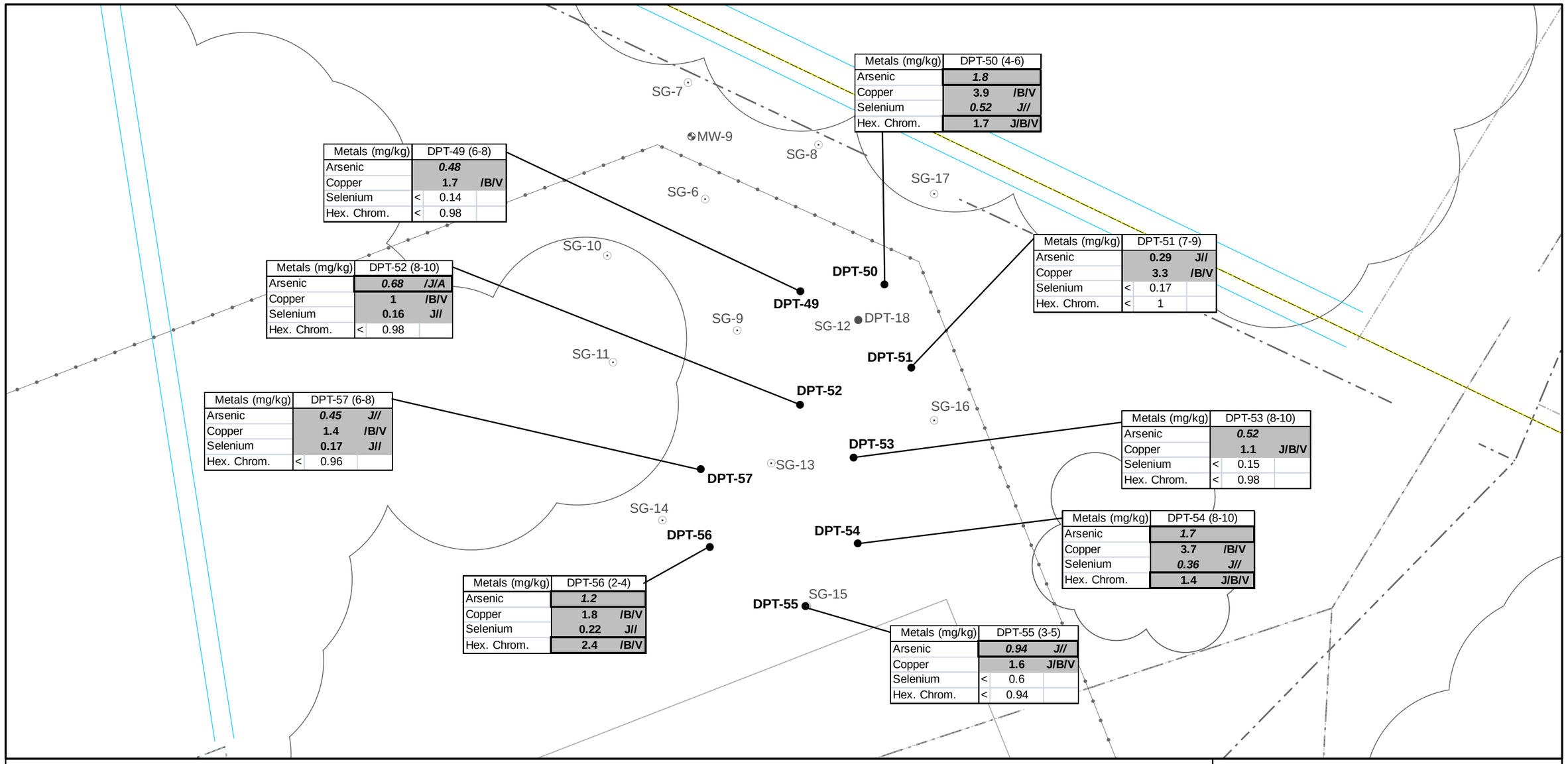
Sample Results for VOCs in Soil Eastern Wooded Area of Interest

Project No.	Prepared by	Date	
60314964	K. Clark	12 June 2014	Figure 5-6

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 5-6 VOCs Eastern Woods Vs10.mxd



Legend

- 2012 SOIL BORING LOCATION
- 2012 SOIL GAS SAMPLE LOCATION
- RI SOIL BORING LOCATION
- SHALLOW WELL
- DRAINAGE
- OVERHEAD POWER LINE
- SANITARY SEWER LINE
- SUBJECT PROPERTY BOUNDRY
- STORM DRAIN

Notes:
H&H - Hart & Hickman
Hex. Chrom. - Hexavalent Chromium
MCL - Maximum Contaminant Level
mg/kg - milligram per kilogram
RI - Remedial Investigation
RSL - Regional Screening Level
SSL - Soil Screening Level
VOC – Volatile Organic Compound

1. Base map obtained from surveys prepared by Edisto Engineers & Surveyors, Inc. dated 6/3/2011 and 4/14/2014.
2. RI soil borings were sampled by AECOM in February/March 2014. 2012 soil borings were sampled by H&H in August 2012 but samples were analyzed for VOCs only, therefore, there are no results for metals in soil from 2012.
3. Only compounds detected above the residential RSLs and the MCL-based SSLs are shown.
4. Residential RSL is from the USEPA RSL Table, based on risk of 10 -6 for carcinogens and hazard quotient of 0.1 for noncarcinogens (May 2014). MCL-Based SSL is from the USEPA Table (May 2014), based on a dilution attenuation factor of 1.
5. Bold font and shading indicate the concentration is detected. Italics indicates the concentration exceeds the MCL-Based SSL. Bold outline indicates the concentration exceeds the Residential RSL.
6. Sample depth (in feet) is indicated by the numbers in parentheses in the sample identification.

Feet
0 25 50

N

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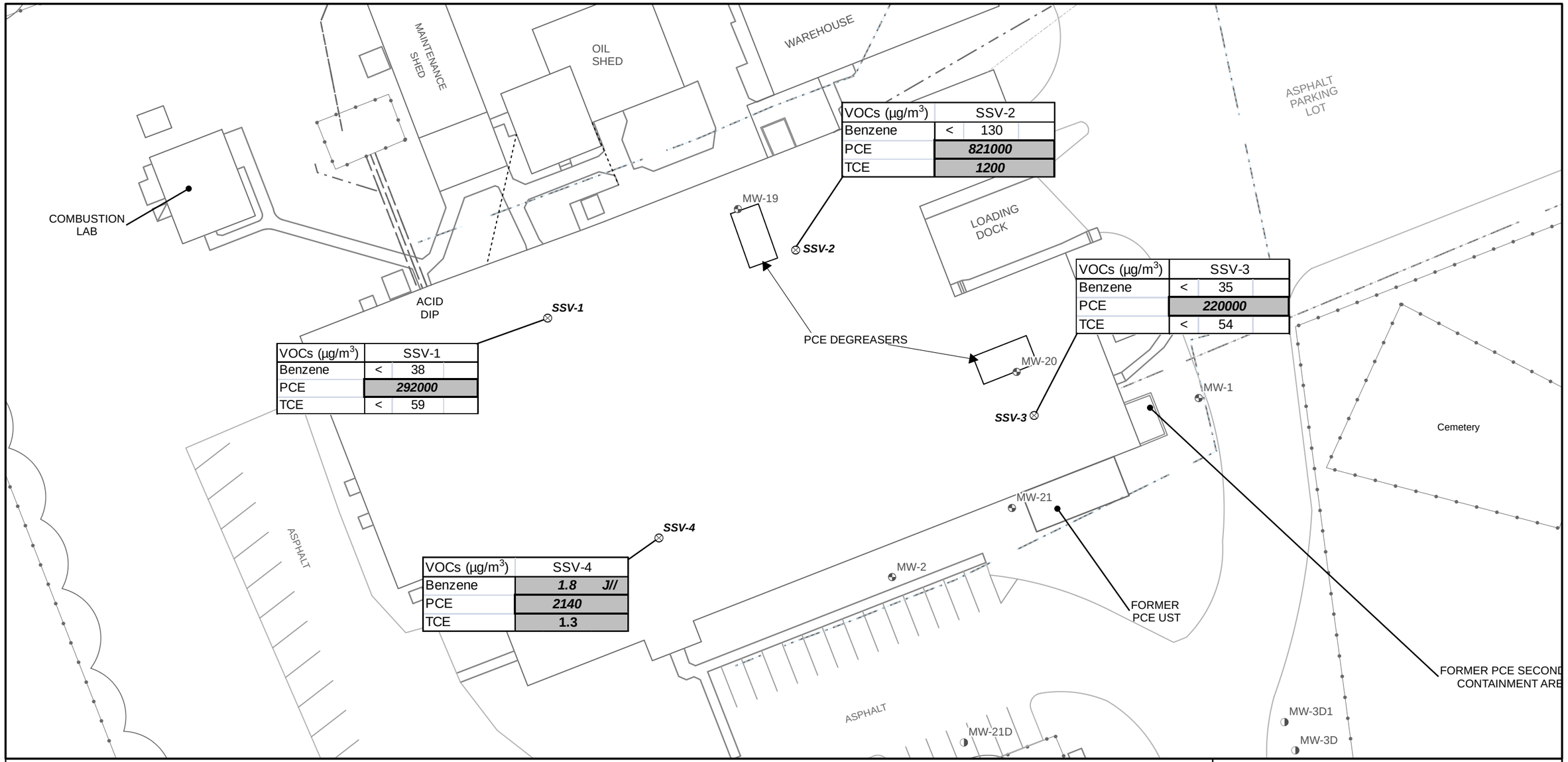
Sample Results for Metals in Soil Eastern Wooded Area of Interest

Project No.	Prepared by	Date	
60314964	K. Clark	12 June 2014	Figure 5-7

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 5-7 Metals Eastern Woods Vs10.mxd



Legend

- 2012 SOIL BORING LOCATION
- 2012 SOIL GAS SAMPLE LOCATION
- SSV SAMPLE LOCATION
- RI SOIL BORING LOCATION
- DEEP WELL
- SHALLOW WELL
- WASTE WATERLINES
- OVERHEAD POWER LINE
- SANITARY SEWER LINE
- STORM DRAIN

Notes:
µg/m3 - micrograms per cubic meter
PCE - Tetrachloroethylene
RI - Remedial Investigation
RSL - Regional Screening Level
SSV - Sub-Slab Vapor
TCE - Trichloroethylene
VOCs - Volatile Organic Compounds

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. SSV locations were sampled by AECOM in March 2014. SSV samples were collect approximately 0.5 ft below the bottom of the concrete slab.
3. Only compounds detected above the USEPA Industrial Air RSLs and t Calculate Shallow Soil Gas Standard are shown.
4. Indoor Air RSL is from the USEPA RSL Table, based on a target risk of 10-6 and a hazard quotient of 0.1 (May 2014).
5. The Shallow Soil Gas Standard was calculated from USEPA RSLs using the USEPA OSWER attenuation for shallow gas of 0.1.
6. Bold font and shading indicate the concentration is detected. Italics indicates the concentration exceeds the USEPA Industrial Air RSLs. Bold outline indicates the concentration exceeds the Shallow Soil Gas Standard.

Feet
0 20 40 80

N

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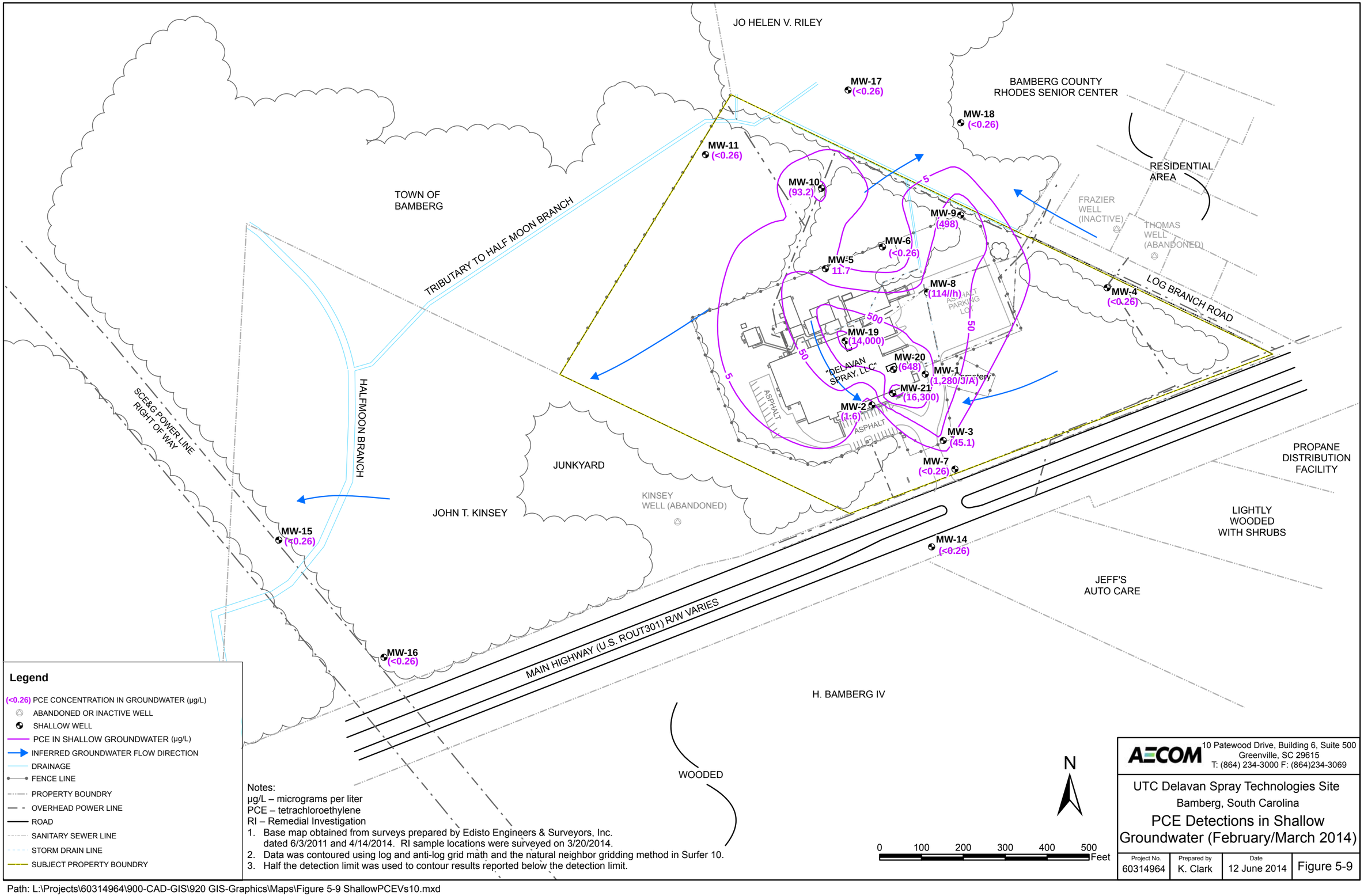
Sub-Slab Vapor Sample Results

Project No.	Prepared by	Date	
60314964	K. Clark	12 June 2014	Figure 5-8

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 5-8 Sub-slab Vapor Sample Results Vs10.mxd



Legend

- (<0.26) PCE CONCENTRATION IN GROUNDWATER (µg/L)
- 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.

N

0 100 200 300 400 500 Feet

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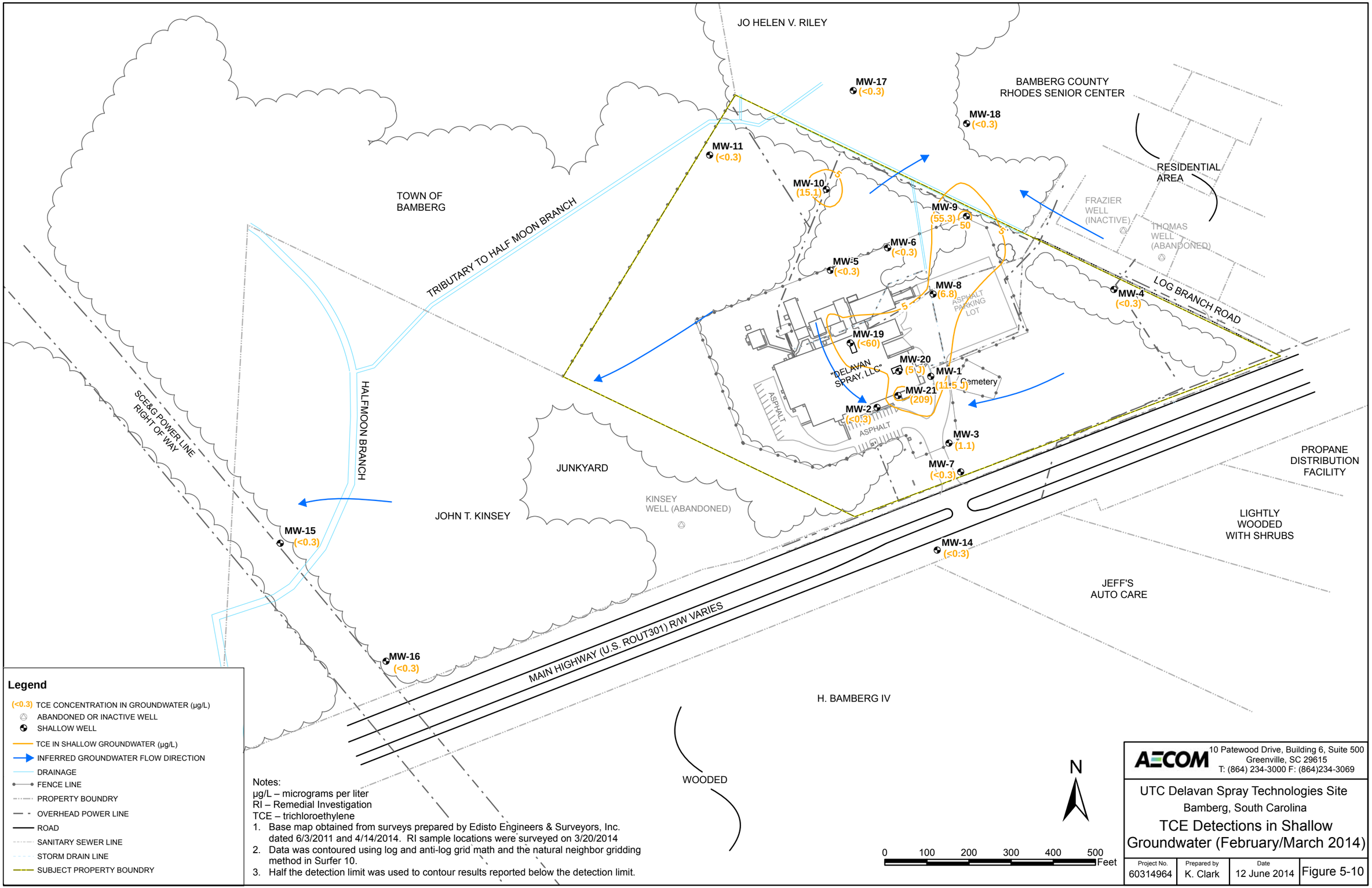
PCE Detections in Shallow Groundwater (February/March 2014)

Project No.	Prepared by	Date	
60314964	K. Clark	12 June 2014	Figure 5-9

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 5-9 ShallowPCEVs10.mxd



Legend

- (<0.3) TCE CONCENTRATION IN GROUNDWATER (µg/L)
- 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.

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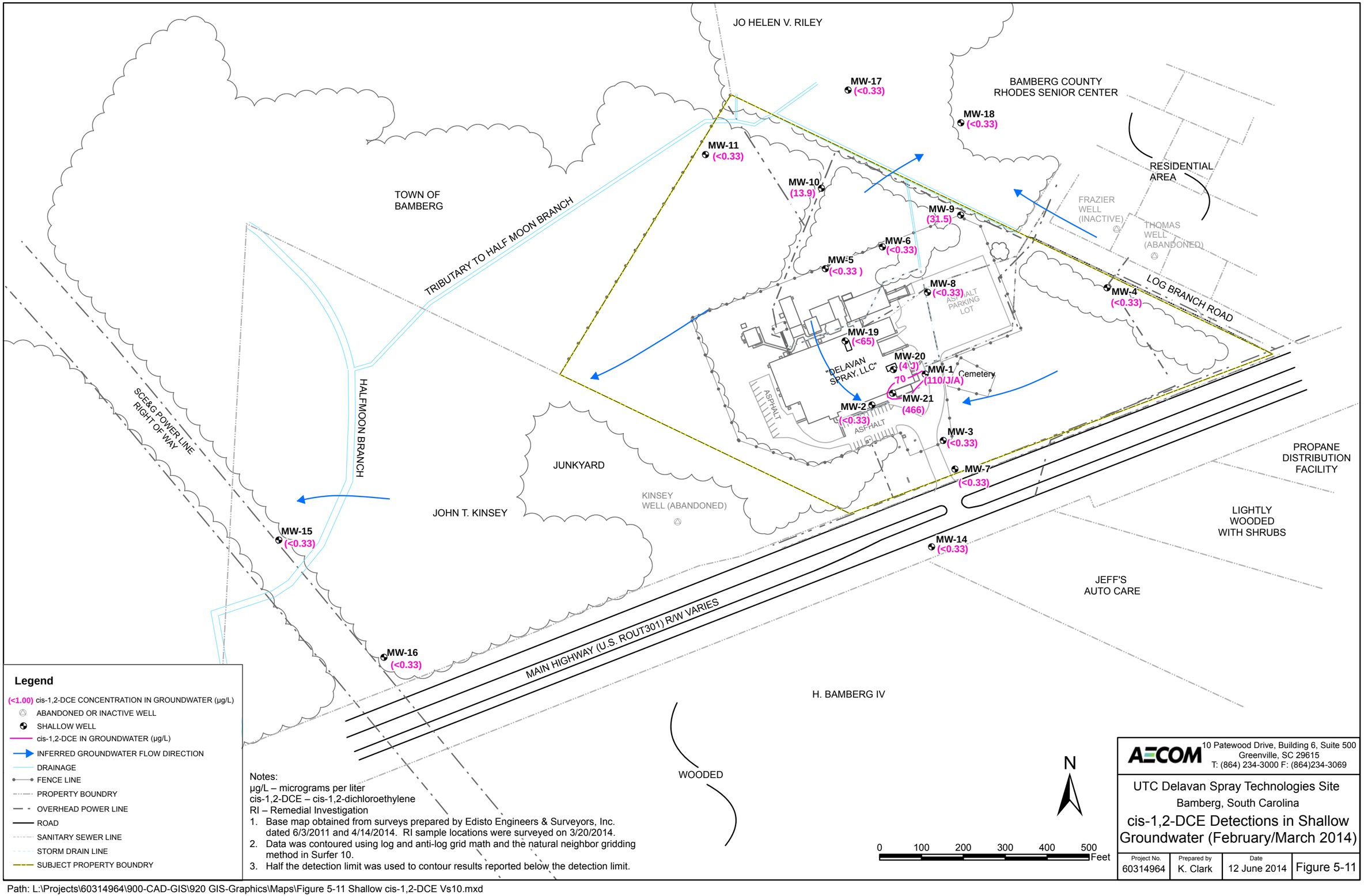
TCE Detections in Shallow Groundwater (February/March 2014)

Project No.	Prepared by	Date	
60314964	K. Clark	12 June 2014	Figure 5-10

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 5-10 ShallowTCEVs10.mxd



Legend

- (<1.00) cis-1,2-DCE CONCENTRATION IN GROUNDWATER (µg/L)
- 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.

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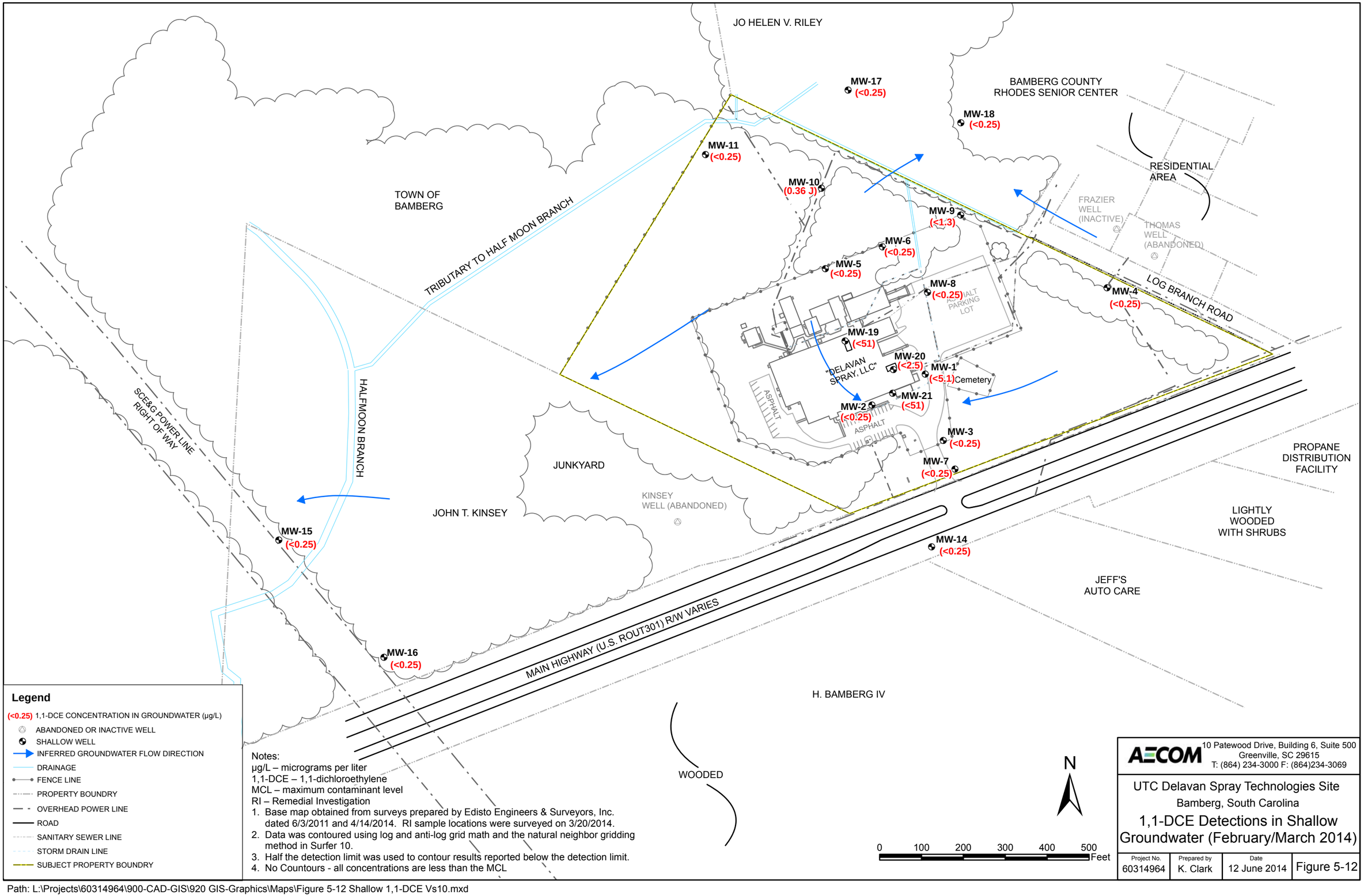
cis-1,2-DCE Detections in Shallow Groundwater (February/March 2014)

Project No.	Prepared by	Date	
60314964	K. Clark	12 June 2014	Figure 5-11

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 5-11 Shallow cis-1,2-DCE Vs10.mxd



Legend

- (<0.25) 1,1-DCE CONCENTRATION IN GROUNDWATER (µg/L)
- 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.
4. No Countours - all concentrations are less than the MCL

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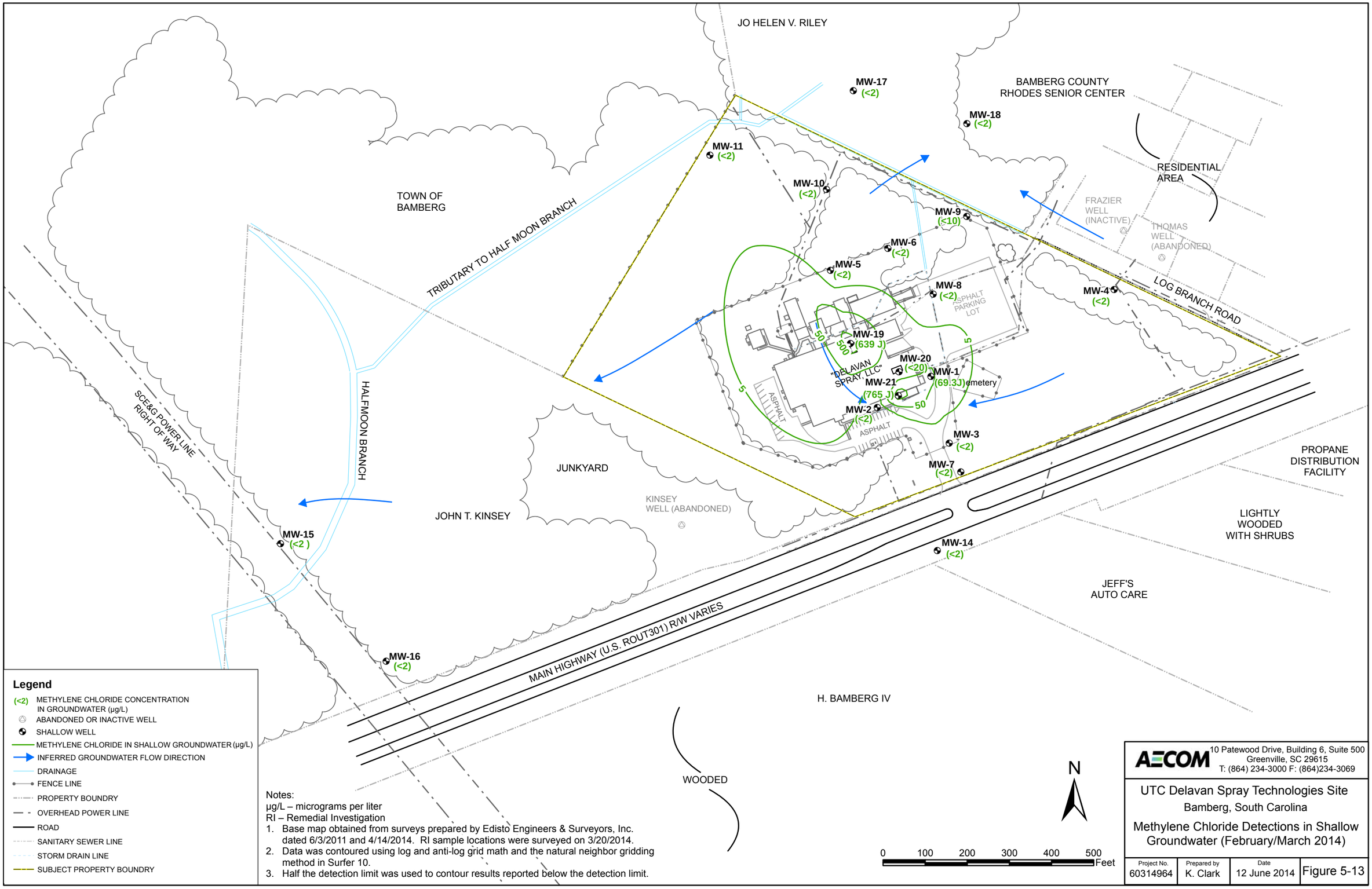
1,1-DCE Detections in Shallow Groundwater (February/March 2014)

Project No.	Prepared by	Date	Figure
60314964	K. Clark	12 June 2014	Figure 5-12

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 5-12 Shallow 1,1-DCE Vs10.mxd



Legend

- (<2) METHYLENE CHLORIDE CONCENTRATION IN GROUNDWATER (µg/L)
- ABANDONED OR INACTIVE WELL
- SHALLOW WELL
- METHYLENE CHLORIDE 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

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.

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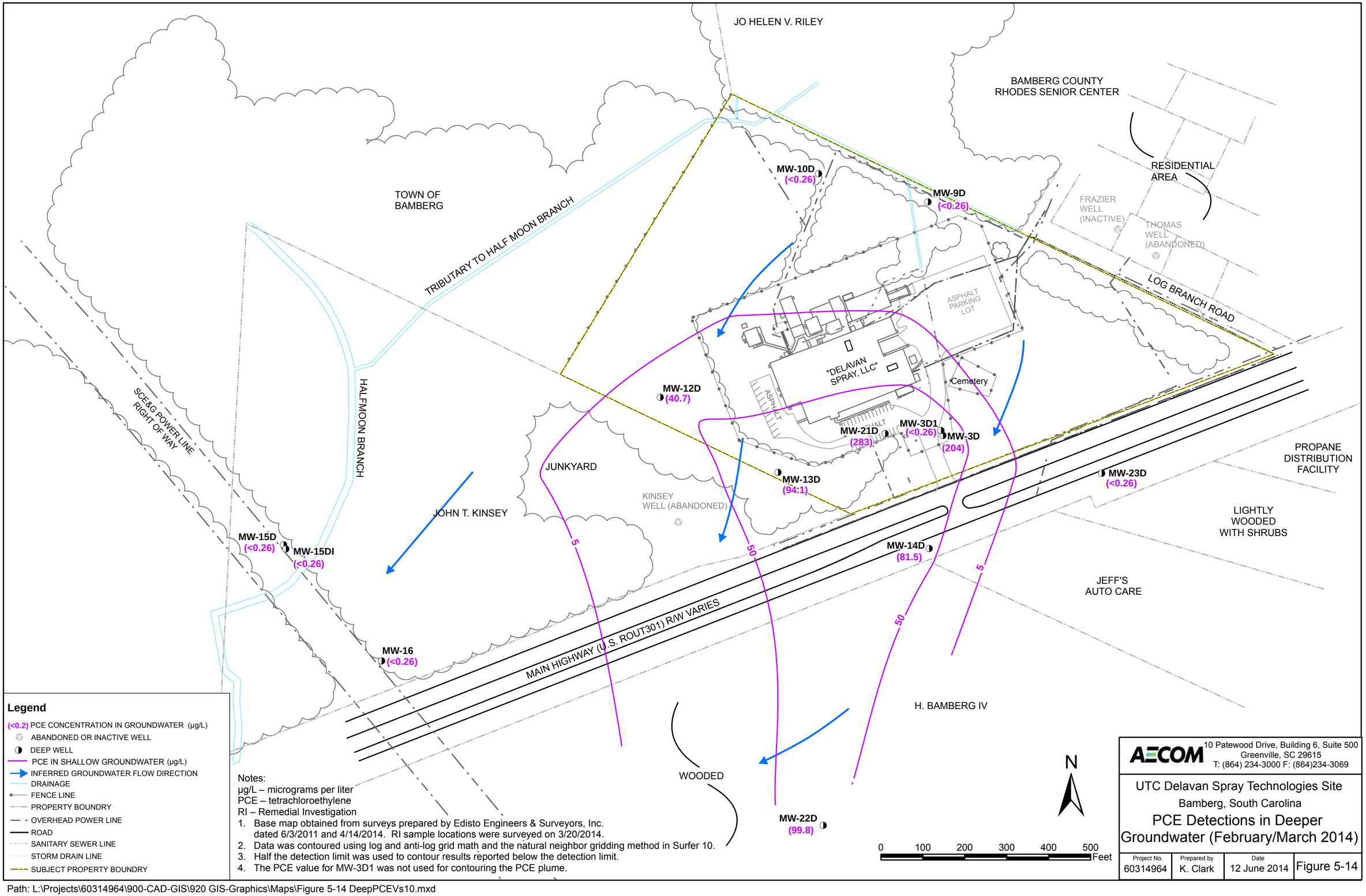
Methylene Chloride Detections in Shallow Groundwater (February/March 2014)

Project No.	Prepared by	Date	
60314964	K. Clark	12 June 2014	Figure 5-13

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 5-13 Shallow Methylene ChlorideVs10.mxd



Legend

- (<0.2) PCE CONCENTRATION IN GROUNDWATER (µg/L)
- 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.

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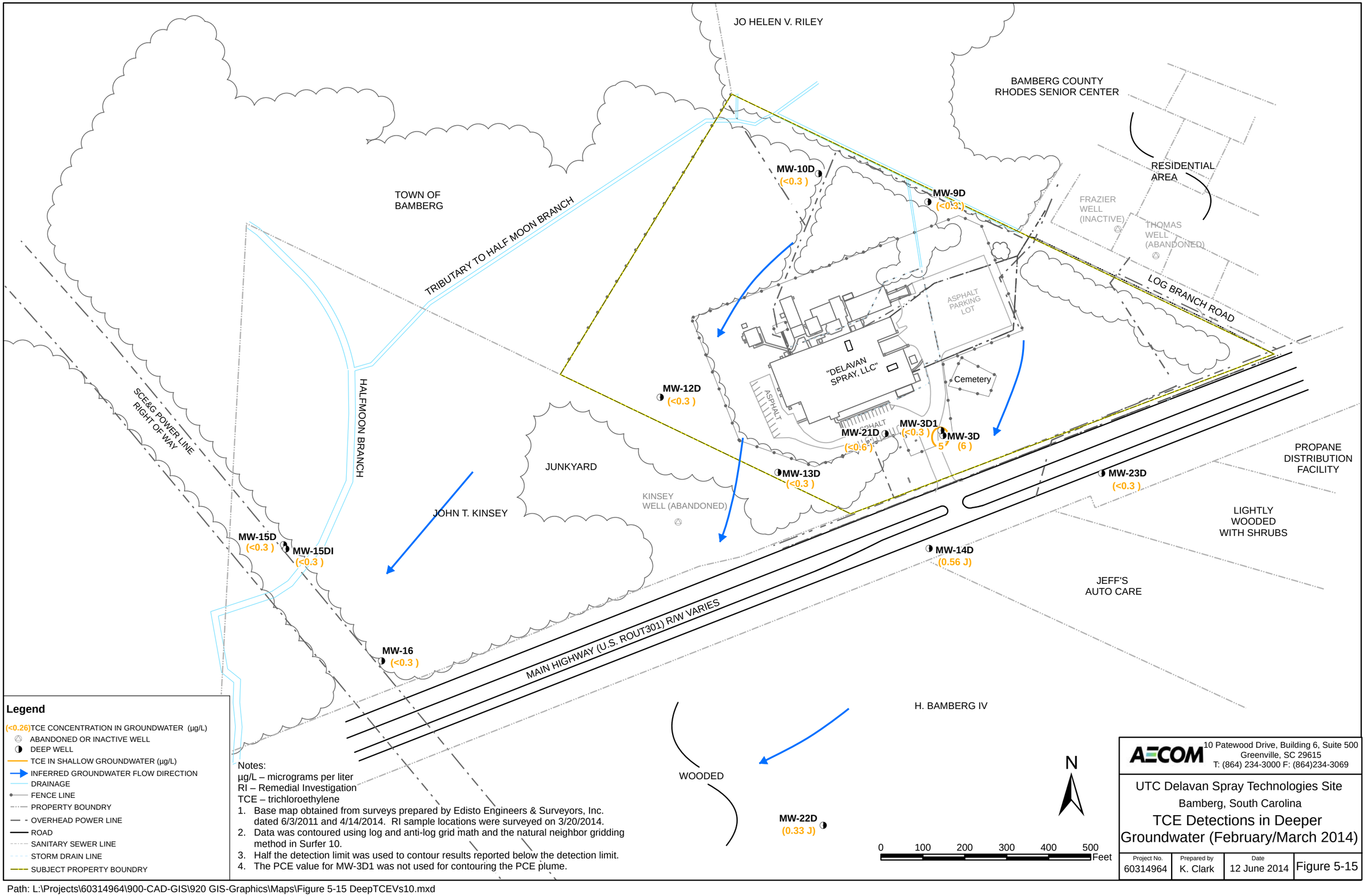
PCE Detections in Deeper Groundwater (February/March 2014)

Project No.	Prepared by	Date	
60314964	K. Clark	12 June 2014	Figure 5-14

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 5-14 DeepPCEVs10.mxd



Legend

- (<0.26) TCE CONCENTRATION IN GROUNDWATER (µg/L)
- ABANDONED OR INACTIVE WELL
- DEEP 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.
4. The PCE value for MW-3D1 was not used for contouring the PCE plume.

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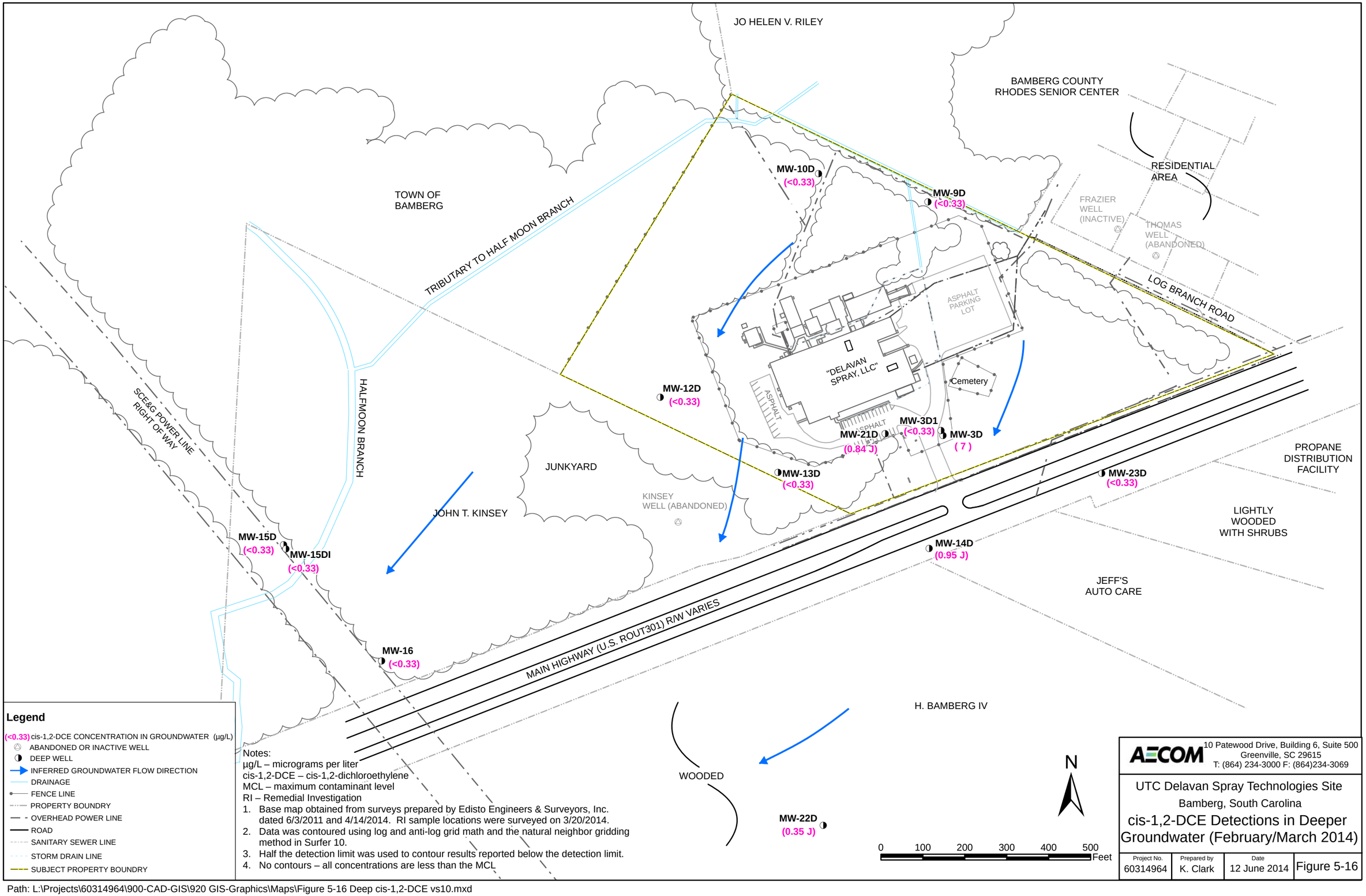
UTC Delavan Spray Technologies Site
Bamberg, South Carolina

TCE Detections in Deeper Groundwater (February/March 2014)

Project No.	Prepared by	Date	
60314964	K. Clark	12 June 2014	Figure 5-15

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 5-15 DeepTCEVs10.mxd



Legend

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

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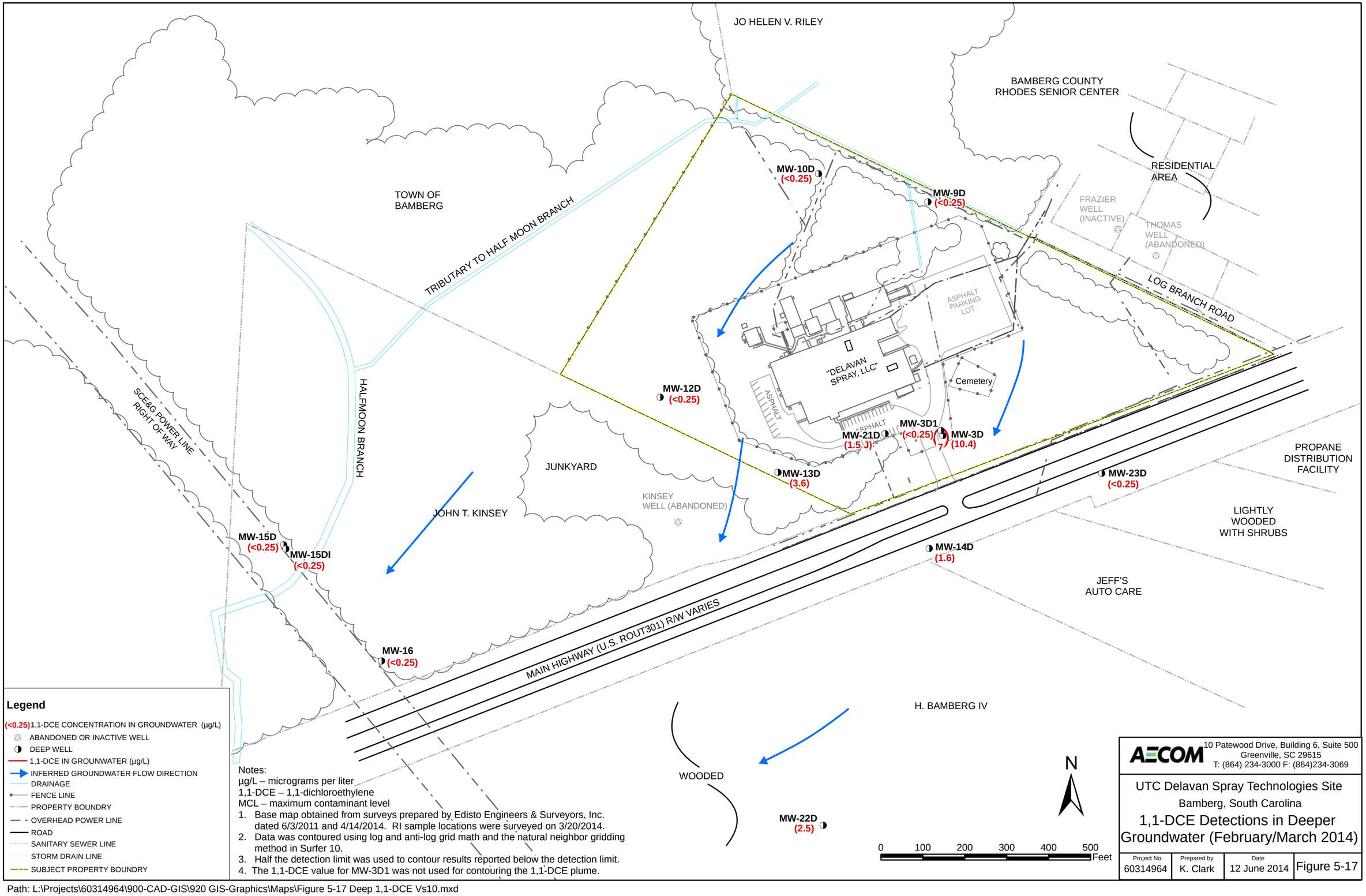
cis-1,2-DCE Detections in Deeper Groundwater (February/March 2014)

Project No.	Prepared by	Date	
60314964	K. Clark	12 June 2014	Figure 5-16

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 5-16 Deep cis-1,2-DCE vs10.mxd



Legend

- (<0.25) 1,1-DCE CONCENTRATION IN GROUNDWATER (µg/L)
- ABANDONED OR INACTIVE WELL
- DEEP WELL
- 1,1-DCE IN GROUNWATER (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
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.

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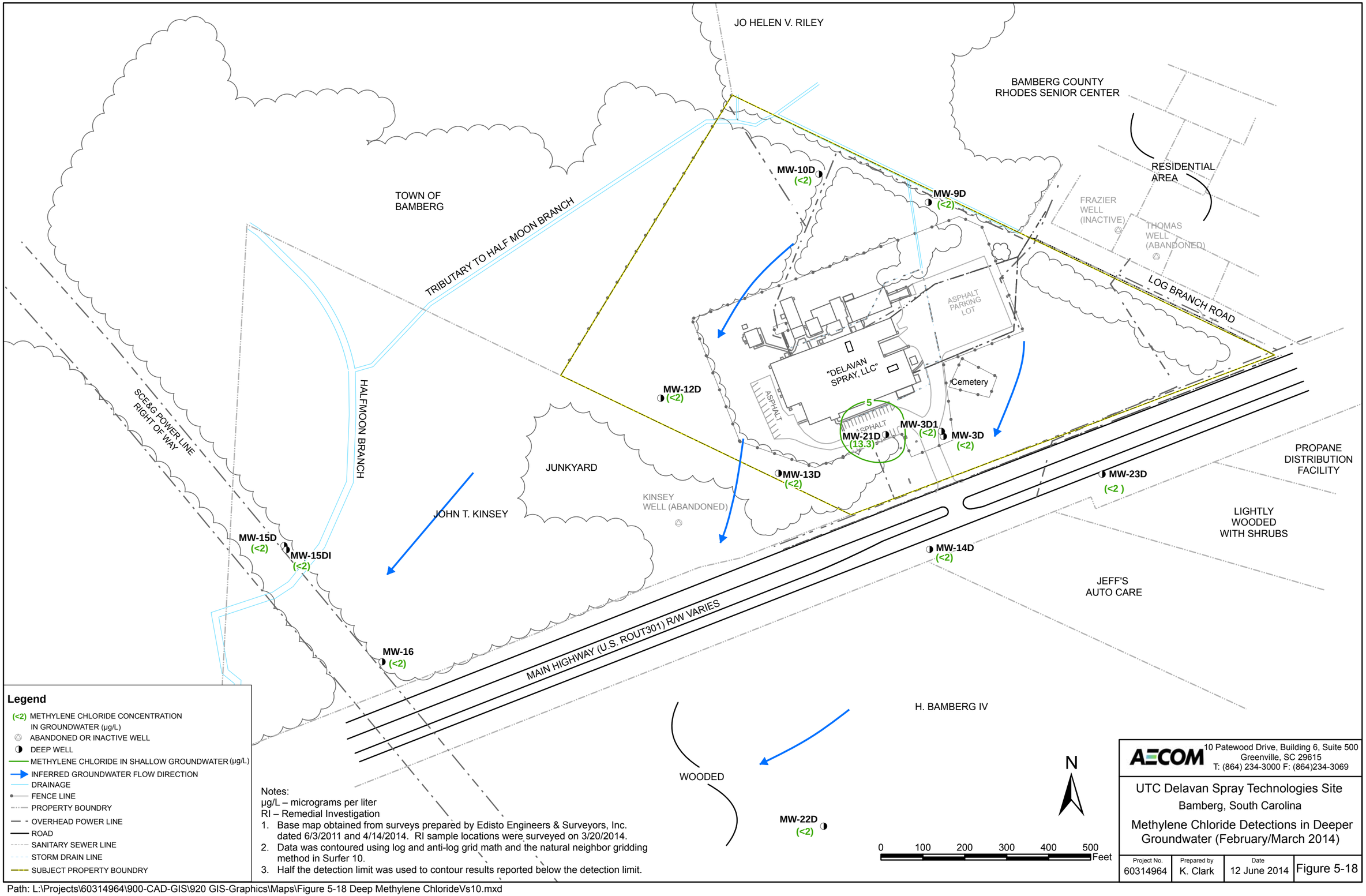
1,1-DCE Detections in Deeper Groundwater (February/March 2014)

Project No.	Prepared by	Date	
60314964	K. Clark	12 June 2014	Figure 5-17

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 5-17 Deep 1,1-DCE Vs10.mxd



Legend

- (<2) METHYLENE CHLORIDE CONCENTRATION IN GROUNDWATER (µg/L)
- ABANDONED OR INACTIVE WELL
- DEEP WELL
- METHYLENE CHLORIDE 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

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.

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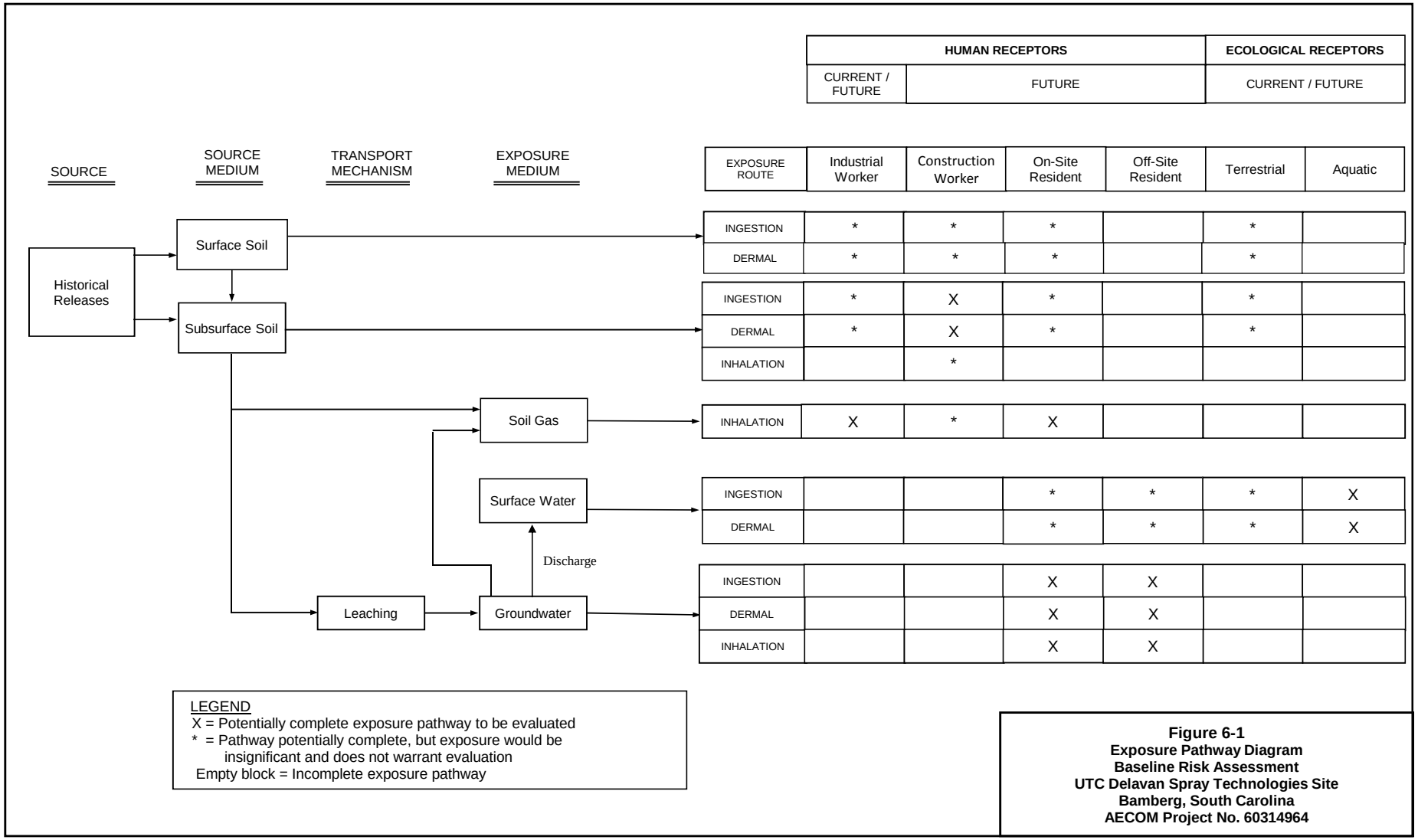
Methylene Chloride Detections in Deeper Groundwater (February/March 2014)

Project No.	Prepared by	Date	
60314964	K. Clark	12 June 2014	Figure 5-18

Path: L:\Projects\60314964\900-CAD-GIS\920 GIS-Graphics\Maps\Figure 5-18 Deep Methylene ChlorideVs10.mxd



	HUMAN RECEPTORS				ECOLOGICAL RECEPTORS	
EXPOSURE ROUTE	CURRENT / FUTURE: Industrial Worker	FUTURE: Construction Worker	FUTURE: On-Site Resident	FUTURE: Off-Site Resident	CURRENT / FUTURE: Terrestrial	CURRENT / FUTURE: Aquatic
INGESTION (Surface Soil)	*	*	*		*	
DERMAL (Surface Soil)	*	*	*		*	
INGESTION (Subsurface Soil)	*	X	*		*	
DERMAL (Subsurface Soil)	*	X	*		*	
INHALATION (Subsurface Soil)		*				
INHALATION (Soil Gas)	X	*	X			
INGESTION (Surface Water)			*	*	*	X
DERMAL (Surface Water)			*	*	*	X
INGESTION (Groundwater)			X	X		
DERMAL (Groundwater)			X	X		
INHALATION (Groundwater)			X	X		

LEGEND
X = Potentially complete exposure pathway to be evaluated
* = Pathway potentially complete, but exposure would be insignificant and does not warrant evaluation
Empty block = Incomplete exposure pathway

Figure 6-1
Exposure Pathway Diagram
Baseline Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Figure 6-2
Ecological Risk Assessment Process in USEPA Region 4
Ecological Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Screening-Level Ecological Risk Assessment (SLERA)

Step 1: Problem Formulation and Effects Evaluation	- Evaluation and aggregation of data - Identification of Ecological Screening Values (ESVs)
Step 2: Exposure Estimation and Risk Calculation	- Description of ecological setting and sensitive receptors - Development of preliminary conceptual site model (CSM) - Calculation of screening-level hazard quotients (HQs)
SMDP 1: Risk assessment/management team agrees on need to continue to Baseline ERA (Step 3a) or to end with completed SLERA report documenting that there are no chemicals of potential ecological concern (COPECs).	

Baseline Ecological Risk Assessment

Step 3a: Problem Formulation	- Identification of site-specific assessment endpoints - Refinement of conceptual site model - Refinement screening of Preliminary COPECs - Risk characterization to identify Final COPECs
SMDP 2a: Team agrees on need to continue to Step 3b or to end with completed ERA report documenting that there are no final COPECs.	

Step 3b: Additional Problem Formulation	- Development of risk questions to be answered in subsequent steps
SMDP 2b: Team agrees on ERA objectives defined in Step 3b and the need to continue to Step 4.	

Step 4: Study Design and Data Quality Objectives	- Identification of additional measurement endpoints - Design of study to obtain additional data - Identification of data quality objectives - Completion of Baseline ERA Work Plan and Sampling & Analysis Plan
SMDP 3: Team approves ERA Work Plan and Sampling & Analysis Plan.	

Step 5: Field Verification of Sampling Design	- Verification that samples specified in Step 4 can be collected - If study design changes are needed, there is an additional SMDP (SMDP 3a) at this point to approve changes
Step 6: Site Investigation and Data Analysis	- Collection of field data - Analysis of data: exposure and effects assessments

Step 7: Risk Characterization	- Risk Estimation
	  - Calculation of HQs and HIs
	  - Evaluation of the weight of evidence
	  - Evaluation of uncertainty
	- Risk Description
	  - Evaluation of the degree of confidence in risk estimates
	  - Interpretation of ecological significance
	  - Identification of final COCs for each assessment endpoint

SMDP 4: Team agrees on whether to continue to Step 8 or end with completed ERA report documenting that there are no final COCs.	

Step 8: Risk Management	- Identification of the range of risk-based and ARAR-based remedial goal options (RGOs) for each final COC and its associated assessment endpoint - Consideration of RGOs by risk managers in choosing remediation levels
SMDP 5: Team agrees on final conclusions and recommendations of ERA and determination of RGOs.	

SMDP = Scientific/management decision point

TABLES

Table 3-1
Soil Boring Information
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Well/Boring Number	Northing	Easting	Elevation	Date Installed	Company	Installation Type	Total Depth (ft BGS)	Comments
DPT-28	527588.70	1985994.98	145.90	2/27/2014	AECOM	DPT - Geoprobe	10.00	
DPT-29	527545.70	1985744.28	149.21	2/27/2014	AECOM	DPT - Geoprobe	10.00	
DPT-30	527547.73	1985712.47	148.53	2/27/2014	AECOM	DPT - Geoprobe	10.00	
DPT-31	527514.33	1985689.81	148.85	2/27/2014	AECOM	DPT - Geoprobe	10.00	
DPT-32	527467.62	1985689.73	148.43	2/27/2014	AECOM	DPT - Geoprobe	10.00	
DPT-33	527439.04	1985676.40	148.17	2/27/2014	AECOM	DPT - Geoprobe	10.00	
DPT-34	527416.64	1985674.75	148.48	3/1/2014	AECOM	DPT - Geoprobe	10.00	
DPT-35	527456.18	1985777.81	148.47	3/1/2014	AECOM	DPT - Geoprobe	20.00	Location converted to MW-19.
DPT-36	527454.71	1985804.50	148.37	3/1/2014	AECOM	DPT - Geoprobe	15.00	
DPT-37	527438.18	1985792.38	148.45	3/2/2014	AECOM	Hand Auger	12.30	
DPT-38	527442.25	1985768.10	148.45	3/2/2014	AECOM	Hand Auger	12.20	
DPT-39	527409.06	1985884.81	148.54	3/2/2014	AECOM	Hand Auger	12.30	
DPT-40	527404.15	1985909.29	148.45	3/3/2014	AECOM	Hand Auger	12.00	
DPT-41	527388.72	1985893.51	148.50	3/2/2014	AECOM	Hand Auger	15.30	Location converted to MW-20.
DPT-42	527389.13	1985872.52	148.50	3/3/2014	AECOM	Hand Auger	12.30	
DPT-43	527356.35	1985909.54	148.53	3/3/2014	AECOM	Hand Auger	12.30	
DPT-44	527354.20	1985895.24	148.54	3/3/2014	AECOM	Hand Auger	12.20	
DPT-45	527332.46	1985891.49	148.17	2/25/2014	AECOM	CME 750	35.00	Location of MW-21.
DPT-46	527825.60	1985718.07	142.39	2/28/2014	AECOM	DPT - Geoprobe	10.00	
DPT-47	527813.13	1985726.04	142.87	2/28/2014	AECOM	DPT - Geoprobe	10.00	
DPT-48	527815.62	1985734.49	142.93	2/28/2014	AECOM	DPT - Geoprobe	10.00	
DPT-49	527724.40	1986076.57	144.28	2/26/2014	AECOM	DPT - Geoprobe	10.00	
DPT-50	527725.82	1986094.01	144.10	2/26/2014	AECOM	DPT - Geoprobe	10.00	
DPT-51	527708.61	1986099.57	144.03	2/26/2014	AECOM	DPT - Geoprobe	10.00	
DPT-52	527700.97	1986076.49	144.17	2/26/2014	AECOM	DPT - Geoprobe	10.00	
DPT-53	527690.01	1986087.61	144.60	2/26/2014	AECOM	DPT - Geoprobe	10.00	
DPT-54	527672.24	1986088.47	144.80	2/26/2014	AECOM	DPT - Geoprobe	10.00	
DPT-55	527659.22	1986077.60	145.15	2/26/2014	AECOM	DPT - Geoprobe	10.00	
DPT-56	527671.48	1986057.78	145.10	2/26/2014	AECOM	DPT - Geoprobe	10.00	
DPT-57	527687.62	1986055.91	144.36	2/26/2014	AECOM	DPT - Geoprobe	10.00	
BG-1	527520.62	1985406.35	147.45	2/28/2014	AECOM	DPT - Geoprobe	20.00	
BG-2	527088.76	1985765.84	146.21	2/28/2014	AECOM	DPT - Geoprobe	20.00	
BG-3	527260.80	1986153.76	147.47	2/28/2014	AECOM	DPT - Geoprobe	20.00	
BG-4	527454.37	1986585.08	147.60	2/27/1947	AECOM	DPT - Geoprobe	20.00	
BG-5	527573.21	1986328.91	146.51	2/28/2014	AECOM	DPT - Geoprobe	20.00	

Notes:
ft bgs - feet below ground surface
Horizontal coordinates are referenced to the State Plane Coordinate System and the North American Datum of 1983 (NAD 83).
Vertical locations are referenced to the North American Vertical Datum of 1988 (NAVD 88).

Table 3-2
Sub-Slab Vapor Point Information
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Location	Northing	Easting	Elevation	Date Installed	Company	Installation Type	Approximate Concrete Thickness (Inches)	Approximate Top of Screen (ft Below Concrete)	Approximate Bottom of Screen (ft Below Concrete)	Soil Type in Sample Interval	Comments
SSV-1	527411.01	1985698.80	148.51	3/3/2014	AECOM	1" drill hole (approx)	3.75	0.5	0.57	silty sand (SM)	added ~0.5-1 inch sand above point then bentonite gel to soil surface; hydrated with potable water
SSV-2	527439.32	1985801.76	148.46	3/3/2014	AECOM	1" drill hole (approx)	4	0.5	0.57	silty sand (SM)	added ~0.5-1 inch sand above point then bentonite gel to soil surface; hydrated with potable water
SSV-3	527370.80	1985900.69	148.46	3/3/2014	AECOM	1" drill hole (approx)	6	0.5	0.57	poorly graded sand with silt (SP-SM)	added ~0.5-1 inch sand above point then bentonite gel to soil surface; hydrated with potable water
SSV-4	527319.95	1985745.07	148.43	3/3/2014	AECOM	1" drill hole (approx)	4.5	0.5	0.57	likely silty sand (SM), but no nearby borings to confirm	added ~0.5-1 inch sand above point then bentonite gel to soil surface; hydrated with potable water

Notes:
ft - feet
1. Horizontal coordinates are referenced to the State Plane Coordinate System and the North American Datum of 1983 (NAD 83).
2. Vertical locations are referenced to the North American Vertical Datum of 1988 (NAVD 88).

Table 3-3
Monitoring Well Construction Details
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Well Number	Northing	Easting	Date Installed	Installed By	Ground Surface Elevation (ft MSL)	Top of Casing Elev (ft MSL)	Stick-up Height (ft)	Well Diameter (Inches)	Casing Type	Total Depth (ft bgs)	Classification	Surface Casing Depth (ft bgs)	Screen Interval (ft bgs)
MW-1	527377.94	1985969.04	6/4/2003	Hart & Hickman	147.56	147.19	-0.37	2	PVC	18	Shallow	NA	3-18
MW-2	527303.71	1985841.78	6/4/2003	Hart & Hickman	147.81	147.63	-0.18	2	PVC	18	Shallow	NA	3-18
MW-3	527219.26	1986012.34	6/4/2003	Hart & Hickman	148.34	148.11	-0.23	2	PVC	18	Shallow	NA	3-18
MW-3D	527231.99	1986009.14	12/13/2007	Hart & Hickman	148.28	148.12	-0.16	2	PVC	49	Deep	24	44-49
MW-3D1	527243.77	1986004.60	10/29/2009	Hart & Hickman	148.12	147.93	-0.19	2	PVC	85	Deep	65	75-85
MW-4	527583.49	1986403.57	6/4/2003	Hart & Hickman	147.30	147.03	-0.27	2	PVC	14	Shallow	NA	4-14
MW-5	527628.44	1985730.62	6/4/2003	Hart & Hickman	145.34	145.46	0.12	2	PVC	14	Shallow	NA	4-14
MW-6	527681.37	1985867.15	6/4/2003	Hart & Hickman	143.45	143.22	-0.23	2	PVC	14	Shallow	NA	4-14
MW-7	527150.98	1986039.96	12/30/2003	Hart & Hickman	149.25	149.03	-0.22	2	PVC	20	Shallow	NA	5-20
MW-8	527572.13	1985974.43	12/29/2003	Hart & Hickman	145.95	145.66	-0.29	2	PVC	20	Shallow	NA	5-20
MW-9	527756.57	1986053.98	12/29/2003	Hart & Hickman	144.11	143.89	-0.22	2	PVC	20	Shallow	NA	5-20
MW-9D	527787.94	1985973.71	12/14/2007	Hart & Hickman	144.80	144.20	-0.60	2	PVC	49	Deep	24	44-49
MW-10	527820.72	1985721.19	12/30/2003	Hart & Hickman	142.56	142.19	-0.37	2	PVC	18	Shallow	NA	3-18
MW-10D	527855.07	1985712.71	12/14/2007	Hart & Hickman	142.08	141.79	-0.29	2	PVC	48	Deep	30	43-48
MW-11	527901.23	1985444.60	12/30/2003	Hart & Hickman	143.77	143.16	-0.61	2	PVC	18	Shallow	NA	3-18
MW-12D	527322.24	1985335.17	10/29/2009	Hart & Hickman	147.86	147.65	-0.21	2	PVC	50	Deep	30	40-50
MW-13D	527143.18	1985615.99	10/29/2009	Hart & Hickman	146.41	146.23	-0.18	2	PVC	50	Deep	30	40-50
MW-14	526965.63	1985984.33	10/26/2009	Hart & Hickman	147.05	146.90	-0.15	2	PVC	20	Shallow	NA	5-20
MW-14D	526962.99	1985976.64	10/27/2009	Hart & Hickman	147.11	146.88	-0.23	2	PVC	50	Deep	29	40-50
MW-15	526981.84	1984425.77	5/18/2011	Hart & Hickman	136.13	135.73	-0.40	2	PVC	19	Shallow	NA	4-19
MW-15D	526971.08	1984437.05	5/19/2011	Hart & Hickman	135.93	135.59	-0.34	2	PVC	45	Deep	30	35-45
MW-15D1	526961.60	1984442.37	4/30/2012	Hart & Hickman	135.94	135.69	-0.25	2	PVC	85	Deep	65	75-85
MW-16	526703.00	1984676.68	5/16/2011	Hart & Hickman	138.74	138.30	-0.44	2	PVC	19	Shallow	NA	4-19
MW-16D	526694.72	1984670.89	5/17/2011	hart & Hickman	138.70	138.38	-0.32	2	PVC	45	Deep	29	35-45
MW-17	528054.31	1985785.06	3/4/2014	AECOM	141.71	141.66	-0.05	2	PVC	28.4	Shallow	NA	13-28
MW-18	527976.58	1986054.35	3/3/2014	AECOM	145.46	145.41	-0.05	2	PVC	26.4	Shallow	NA	11-26
MW-19	527456.18	1985777.81	3/1/2014	AECOM	148.47	148.22	-0.25	2	PVC	20.15	Shallow	NA	5-20
MW-20	527388.72	1985893.51	3/2/2014	AECOM	148.50	148.19	-0.31	2	PVC	15.15	Shallow	NA	5-15
MW-21	527332.46	1985891.49	2/25/2014	AECOM	148.17	147.97	-0.20	2	PVC	34.4	Shallow	NA	19-34
MW-21D	527235.35	1985871.60	2/25/2014	AECOM	147.23	146.92	-0.31	2	PVC	53.4	Deep	31.5	43-53
MW-22D	526303.91	1985723.83	2/26/2014	AECOM	146.06	145.96	-0.10	2	PVC	48.4	Deep	36	38-48
MW-23D	527141.40	1986387.76	2/27/2014	AECOM	148.35	148.26	-0.09	2	PVC	50.4	Deep	34	40-50

Notes:
bgs = below ground surface; NA = Not Applicable
1. Top of casing and ground surface elevations surveyed by Edisto Engineers and Surveyors, Inc. on May 23, 2011 and March 20, 2014.
2. Horizontal coordinates are referenced to the State Plane Coordinate System and the North American Datum of 1983 (NAD 83).
3. Vertical locations are referenced to the North American Vertical Datum of 1988 (NAVD 88).
4. MW-15D1 TOC elevation tied into existing site wells by H&H on April 30, 2012.
5. Hart and Hickman well information from Table 1 of the RI Workplan (H&H, 2013)
6. MW-19 was co-located with DPT-35, MW20 was co-located with DPT-41, and MW-21 was co-located with DPT-45.

Table 4-1
Groundwater Levels and Elevations
UTC 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 4-1
Groundwater Levels and Elevations
UTC 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 4-1
Groundwater Levels and Elevations
UTC 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	
						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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
MW-15D1	85	65	75-85	135.94	135.69	NI	NI	NI	NI	NI	NI	4.25	131.44	2.04	133.65
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
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
MW-17	28.4	--	13-28	142.07	141.66	NI	NI	NI	NI	NI	NI	NI	NI	1.90	139.76
MW-18	26.4	--	11-26	145.68	145.41	NI	NI	NI	NI	NI	NI	NI	NI	9.07	136.34
MW-19	20.15	--	5-20	148.47	148.22	NI	NI	NI	NI	NI	NI	NI	NI	11.35	136.87
MW-20	15.15	--	5-15	148.50	148.19	NI	NI	NI	NI	NI	NI	NI	NI	11.11	137.08
MW-21	34.4	--	19-34	148.43	147.97	NI	NI	NI	NI	NI	NI	NI	NI	11.42	136.55
MW-21D	53.4	31.5	43-53	147.28	146.92	NI	NI	NI	NI	NI	NI	NI	NI	12.51	134.41
MW-22D	48.4	36	38-48	146.42	145.96	NI	NI	NI	NI	NI	NI	NI	NI	11.96	134.00
MW-23D	50.4	34	40-50	148.48	148.26	NI	NI	NI	NI	NI	NI	NI	NI	13.73	134.53

Notes:
bgs = below ground surface; btoc - below top of casing; H&H - Hart & Hickman; NI = Not Installed
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 5-1
Analytical Results for Subsurface Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID				DPT-28 (3-5)	DPT-29 (2-4)	DPT-30 (7-9)	DPT-31 (5-7)
Laboratory ID	Residential		MCL-Based	FA12854-1	FA12854-4	FA12854-2	FA12854-3
Date Collected	RSL		SSL	02/27/14	02/27/14	02/27/14	02/27/14
Volatile Organic Compounds by USEPA Method 8260 (mg/kg)							
1,1,1-Trichloroethane	810	ns	0.07	< 0.00079	< 0.00066	< 0.0007	< 0.00062
1,1,2,2-Tetrachloroethane	0.6	c	—	< 0.0011	< 0.00093	< 0.00099	< 0.00087
1,1,2-Trichloroethane	0.15	c**	0.0016	< 0.0013	< 0.0011	< 0.0011	< 0.00099
1,1-Dichloroethane	3.6	c	—	< 0.00079	< 0.00066	< 0.0007	< 0.00062
1,1-Dichloroethylene	23	n	0.0025	< 0.00079	< 0.00066	< 0.0007	< 0.00062
1,2-Dichloroethane	0.46	c*	0.0014	< 0.00079	< 0.00066	< 0.0007	< 0.00062
1,2-Dichloropropane	1	c*	0.0017	< 0.00079	< 0.00066	< 0.0007	< 0.00062
2-Hexanone	20	n	—	< 0.0038	< 0.0032	< 0.0034	< 0.003
4-Methyl-2-pentanone	530	ns	—	< 0.0039	< 0.0033	< 0.0035	< 0.0031
Acetone	6100	n	—	< 0.012	< 0.0099	< 0.01	**0.0113 J//**
Benzene	1.2	c*	0.0026	< 0.00079	< 0.00066	< 0.0007	< 0.00062
Bromodichloromethane	0.29	c	0.022	< 0.00079	< 0.00066	< 0.0007	< 0.00062
Bromoform	67	c*	0.021	< 0.00085	< 0.00071	< 0.00075	< 0.00067
Carbon disulfide	77	ns	—	< 0.00079	< 0.00066	< 0.0007	< 0.00062
Carbon tetrachloride	0.65	c	0.0019	< 0.0011	< 0.00092	< 0.00097	< 0.00086
Chlorobenzene	28	n	0.068	< 0.00079	< 0.00066	< 0.0007	< 0.00062
Chloroethane	1400	ns	—	< 0.0018	< 0.0015	< 0.0016	< 0.0014
Chloroform	0.32	c	0.022	< 0.00089	< 0.00075	< 0.00079	< 0.0007
cis-1,2-Dichloroethylene	16	n	0.021	< 0.00079	< 0.00066	< 0.0007	< 0.00062
cis-1,3-Dichloropropene	1.8	c*	—	< 0.00079	< 0.00066	< 0.0007	< 0.00062
Dibromochloromethane	0.73	c	0.021	< 0.00079	< 0.00066	< 0.0007	< 0.00062
Ethylbenzene	5.8	c	0.78	< 0.00079	< 0.00066	< 0.0007	< 0.00062
Methyl bromide	0.68	n	—	< 0.0015	< 0.0012	< 0.0013	< 0.0012
Methyl chloride	11	n	—	< 0.0016	< 0.0013	< 0.0014	< 0.0012
Methyl ethyl ketone	2700	n	—	< 0.0059	< 0.0049	< 0.0052	< 0.0046
Methylene chloride	35	c**	0.0013	< 0.0031	< 0.0026	***0.0064 J//***	< 0.0025
Styrene	600	ns	0.11	< 0.00079	< 0.00066	< 0.0007	< 0.00062
Tetrachloroethylene	8.1	c**	0.0023	< 0.00099	< 0.00083	< 0.00088	**0.0017 J//**
Toluene	490	ns	0.69	< 0.00079	< 0.00066	< 0.0007	< 0.00062
trans-1,2-Dichloroethylene	160	n	0.029	< 0.0011	< 0.00088	< 0.00094	< 0.00083
trans-1,3-Dichloropropene	1.8	c*	—	< 0.00079	< 0.00066	< 0.0007	< 0.00062
Trichloroethylene	0.41	c**	0.0018	< 0.0008	< 0.00067	< 0.00071	< 0.00063
Vinyl chloride	0.059	c	0.00069	< 0.0008	< 0.00067	< 0.00071	< 0.00063
Xylene (total)	58	ns	9.8	< 0.0021	< 0.0018	< 0.0019	< 0.0016
Semi-Volatile Organic Compounds by USEPA Method 8270 (mg/kg)							
1,2,4-Trichlorobenzene	5.8	c**	0.2	< 0.019	< 0.018	< 0.019	< 0.019
1,2-Dichlorobenzene	180	ns	0.58	< 0.019	< 0.018	< 0.019	< 0.019
1,3-Dichlorobenzene	—		—	< 0.019	< 0.018	< 0.019	< 0.019
1,4-Dichlorobenzene	2.6	c	0.072	< 0.019	< 0.018	< 0.019	< 0.019
2,4,5-Trichlorophenol	620	n	—	< 0.025	< 0.024	< 0.024	< 0.025
2,4,6-Trichlorophenol	6.2	c**	—	< 0.019	< 0.018	< 0.019	< 0.019
2,4-Dichlorophenol	18	n	—	< 0.02	< 0.019	< 0.019	< 0.02
2,4-Dimethylphenol	120	n	—	< 0.021	< 0.02	< 0.02	< 0.021
2,4-Dinitrophenol	12	n	—	< 0.19	< 0.18	< 0.19	< 0.19
2,4-Dinitrotoluene	1.7	c*	—	< 0.022	< 0.021	< 0.021	< 0.022
2,6-Dinitrotoluene	0.36	c*	—	< 0.021	< 0.02	< 0.02	< 0.021
2-Chloronaphthalene	630	n	—	< 0.023	< 0.022	< 0.022	< 0.023
2-Chlorophenol	39	n	—	< 0.019	< 0.018	< 0.019	< 0.019
2-Methylnaphthalene	23	n	—	< 0.019	< 0.018	< 0.019	< 0.019
2-Methylphenol	310	n	—	< 0.019	< 0.018	< 0.019	< 0.019
2-Nitroaniline	61	n	—	< 0.038	< 0.037	< 0.037	< 0.038
2-Nitrophenol	—		—	< 0.019	< 0.018	< 0.019	< 0.019
3&4-Methylphenol	310	n	—	< 0.038	< 0.037	< 0.037	< 0.038
3,3'-Dichlorobenzidine	1.2	c	—	< 0.019	< 0.018	< 0.019	< 0.019
3-Nitroaniline	—		—	< 0.038	< 0.037	< 0.037	< 0.038
4,6-Dinitro-o-cresol	0.49	n	—	< 0.076	< 0.073	< 0.074	< 0.076
4-Bromophenyl phenyl ether	—		—	< 0.019	< 0.018	< 0.019	< 0.019
4-Chloro-3-methyl phenol	620	n	—	< 0.019	< 0.018	< 0.019	< 0.019
4-Chloroaniline	2.7*	c	—	< 0.019	< 0.018	< 0.019	< 0.019
4-Chlorophenyl phenyl ether	—		—	< 0.028	< 0.027	< 0.028	< 0.028

Table 5-1
Analytical Results for Subsurface Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID				DPT-28 (3-5)		DPT-29 (2-4)		DPT-30 (7-9)		DPT-31 (5-7)	
Laboratory ID	Residential		MCL-Based	FA12854-1		FA12854-4		FA12854-2		FA12854-3	
Date Collected	RSL		SSL	02/27/14		02/27/14		02/27/14		02/27/14	
Semi-Volatile Organic Compounds by USEPA Method 8270 (mg/kg)											
4-Nitroaniline	25	c**	—	< 0.038		< 0.037		< 0.037		< 0.038	
4-Nitrophenol	—		—	< 0.15		< 0.15		< 0.15		< 0.15	
Acenaphthene	350	n	—	< 0.024		< 0.023		< 0.023		< 0.024	
Acenaphthylene	350	n	—	< 0.019		< 0.018		< 0.019		< 0.019	
Anthracene	1700	n	—	< 0.019		< 0.018		< 0.019		< 0.019	
Benzo(a)anthracene	0.15	c	—	< 0.019		< 0.018		< 0.019		< 0.019	
Benzo(a)pyrene	0.015	c	0.24	< 0.019		< 0.018		< 0.019		< 0.019	
Benzo(b)fluoranthene	0.15	c	—	< 0.019		< 0.018		< 0.019		< 0.019	
Benzo(g,h,i)perylene	—		—	< 0.019		< 0.018		< 0.019		< 0.019	
Benzo(k)fluoranthene	1.5	c	—	< 0.021		< 0.02		< 0.02		< 0.021	
Benzoic Acid	25000	nm	—	< 0.19		< 0.18		< 0.19		< 0.19	
Benzyl Alcohol	620	n	—	< 0.019		< 0.018		< 0.019		< 0.019	
bis(2-Chloroethoxy)methane	18	n	—	< 0.019		< 0.018		< 0.019		< 0.019	
bis(2-Chloroethyl)ether	0.23	c	—	< 0.019		< 0.018		< 0.019		< 0.019	
bis(2-Chloroisopropyl)ether	—		—	< 0.02		< 0.019		< 0.019		< 0.02	
bis(2-Ethylhexyl)phthalate	38	c*	1.4	< 0.038		< 0.037		< 0.037		< 0.038	
Butyl benzyl phthalate	280	c*	—	< 0.038		< 0.037		< 0.037		< 0.038	
Carbazole	—		—	< 0.019		< 0.018		< 0.019		< 0.019	
Chrysene	15	c	—	< 0.019		< 0.018		< 0.019		< 0.019	
Di-n-butyl phthalate	620	n	—	< 0.038		< 0.037		< 0.037		< 0.038	
Di-n-octyl phthalate	62	n	—	< 0.038		< 0.037		< 0.037		< 0.038	
Dibenzo(a,h)anthracene	0.015	c	—	< 0.019		< 0.018		< 0.019		< 0.019	
Dibenzofuran	7.2	n	—	< 0.019		< 0.018		< 0.019		< 0.019	
Diethyl phthalate	4900	n	—	< 0.038		< 0.037		< 0.037		< 0.038	
Dimethyl phthalate	—		—	< 0.038		< 0.037		< 0.037		< 0.038	
Fluoranthene	230	n	—	< 0.019		< 0.018		< 0.019		< 0.019	
Fluorene	230	n	—	< 0.019		< 0.018		< 0.019		< 0.019	
Hexachlorobenzene	0.33	c	0.013	< 0.019		< 0.018		< 0.019		< 0.019	
Hexachlorobutadiene	6.2	c**	—	< 0.019		< 0.018		< 0.019		< 0.019	
Hexachlorocyclopentadiene	37	n	0.16	< 0.019		< 0.018		< 0.019		< 0.019	
Hexachloroethane	4.3	c**	—	< 0.019		< 0.018		< 0.019		< 0.019	
Indeno(1,2,3-cd)pyrene	0.15	c	—	< 0.019		< 0.018		< 0.019		< 0.019	
Isophorone	560	c*	—	< 0.019		< 0.018		< 0.019		< 0.019	
N-Nitroso-di-n-propylamine	0.076	c	—	< 0.019		< 0.018		< 0.019		< 0.019	
N-Nitrosodiphenylamine	110	c	—	< 0.019		< 0.018		< 0.019		< 0.019	
Naphthalene	3.8	c*	—	< 0.019		< 0.018		< 0.019		< 0.019	
Nitrobenzene	5.1	c*	—	< 0.019		< 0.018		< 0.019		< 0.019	
Pentachlorophenol	0.99	c	0.01	< 0.15		< 0.15		< 0.15		< 0.15	
Phenanthrene	—		—	< 0.019		< 0.018		< 0.019		< 0.019	
Phenol	1800	n	—	< 0.019		< 0.018		< 0.019		< 0.019	
Pyrene	170	n	—	< 0.019		< 0.018		< 0.019		< 0.019	
Metals by USEPA Method 6010 (mg/kg)											
Antimony	3.1	n	0.27	< 0.11		< 0.09		< 0.08		< 0.11	
Arsenic	0.67	c*	0.29	***0.65***		***0.73***		***0.82***		***1.3***	
Beryllium	16	n	3.2	**0.04**	***J//***	**0.03**	***J//***	< 0.02		**0.03**	***J//***
Cadmium	7	n	—	< 0.02		< 0.02		< 0.02		< 0.02	
Chromium	12000	nm	180000	**13.1**		**18.7**		**17.9**		**23**	
Copper	310	n	46	**1**	***J//***	**0.65**	***J//***	**0.81**	***J//***	**1.7**	
Lead	400	L	14	**6**		**3.3**		**3.5**		**4.5**	
Nickel	150	n	—	**0.34**	***J//***	**0.75**	***J//***	**0.28**	***J//***	**1.1**	***J//***
Selenium	39	n	0.26	< 0.17		**0.23**	***J//***	**0.19**	***J//***	***0.42***	***J//***
Silver	39	n	—	< 0.03		< 0.03		< 0.02		**0.05**	***J//***
Thallium	0.16	n	—	< 0.08		< 0.07		< 0.06		< 0.08	
Zinc	2300	n	—	**0.48**	***J//***	**0.89**	***J//***	**0.44**	***J//***	**2.4**	
Mercury by USEPA Method 7471 (mg/kg)											
Mercury	0.94	ns	0.1	**0.01**	***J//***	**0.01**	***J//***	**0.007**	***J//***	**0.03**	***J//***
Hexavalent Chromium by USEPA Method 3060 (mg/kg)											
Hexavalent Chromium	0.3	c	—	**1.3**	***J//***	**3.8**		**1.4**	***J//***	< 0.99	
Soil pH by USEPA Method 9045D (Standard Units)											
Soil pH	—		—	**4.66**		**4.56**		**4.4**		**4.59**	

Table 5-1
Analytical Results for Subsurface Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID				DPT-32 (8-10)	DPT-33 (6-8)	DPT-34 (8-10)	DPT-35 (3-5)
Laboratory ID	Residential		MCL-Based	FA12854-5	FA12854-6	FA12959-1	FA12959-6
Date Collected	RSL		SSL	02/27/14	02/27/14	03/01/14	03/01/14
Volatile Organic Compounds by USEPA Method 8260 (mg/kg)							
1,1,1-Trichloroethane	810	ns	0.07	< 0.00062	< 0.00073	< 0.00085	**0.0248 /M/mD**
1,1,2,2-Tetrachloroethane	0.6	c	—	< 0.00088	< 0.001	< 0.0012	< 0.00095 /M/MD
1,1,2-Trichloroethane	0.15	c**	0.0016	< 0.001	< 0.0012	< 0.0014	< 0.0011
1,1-Dichloroethane	3.6	c	—	< 0.00062	< 0.00073	< 0.00085	< 0.00067
1,1-Dichloroethylene	23	n	0.0025	< 0.00062	< 0.00073	< 0.00085	***0.003 J//***
1,2-Dichloroethane	0.46	c*	0.0014	< 0.00062	< 0.00073	< 0.00085	< 0.00067
1,2-Dichloropropane	1	c*	0.0017	< 0.00062	< 0.00073	< 0.00085	< 0.00067
2-Hexanone	20	n	—	< 0.003	< 0.0036	< 0.0042	< 0.0033
4-Methyl-2-pentanone	530	ns	—	< 0.0031	< 0.0036	< 0.0043	< 0.0034
Acetone	6100	n	—	< 0.0093	< 0.011	< 0.013	< 0.01
Benzene	1.2	c*	0.0026	< 0.00062	< 0.00073	< 0.00085	< 0.00067
Bromodichloromethane	0.29	c	0.022	< 0.00062	< 0.00073	< 0.00085	< 0.00067
Bromoform	67	c*	0.021	< 0.00067	< 0.00079	< 0.00092	< 0.00073
Carbon disulfide	77	ns	—	< 0.00062	< 0.00073	< 0.00085	< 0.00067
Carbon tetrachloride	0.65	c	0.0019	< 0.00086	< 0.001	< 0.0012	< 0.00094
Chlorobenzene	28	n	0.068	< 0.00062	< 0.00073	< 0.00085	< 0.00067
Chloroethane	1400	ns	—	< 0.0014	< 0.0016	< 0.0019	< 0.0015
Chloroform	0.32	c	0.022	< 0.0007	< 0.00082	< 0.00096	**0.0018 J//**
cis-1,2-Dichloroethylene	16	n	0.021	< 0.00062	< 0.00073	< 0.00085	***0.0222 /M/D***
cis-1,3-Dichloropropene	1.8	c*	—	< 0.00062	< 0.00073	< 0.00085	< 0.00067
Dibromochloromethane	0.73	c	0.021	< 0.00062	< 0.00073	< 0.00085	< 0.00067
Ethylbenzene	5.8	c	0.78	< 0.00062	< 0.00073	< 0.00085	< 0.00067
Methyl bromide	0.68	n	—	< 0.0012	< 0.0014	< 0.0016	< 0.0013
Methyl chloride	11	n	—	< 0.0012	< 0.0015	< 0.0017	< 0.0013
Methyl ethyl ketone	2700	n	—	< 0.0047	< 0.0054	< 0.0064	< 0.005
Methylene chloride	35	c**	0.0013	< 0.0025	< 0.0029	< 0.0034	< 0.0027
Styrene	600	ns	0.11	< 0.00062	< 0.00073	< 0.00085	< 0.00067
Tetrachloroethylene	8.1	c**	0.0023	< 0.00078	***0.0228***	***0.371***	***85.4***
Toluene	490	ns	0.69	< 0.00062	< 0.00073	< 0.00085	< 0.00067
trans-1,2-Dichloroethylene	160	n	0.029	< 0.00083	< 0.00097	< 0.0011	< 0.0009
trans-1,3-Dichloropropene	1.8	c*	—	< 0.00062	< 0.00073	< 0.00085	< 0.00067 /M/m
Trichloroethylene	0.41	c**	0.0018	< 0.00063	< 0.00074	< 0.00087	***0.0322***
Vinyl chloride	0.059	c	0.00069	< 0.00063	< 0.00074	< 0.00087	< 0.00069
Xylene (total)	58	ns	9.8	< 0.0017	< 0.0019	< 0.0023	**0.0199**
Semi-Volatile Organic Compounds by USEPA Method 8270 (mg/kg)							
1,2,4-Trichlorobenzene	5.8	c**	0.2	< 0.019	< 0.019	< 0.019	< 0.02
1,2-Dichlorobenzene	180	ns	0.58	< 0.019	< 0.019	< 0.019	< 0.02
1,3-Dichlorobenzene	—		—	< 0.019	< 0.019	< 0.019	< 0.02
1,4-Dichlorobenzene	2.6	c	0.072	< 0.019	< 0.019	< 0.019	< 0.02
2,4,5-Trichlorophenol	620	n	—	< 0.024	< 0.025	< 0.024	< 0.025
2,4,6-Trichlorophenol	6.2	c**	—	< 0.019	< 0.019	< 0.019	< 0.02
2,4-Dichlorophenol	18	n	—	< 0.02	< 0.02	< 0.019	< 0.02
2,4-Dimethylphenol	120	n	—	< 0.021	< 0.021	< 0.021	< 0.022
2,4-Dinitrophenol	12	n	—	< 0.19	< 0.19	< 0.19	< 0.2
2,4-Dinitrotoluene	1.7	c*	—	< 0.022	< 0.022	< 0.021	< 0.022
2,6-Dinitrotoluene	0.36	c*	—	< 0.021	< 0.021	< 0.02	< 0.022
2-Chloronaphthalene	630	n	—	< 0.023	< 0.023	< 0.022	< 0.023
2-Chlorophenol	39	n	—	< 0.019	< 0.019	< 0.019	< 0.02
2-Methylnaphthalene	23	n	—	< 0.019	< 0.019	< 0.019	**0.219**
2-Methylphenol	310	n	—	< 0.019	< 0.019	< 0.019	< 0.02
2-Nitroaniline	61	n	—	< 0.038	< 0.038	< 0.037	< 0.039
2-Nitrophenol	—		—	< 0.019	< 0.019	< 0.019	< 0.02
3&4-Methylphenol	310	n	—	< 0.038	< 0.038	< 0.037	< 0.039
3,3'-Dichlorobenzidine	1.2	c	—	< 0.019	< 0.019	< 0.019	< 0.02 /M/D
3-Nitroaniline	—		—	< 0.038	< 0.038	< 0.037	< 0.039
4,6-Dinitro-o-cresol	0.49	n	—	< 0.076	< 0.077	< 0.074	< 0.079
4-Bromophenyl phenyl ether	—		—	< 0.019	< 0.019	< 0.019	< 0.02
4-Chloro-3-methyl phenol	620	n	—	< 0.019	< 0.019	< 0.019	< 0.02
4-Chloroaniline	2.7*	c	—	< 0.019	< 0.019	< 0.019	< 0.02
4-Chlorophenyl phenyl ether	—		—	< 0.028	< 0.029	< 0.028	< 0.029

Table 5-1
Analytical Results for Subsurface Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID				DPT-32 (8-10)		DPT-33 (6-8)		DPT-34 (8-10)		DPT-35 (3-5)	
Laboratory ID	Residential		MCL-Based	FA12854-5		FA12854-6		FA12959-1		FA12959-6	
Date Collected	RSL		SSL	02/27/14		02/27/14		03/01/14		03/01/14	
Semi-Volatile Organic Compounds by USEPA Method 8270 (mg/kg)											
4-Nitroaniline	25	c**	—	< 0.038		< 0.038		< 0.037		< 0.039	
4-Nitrophenol	—		—	< 0.15		< 0.15		< 0.15		< 0.16	
Acenaphthene	350	n	—	< 0.024		< 0.024		< 0.024		< 0.025	
Acenaphthylene	350	n	—	< 0.019		< 0.019		< 0.019		< 0.02	
Anthracene	1700	n	—	< 0.019		< 0.019		< 0.019		< 0.02	
Benzo(a)anthracene	0.15	c	—	< 0.019		< 0.019		< 0.019		< 0.02	
Benzo(a)pyrene	0.015	c	0.24	< 0.019		< 0.019		< 0.019		< 0.02	
Benzo(b)fluoranthene	0.15	c	—	< 0.019		< 0.019		< 0.019		< 0.02	
Benzo(g,h,i)perylene	—		—	< 0.019		< 0.019		< 0.019		< 0.02	
Benzo(k)fluoranthene	1.5	c	—	< 0.021		< 0.021		< 0.02		< 0.022	
Benzoic Acid	25000	nm	—	< 0.19		< 0.19		< 0.19		< 0.2	
Benzyl Alcohol	620	n	—	< 0.019		< 0.019		< 0.019		< 0.02	
bis(2-Chloroethoxy)methane	18	n	—	< 0.019		< 0.019		< 0.019		< 0.02	
bis(2-Chloroethyl)ether	0.23	c	—	< 0.019		< 0.019		< 0.019		< 0.02	
bis(2-Chloroisopropyl)ether	—		—	< 0.02		< 0.02		< 0.019		< 0.021	
bis(2-Ethylhexyl)phthalate	38	c*	1.4	< 0.038		< 0.038		< 0.037		**0.463**	
Butyl benzyl phthalate	280	c*	—	< 0.038		< 0.038		< 0.037		< 0.039	
Carbazole	—		—	< 0.019		< 0.019		< 0.019		< 0.02	
Chrysene	15	c	—	< 0.019		< 0.019		< 0.019		< 0.02	
Di-n-butyl phthalate	620	n	—	< 0.038		< 0.038		< 0.037		**0.0767**	**J//**
Di-n-octyl phthalate	62	n	—	< 0.038		< 0.038		< 0.037		< 0.039	
Dibenzo(a,h)anthracene	0.015	c	—	< 0.019		< 0.019		< 0.019		< 0.02	
Dibenzofuran	7.2	n	—	< 0.019		< 0.019		< 0.019		**0.0345**	**J//**
Diethyl phthalate	4900	n	—	< 0.038		< 0.038		< 0.037		< 0.039	
Dimethyl phthalate	—		—	< 0.038		< 0.038		< 0.037		< 0.039	
Fluoranthene	230	n	—	< 0.019		< 0.019		< 0.019		< 0.02	
Fluorene	230	n	—	< 0.019		< 0.019		< 0.019		< 0.02	
Hexachlorobenzene	0.33	c	0.013	< 0.019		< 0.019		< 0.019		< 0.02	
Hexachlorobutadiene	6.2	c**	—	< 0.019		< 0.019		< 0.019		< 0.02	
Hexachlorocyclopentadiene	37	n	0.16	< 0.019		< 0.019		< 0.019		< 0.02	
Hexachloroethane	4.3	c**	—	< 0.019		< 0.019		< 0.019		< 0.02	
Indeno(1,2,3-cd)pyrene	0.15	c	—	< 0.019		< 0.019		< 0.019		< 0.02	
Isophorone	560	c*	—	< 0.019		< 0.019		< 0.019		**0.557**	
N-Nitroso-di-n-propylamine	0.076	c	—	< 0.019		< 0.019		< 0.019		< 0.02	
N-Nitrosodiphenylamine	110	c	—	< 0.019		< 0.019		< 0.019		< 0.02	
Naphthalene	3.8	c*	—	< 0.019		< 0.019		< 0.019		**0.082**	**J//**
Nitrobenzene	5.1	c*	—	< 0.019		< 0.019		< 0.019		< 0.02	
Pentachlorophenol	0.99	c	0.01	< 0.15		< 0.15		< 0.15		< 0.16	
Phenanthrene	—		—	< 0.019		< 0.019		< 0.019		**0.134**	**J//**
Phenol	1800	n	—	< 0.019		< 0.019		< 0.019		< 0.02	
Pyrene	170	n	—	< 0.019		< 0.019		< 0.019		< 0.02	
Metals by USEPA Method 6010 (mg/kg)											
Antimony	3.1	n	0.27	< 0.08		< 0.08		< 0.09		—	
Arsenic	0.67	c*	0.29	***0.58***		***1.3***		***1.2***		—	
Beryllium	16	n	3.2	**0.02**	**J//**	**0.03**	**J//**	**0.02**	**J//**	—	
Cadmium	7	n	—	< 0.02		**0.03**	**J//**	< 0.02		—	
Chromium	12000	nm	180000	**13.2**		**27.5**		**14.7**		—	
Copper	310	n	46	**0.88**	**J//**	***266***		**43.3**		—	
Lead	400	L	14	**4.1**		**3**		**3**		—	
Nickel	150	n	—	**0.91**	**J//**	**1.7**		**0.71**	**J//**	—	
Selenium	39	n	0.26	< 0.12		**0.21**	**J//**	< 0.14		—	
Silver	39	n	—	< 0.02		**0.03**	**J//**	**0.04**	**J//**	—	
Thallium	0.16	n	—	< 0.06		< 0.06		< 0.07		—	
Zinc	2300	n	—	**1.1**		**92.9**		**29.3**		—	
Mercury by USEPA Method 7471 (mg/kg)											
Mercury	0.94	ns	0.1	**0.01**	**J//**	**0.01**	**J//**	**0.01**	**J//**	—	
Hexavalent Chromium by USEPA Method 3060 (mg/kg)											
Hexavalent Chromium	0.3	c	—	**2.9**		**3.8**		< 0.96		—	
Soil pH by USEPA Method 9045D (Standard Units)											
Soil pH	—		—	**4.68**		**4.21**		**3.87**		—	

Table 5-1
Analytical Results for Subsurface Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID				DPT-35 (10.5-12.5)	DPT-36 (5-7)	DPT-36 (12-14)	DPT-37 (6-8)
Laboratory ID	Residential		MCL-Based	FA12959-7	FA12959-3	FA12959-5	FA12959-8
Date Collected	RSL		SSL	03/01/14	03/01/14	03/01/14	03/02/14
Volatile Organic Compounds by USEPA Method 8260 (mg/kg)							
1,1,1-Trichloroethane	810	ns	0.07	**0.0046**	< 0.0007	< 0.00075	< 0.00078
1,1,2,2-Tetrachloroethane	0.6	c	—	< 0.0011	< 0.00099	< 0.0011	< 0.0011
1,1,2-Trichloroethane	0.15	c**	0.0016	< 0.0012	< 0.0011	< 0.0012	< 0.0013
1,1-Dichloroethane	3.6	c	—	< 0.00076	< 0.0007	< 0.00075	< 0.00078
1,1-Dichloroethylene	23	n	0.0025	< 0.00076	< 0.0007	< 0.00075	< 0.00078
1,2-Dichloroethane	0.46	c*	0.0014	< 0.00076	< 0.0007	< 0.00075	< 0.00078
1,2-Dichloropropane	1	c*	0.0017	< 0.00076	< 0.0007	< 0.00075	< 0.00078
2-Hexanone	20	n	—	< 0.0037	< 0.0034	< 0.0037	< 0.0038
4-Methyl-2-pentanone	530	ns	—	< 0.0038	< 0.0035	< 0.0038	< 0.0039
Acetone	6100	n	—	< 0.011	< 0.011	< 0.011	< 0.012
Benzene	1.2	c*	0.0026	< 0.00076	< 0.0007	< 0.00075	< 0.00078
Bromodichloromethane	0.29	c	0.022	< 0.00076	< 0.0007	< 0.00075	< 0.00078
Bromoform	67	c*	0.021	< 0.00082	< 0.00076	< 0.00081	< 0.00085
Carbon disulfide	77	ns	—	< 0.00076	< 0.0007	< 0.00075	< 0.00078
Carbon tetrachloride	0.65	c	0.0019	< 0.0011	< 0.00097	< 0.001	< 0.0011
Chlorobenzene	28	n	0.068	< 0.00076	< 0.0007	< 0.00075	< 0.00078
Chloroethane	1400	ns	—	< 0.0017	< 0.0016	< 0.0017	< 0.0018
Chloroform	0.32	c	0.022	< 0.00085	< 0.00079	< 0.00085	< 0.00088
cis-1,2-Dichloroethylene	16	n	0.021	**0.0109**	< 0.0007	**0.0021 J//**	< 0.00078
cis-1,3-Dichloropropene	1.8	c*	—	< 0.00076	< 0.0007	< 0.00075	< 0.00078
Dibromochloromethane	0.73	c	0.021	< 0.00076	< 0.0007	< 0.00075	< 0.00078
Ethylbenzene	5.8	c	0.78	< 0.00076	< 0.0007	< 0.00075	< 0.00078
Methyl bromide	0.68	n	—	< 0.0014	< 0.0013	< 0.0014	< 0.0015
Methyl chloride	11	n	—	< 0.0015	< 0.0014	< 0.0015	< 0.0016
Methyl ethyl ketone	2700	n	—	< 0.0057	< 0.0052	< 0.0056	< 0.0059
Methylene chloride	35	c**	0.0013	< 0.003	< 0.0028	< 0.003	< 0.0031
Styrene	600	ns	0.11	< 0.00076	< 0.0007	< 0.00075	< 0.00078
Tetrachloroethylene	8.1	c**	0.0023	***0.449***	***0.0139 /J/A***	***0.101***	***0.047 /M/m***
Toluene	490	ns	0.69	< 0.00076	< 0.0007	< 0.00075	< 0.00078
trans-1,2-Dichloroethylene	160	n	0.029	< 0.001	< 0.00094	< 0.001	< 0.001
trans-1,3-Dichloropropene	1.8	c*	—	< 0.00076	< 0.0007	< 0.00075	< 0.00078
Trichloroethylene	0.41	c**	0.0018	***0.0023 J//***	< 0.00071	**0.0014 J//**	< 0.0008
Vinyl chloride	0.059	c	0.00069	< 0.00077	< 0.00071	< 0.00077	< 0.0008
Xylene (total)	58	ns	9.8	< 0.002	< 0.0019	< 0.002	< 0.0021
Semi-Volatile Organic Compounds by USEPA Method 8270 (mg/kg)							
1,2,4-Trichlorobenzene	5.8	c**	0.2	< 0.018	< 0.018	< 0.018	< 0.018
1,2-Dichlorobenzene	180	ns	0.58	< 0.018	< 0.018	< 0.018	< 0.018
1,3-Dichlorobenzene	—		—	< 0.018	< 0.018	< 0.018	< 0.018
1,4-Dichlorobenzene	2.6	c	0.072	< 0.018	< 0.018	< 0.018	< 0.018
2,4,5-Trichlorophenol	620	n	—	< 0.024	< 0.024	< 0.024	< 0.023
2,4,6-Trichlorophenol	6.2	c**	—	< 0.018	< 0.018	< 0.018	< 0.018
2,4-Dichlorophenol	18	n	—	< 0.019	< 0.019	< 0.019	< 0.019
2,4-Dimethylphenol	120	n	—	< 0.02	< 0.02	< 0.02	< 0.02
2,4-Dinitrophenol	12	n	—	< 0.18	< 0.18	< 0.18	< 0.18
2,4-Dinitrotoluene	1.7	c*	—	< 0.021	< 0.021	< 0.021	< 0.02
2,6-Dinitrotoluene	0.36	c*	—	< 0.02	< 0.02	< 0.02	< 0.02
2-Chloronaphthalene	630	n	—	< 0.022	< 0.022	< 0.022	< 0.021
2-Chlorophenol	39	n	—	< 0.018	< 0.018	< 0.018	< 0.018
2-Methylnaphthalene	23	n	—	< 0.018	< 0.018	< 0.018	< 0.018
2-Methylphenol	310	n	—	< 0.018	< 0.018	< 0.018	< 0.018
2-Nitroaniline	61	n	—	< 0.037	< 0.037	< 0.037	< 0.036
2-Nitrophenol	—		—	< 0.018	< 0.018	< 0.018	< 0.018
3&4-Methylphenol	310	n	—	< 0.037	< 0.037	< 0.037	< 0.036
3,3'-Dichlorobenzidine	1.2	c	—	< 0.018	< 0.018	< 0.018	< 0.018
3-Nitroaniline	—		—	< 0.037	< 0.037	< 0.037	< 0.036
4,6-Dinitro-o-cresol	0.49	n	—	< 0.074	< 0.073	< 0.074	< 0.072
4-Bromophenyl phenyl ether	—		—	< 0.018	< 0.018	< 0.018	< 0.018
4-Chloro-3-methyl phenol	620	n	—	< 0.018	< 0.018	< 0.018	< 0.018
4-Chloroaniline	2.7*	c	—	< 0.018	< 0.018	< 0.018	< 0.018
4-Chlorophenyl phenyl ether	—		—	< 0.028	< 0.027	< 0.027	< 0.027

Table 5-1
Analytical Results for Subsurface Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID Laboratory ID Date Collected	Residential RSL		MCL-Based SSL	DPT-35 (10.5-12.5) FA12959-7 03/01/14	DPT-36 (5-7) FA12959-3 03/01/14	DPT-36 (12-14) FA12959-5 03/01/14	DPT-37 (6-8) FA12959-8 03/02/14
Semi-Volatile Organic Compounds by USEPA Method 8270 (mg/kg)							
4-Nitroaniline	25	c**	—	< 0.037	< 0.037	< 0.037	< 0.036
4-Nitrophenol	—		—	< 0.15	< 0.15	< 0.15	< 0.14
Acenaphthene	350	n	—	< 0.023	< 0.023	< 0.023	< 0.023
Acenaphthylene	350	n	—	< 0.018	< 0.018	< 0.018	< 0.018
Anthracene	1700	n	—	< 0.018	< 0.018	< 0.018	< 0.018
Benzo(a)anthracene	0.15	c	—	< 0.018	< 0.018	< 0.018	< 0.018
Benzo(a)pyrene	0.015	c	0.24	< 0.018	< 0.018	< 0.018	< 0.018
Benzo(b)fluoranthene	0.15	c	—	< 0.018	< 0.018	< 0.018	< 0.018
Benzo(g,h,i)perylene	—		—	< 0.018	< 0.018	< 0.018	< 0.018
Benzo(k)fluoranthene	1.5	c	—	< 0.02	< 0.02	< 0.02	< 0.02
Benzoic Acid	25000	nm	—	< 0.18	< 0.18	< 0.18	< 0.18
Benzyl Alcohol	620	n	—	< 0.018	< 0.018	< 0.018	< 0.018
bis(2-Chloroethoxy)methane	18	n	—	< 0.018	< 0.018	< 0.018	< 0.018
bis(2-Chloroethyl)ether	0.23	c	—	< 0.018	< 0.018	< 0.018	< 0.018
bis(2-Chloroisopropyl)ether	—		—	< 0.019	< 0.019	< 0.019	< 0.019
bis(2-Ethylhexyl)phthalate	38	c*	1.4	< 0.037	< 0.037	< 0.037	< 0.036
Butyl benzyl phthalate	280	c*	—	< 0.037	< 0.037	< 0.037	< 0.036
Carbazole	—		—	< 0.018	< 0.018	< 0.018	< 0.018
Chrysene	15	c	—	< 0.018	< 0.018	< 0.018	< 0.018
Di-n-butyl phthalate	620	n	—	< 0.037	< 0.037	< 0.037	< 0.036
Di-n-octyl phthalate	62	n	—	< 0.037	< 0.037	< 0.037	< 0.036
Dibenzo(a,h)anthracene	0.015	c	—	< 0.018	< 0.018	< 0.018	< 0.018
Dibenzofuran	7.2	n	—	< 0.018	< 0.018	< 0.018	< 0.018
Diethyl phthalate	4900	n	—	< 0.037	< 0.037	< 0.037	< 0.036
Dimethyl phthalate	—		—	< 0.037	< 0.037	< 0.037	< 0.036
Fluoranthene	230	n	—	< 0.018	< 0.018	< 0.018	< 0.018
Fluorene	230	n	—	< 0.018	< 0.018	< 0.018	< 0.018
Hexachlorobenzene	0.33	c	0.013	< 0.018	< 0.018	< 0.018	< 0.018
Hexachlorobutadiene	6.2	c**	—	< 0.018	< 0.018	< 0.018	< 0.018
Hexachlorocyclopentadiene	37	n	0.16	< 0.018	< 0.018	< 0.018	< 0.018
Hexachloroethane	4.3	c**	—	< 0.018	< 0.018	< 0.018	< 0.018
Indeno(1,2,3-cd)pyrene	0.15	c	—	< 0.018	< 0.018	< 0.018	< 0.018
Isophorone	560	c*	—	< 0.018	< 0.018	< 0.018	< 0.018
N-Nitroso-di-n-propylamine	0.076	c	—	< 0.018	< 0.018	< 0.018	< 0.018
N-Nitrosodiphenylamine	110	c	—	< 0.018	< 0.018	< 0.018	< 0.018
Naphthalene	3.8	c*	—	< 0.018	< 0.018	< 0.018	< 0.018
Nitrobenzene	5.1	c*	—	< 0.018	< 0.018	< 0.018	< 0.018
Pentachlorophenol	0.99	c	0.01	< 0.15	< 0.15	< 0.15	< 0.14
Phenanthrene	—		—	< 0.018	< 0.018	< 0.018	< 0.018
Phenol	1800	n	—	< 0.018	< 0.018	< 0.018	< 0.018
Pyrene	170	n	—	< 0.018	< 0.018	< 0.018	< 0.018
Metals by USEPA Method 6010 (mg/kg)							
Antimony	3.1	n	0.27	—	—	—	—
Arsenic	0.67	c*	0.29	—	—	—	—
Beryllium	16	n	3.2	—	—	—	—
Cadmium	7	n	—	—	—	—	—
Chromium	12000	nm	180000	—	—	—	—
Copper	310	n	46	—	—	—	—
Lead	400	L	14	—	—	—	—
Nickel	150	n	—	—	—	—	—
Selenium	39	n	0.26	—	—	—	—
Silver	39	n	—	—	—	—	—
Thallium	0.16	n	—	—	—	—	—
Zinc	2300	n	—	—	—	—	—
Mercury by USEPA Method 7471 (mg/kg)							
Mercury	0.94	ns	0.1	—	—	—	—
Hexavalent Chromium by USEPA Method 3060 (mg/kg)							
Hexavalent Chromium	0.3	c	—	—	—	—	—
Soil pH by USEPA Method 9045D (Standard Units)							
Soil pH	—		—	—	—	—	—

Table 5-1
Analytical Results for Subsurface Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID				DPT-38 (8-10)	DPT-39 (8-10)	DPT-40 (2-4)	DPT-40 (9-11)
Laboratory ID	Residential		MCL-Based	FA12959-9	FA12959-11	FA12959-19	FA12959-15
Date Collected	RSL		SSL	03/02/14	03/02/14	03/03/14	03/03/14
Volatile Organic Compounds by USEPA Method 8260 (mg/kg)							
1,1,1-Trichloroethane	810	ns	0.07	< 0.00066	< 0.00076	< 0.0006	< 0.00084
1,1,2,2-Tetrachloroethane	0.6	c	—	< 0.00093	< 0.0011	< 0.00084	< 0.0012
1,1,2-Trichloroethane	0.15	c**	0.0016	< 0.0011	< 0.0012	< 0.00096	< 0.0014
1,1-Dichloroethane	3.6	c	—	< 0.00066	< 0.00076	< 0.0006	< 0.00084
1,1-Dichloroethylene	23	n	0.0025	< 0.00066	< 0.00076	< 0.0006	< 0.00084
1,2-Dichloroethane	0.46	c*	0.0014	< 0.00066	< 0.00076	< 0.0006	< 0.00084
1,2-Dichloropropane	1	c*	0.0017	< 0.00066	< 0.00076	< 0.0006	< 0.00084
2-Hexanone	20	n	—	< 0.0032	< 0.0037	< 0.0029	< 0.0041
4-Methyl-2-pentanone	530	ns	—	< 0.0033	< 0.0038	< 0.003	< 0.0042
Acetone	6100	n	—	< 0.0099	< 0.011	< 0.009	< 0.013
Benzene	1.2	c*	0.0026	< 0.00066	< 0.00076	< 0.0006	< 0.00084
Bromodichloromethane	0.29	c	0.022	< 0.00066	< 0.00076	< 0.0006	< 0.00084
Bromoform	67	c*	0.021	< 0.00071	< 0.00082	< 0.00065	< 0.00091
Carbon disulfide	77	ns	—	< 0.00066	< 0.00076	< 0.0006	< 0.00084
Carbon tetrachloride	0.65	c	0.0019	< 0.00092	< 0.0011	< 0.00083	< 0.0012
Chlorobenzene	28	n	0.068	< 0.00066	< 0.00076	< 0.0006	< 0.00084
Chloroethane	1400	ns	—	< 0.0015	< 0.0017	< 0.0014	< 0.0019
Chloroform	0.32	c	0.022	< 0.00075	< 0.00086	< 0.00068	< 0.00095
cis-1,2-Dichloroethylene	16	n	0.021	< 0.00066	< 0.00076	< 0.0006	< 0.00084
cis-1,3-Dichloropropene	1.8	c*	—	< 0.00066	< 0.00076	< 0.0006	< 0.00084
Dibromochloromethane	0.73	c	0.021	< 0.00066	< 0.00076	< 0.0006	< 0.00084
Ethylbenzene	5.8	c	0.78	< 0.00066	< 0.00076	< 0.0006	< 0.00084
Methyl bromide	0.68	n	—	< 0.0012	< 0.0014	< 0.0011	< 0.0016
Methyl chloride	11	n	—	< 0.0013	< 0.0015	< 0.0012	< 0.0017
Methyl ethyl ketone	2700	n	—	< 0.005	< 0.0057	< 0.0045	< 0.0063
Methylene chloride	35	c**	0.0013	< 0.0026	< 0.003	< 0.0024	< 0.0034
Styrene	600	ns	0.11	< 0.00066	< 0.00076	< 0.0006	< 0.00084
Tetrachloroethylene	8.1	c**	0.0023	***0.0136***	< 0.00096	***0.0077***	***0.0116***
Toluene	490	ns	0.69	< 0.00066	< 0.00076	< 0.0006	< 0.00084
trans-1,2-Dichloroethylene	160	n	0.029	< 0.00089	< 0.001	< 0.0008	< 0.0011
trans-1,3-Dichloropropene	1.8	c*	—	< 0.00066	< 0.00076	< 0.0006	< 0.00084
Trichloroethylene	0.41	c**	0.0018	< 0.00067	< 0.00077	< 0.00061	< 0.00086
Vinyl chloride	0.059	c	0.00069	< 0.00067	< 0.00077	< 0.00061	< 0.00086
Xylene (total)	58	ns	9.8	< 0.0018	< 0.002	< 0.0016	< 0.0022
Semi-Volatile Organic Compounds by USEPA Method 8270 (mg/kg)							
1,2,4-Trichlorobenzene	5.8	c**	0.2	< 0.018	< 0.02	< 0.018	< 0.021
1,2-Dichlorobenzene	180	ns	0.58	< 0.018	< 0.02	< 0.018	< 0.021
1,3-Dichlorobenzene	—		—	< 0.018	< 0.02	< 0.018	< 0.021
1,4-Dichlorobenzene	2.6	c	0.072	< 0.018	< 0.02	< 0.018	< 0.021
2,4,5-Trichlorophenol	620	n	—	< 0.023	< 0.025	< 0.023	< 0.027
2,4,6-Trichlorophenol	6.2	c**	—	< 0.018	< 0.02	< 0.018	< 0.021
2,4-Dichlorophenol	18	n	—	< 0.019	< 0.02	< 0.018	< 0.021
2,4-Dimethylphenol	120	n	—	< 0.02	< 0.022	< 0.02	< 0.023
2,4-Dinitrophenol	12	n	—	< 0.18	< 0.2	< 0.18	< 0.21
2,4-Dinitrotoluene	1.7	c*	—	< 0.021	< 0.022	< 0.02	< 0.024
2,6-Dinitrotoluene	0.36	c*	—	< 0.02	< 0.022	< 0.02	< 0.023
2-Chloronaphthalene	630	n	—	< 0.022	< 0.024	< 0.021	< 0.025
2-Chlorophenol	39	n	—	< 0.018	< 0.02	< 0.018	< 0.021
2-Methylnaphthalene	23	n	—	< 0.018	< 0.02	< 0.018	< 0.021
2-Methylphenol	310	n	—	< 0.018	< 0.02	< 0.018	< 0.021
2-Nitroaniline	61	n	—	< 0.036	< 0.04	< 0.036	< 0.041
2-Nitrophenol	—		—	< 0.018	< 0.02	< 0.018	< 0.021
3&4-Methylphenol	310	n	—	< 0.036	< 0.04	< 0.036	< 0.041
3,3'-Dichlorobenzidine	1.2	c	—	< 0.018	< 0.02	< 0.018	< 0.021
3-Nitroaniline	—		—	< 0.036	< 0.04	< 0.036	< 0.041
4,6-Dinitro-o-cresol	0.49	n	—	< 0.073	< 0.079	< 0.071	< 0.083
4-Bromophenyl phenyl ether	—		—	< 0.018	< 0.02	< 0.018	< 0.021
4-Chloro-3-methyl phenol	620	n	—	< 0.018	< 0.02	< 0.018	< 0.021
4-Chloroaniline	2.7*	c	—	< 0.018	< 0.02	< 0.018	< 0.021
4-Chlorophenyl phenyl ether	—		—	< 0.027	< 0.029	< 0.027	< 0.031

Table 5-1
Analytical Results for Subsurface Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID				DPT-38 (8-10)	DPT-39 (8-10)	DPT-40 (2-4)	DPT-40 (9-11)
Laboratory ID	Residential		MCL-Based	FA12959-9	FA12959-11	FA12959-19	FA12959-15
Date Collected	RSL		SSL	03/02/14	03/02/14	03/03/14	03/03/14
Semi-Volatile Organic Compounds by USEPA Method 8270 (mg/kg)							
4-Nitroaniline	25	c**	—	< 0.036	< 0.04	< 0.036	< 0.041
4-Nitrophenol	—		—	< 0.15	< 0.16	< 0.14	< 0.17
Acenaphthene	350	n	—	< 0.023	< 0.025	< 0.023	< 0.026
Acenaphthylene	350	n	—	< 0.018	< 0.02	< 0.018	< 0.021
Anthracene	1700	n	—	< 0.018	< 0.02	< 0.018	< 0.021
Benzo(a)anthracene	0.15	c	—	< 0.018	< 0.02	< 0.018	< 0.021
Benzo(a)pyrene	0.015	c	0.24	< 0.018	< 0.02	< 0.018	< 0.021
Benzo(b)fluoranthene	0.15	c	—	< 0.018	< 0.02	< 0.018	< 0.021
Benzo(g,h,i)perylene	—		—	< 0.018	< 0.02	< 0.018	< 0.021
Benzo(k)fluoranthene	1.5	c	—	< 0.02	< 0.022	< 0.019	< 0.023
Benzoic Acid	25000	nm	—	< 0.18	< 0.2	< 0.18	< 0.21
Benzyl Alcohol	620	n	—	< 0.018	< 0.02	**0.0878 J//**	< 0.021
bis(2-Chloroethoxy)methane	18	n	—	< 0.018	< 0.02	< 0.018	< 0.021
bis(2-Chloroethyl)ether	0.23	c	—	< 0.018	< 0.02	< 0.018	< 0.021
bis(2-Chloroisopropyl)ether	—		—	< 0.019	< 0.021	< 0.019	< 0.022
bis(2-Ethylhexyl)phthalate	38	c*	1.4	< 0.036	**0.136 J//**	< 0.036	< 0.041
Butyl benzyl phthalate	280	c*	—	< 0.036	< 0.04	< 0.036	< 0.041
Carbazole	—		—	< 0.018	< 0.02	< 0.018	< 0.021
Chrysene	15	c	—	< 0.018	< 0.02	< 0.018	< 0.021
Di-n-butyl phthalate	620	n	—	< 0.036	< 0.04	< 0.036	< 0.041
Di-n-octyl phthalate	62	n	—	< 0.036	< 0.04	< 0.036	< 0.041
Dibenzo(a,h)anthracene	0.015	c	—	< 0.018	< 0.02	< 0.018	< 0.021
Dibenzofuran	7.2	n	—	< 0.018	< 0.02	< 0.018	< 0.021
Diethyl phthalate	4900	n	—	< 0.036	< 0.04	< 0.036	< 0.041
Dimethyl phthalate	—		—	< 0.036	< 0.04	< 0.036	< 0.041
Fluoranthene	230	n	—	< 0.018	< 0.02	< 0.018	< 0.021
Fluorene	230	n	—	< 0.018	< 0.02	< 0.018	< 0.021
Hexachlorobenzene	0.33	c	0.013	< 0.018	< 0.02	< 0.018	< 0.021
Hexachlorobutadiene	6.2	c**	—	< 0.018	< 0.02	< 0.018	< 0.021
Hexachlorocyclopentadiene	37	n	0.16	< 0.018	< 0.02	< 0.018	< 0.021
Hexachloroethane	4.3	c**	—	< 0.018	< 0.02	< 0.018	< 0.021
Indeno(1,2,3-cd)pyrene	0.15	c	—	< 0.018	< 0.02	< 0.018	< 0.021
Isophorone	560	c*	—	< 0.018	< 0.02	< 0.018	< 0.021
N-Nitroso-di-n-propylamine	0.076	c	—	< 0.018	< 0.02	< 0.018	< 0.021
N-Nitrosodiphenylamine	110	c	—	< 0.018	< 0.02	< 0.018	< 0.021
Naphthalene	3.8	c*	—	< 0.018	< 0.02	< 0.018	< 0.021
Nitrobenzene	5.1	c*	—	< 0.018	< 0.02	< 0.018	< 0.021
Pentachlorophenol	0.99	c	0.01	< 0.15	< 0.16	< 0.14	< 0.17
Phenanthrene	—		—	< 0.018	< 0.02	< 0.018	< 0.021
Phenol	1800	n	—	< 0.018	< 0.02	< 0.018	< 0.021
Pyrene	170	n	—	< 0.018	< 0.02	< 0.018	< 0.021
Metals by USEPA Method 6010 (mg/kg)							
Antimony	3.1	n	0.27	—	—	—	—
Arsenic	0.67	c*	0.29	—	—	—	—
Beryllium	16	n	3.2	—	—	—	—
Cadmium	7	n	—	—	—	—	—
Chromium	12000	nm	180000	—	—	—	—
Copper	310	n	46	—	—	—	—
Lead	400	L	14	—	—	—	—
Nickel	150	n	—	—	—	—	—
Selenium	39	n	0.26	—	—	—	—
Silver	39	n	—	—	—	—	—
Thallium	0.16	n	—	—	—	—	—
Zinc	2300	n	—	—	—	—	—
Mercury by USEPA Method 7471 (mg/kg)							
Mercury	0.94	ns	0.1	—	—	—	—
Hexavalent Chromium by USEPA Method 3060 (mg/kg)							
Hexavalent Chromium	0.3	c	—	—	—	—	—
Soil pH by USEPA Method 9045D (Standard Units)							
Soil pH	—		—	—	—	—	—

Table 5-1
Analytical Results for Subsurface Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID				DPT-41 (6-8)	DPT-42 (8-10)	DPT-43 (5-7)	DPT-43 (11-12)
Laboratory ID	Residential		MCL-Based	FA12959-12	FA12959-14	FA12959-17	FA12959-18
Date Collected	RSL		SSL	03/02/14	03/03/14	03/03/14	03/03/14
Volatile Organic Compounds by USEPA Method 8260 (mg/kg)							
1,1,1-Trichloroethane	810	ns	0.07	< 0.00079	< 0.00073	< 0.0008	< 0.00079
1,1,2,2-Tetrachloroethane	0.6	c	—	< 0.0011	< 0.001	< 0.0011	< 0.0011
1,1,2-Trichloroethane	0.15	c**	0.0016	< 0.0013	< 0.0012	< 0.0013	< 0.0013
1,1-Dichloroethane	3.6	c	—	< 0.00079	< 0.00073	< 0.0008	< 0.00079
1,1-Dichloroethylene	23	n	0.0025	< 0.00079	< 0.00073	< 0.0008	< 0.00079
1,2-Dichloroethane	0.46	c*	0.0014	< 0.00079	< 0.00073	< 0.0008	< 0.00079
1,2-Dichloropropane	1	c*	0.0017	< 0.00079	< 0.00073	< 0.0008	< 0.00079
2-Hexanone	20	n	—	< 0.0039	< 0.0036	< 0.0039	< 0.0039
4-Methyl-2-pentanone	530	ns	—	< 0.0039	< 0.0037	< 0.004	< 0.004
Acetone	6100	n	—	< 0.012	< 0.011	**0.0246 J//**	< 0.012
Benzene	1.2	c*	0.0026	< 0.00079	< 0.00073	< 0.0008	< 0.00079
Bromodichloromethane	0.29	c	0.022	< 0.00079	< 0.00073	< 0.0008	< 0.00079
Bromoform	67	c*	0.021	< 0.00085	< 0.00079	< 0.00086	< 0.00086
Carbon disulfide	77	ns	—	< 0.00079	< 0.00073	< 0.0008	< 0.00079
Carbon tetrachloride	0.65	c	0.0019	< 0.0011	< 0.001	< 0.0011	< 0.0011
Chlorobenzene	28	n	0.068	< 0.00079	< 0.00073	< 0.0008	< 0.00079
Chloroethane	1400	ns	—	< 0.0018	< 0.0017	< 0.0018	< 0.0018
Chloroform	0.32	c	0.022	< 0.00089	< 0.00083	< 0.0009	< 0.0009
cis-1,2-Dichloroethylene	16	n	0.021	< 0.00079	< 0.00073	< 0.0008	**0.0029 J//**
cis-1,3-Dichloropropene	1.8	c*	—	< 0.00079	< 0.00073	< 0.0008	< 0.00079
Dibromochloromethane	0.73	c	0.021	< 0.00079	< 0.00073	< 0.0008	< 0.00079
Ethylbenzene	5.8	c	0.78	< 0.00079	< 0.00073	< 0.0008	< 0.00079
Methyl bromide	0.68	n	—	< 0.0015	< 0.0014	< 0.0015	< 0.0015
Methyl chloride	11	n	—	< 0.0016	< 0.0015	< 0.0016	< 0.0016
Methyl ethyl ketone	2700	n	—	< 0.0059	< 0.0055	< 0.006	< 0.0059
Methylene chloride	35	c**	0.0013	< 0.0031	< 0.0029	< 0.0032	< 0.0032
Styrene	600	ns	0.11	< 0.00079	< 0.00073	< 0.0008	< 0.00079
Tetrachloroethylene	8.1	c**	0.0023	***0.0025 J//***	***0.005***	***0.0121***	***0.535***
Toluene	490	ns	0.69	< 0.00079	< 0.00073	< 0.0008	< 0.00079
trans-1,2-Dichloroethylene	160	n	0.029	< 0.0011	< 0.00098	< 0.0011	< 0.0011
trans-1,3-Dichloropropene	1.8	c*	—	< 0.00079	< 0.00073	< 0.0008	< 0.00079
Trichloroethylene	0.41	c**	0.0018	< 0.0008	< 0.00075	< 0.00081	***0.0031 J//***
Vinyl chloride	0.059	c	0.00069	< 0.0008	< 0.00075	< 0.00081	< 0.00081
Xylene (total)	58	ns	9.8	< 0.0021	< 0.0019	< 0.0021	< 0.0021
Semi-Volatile Organic Compounds by USEPA Method 8270 (mg/kg)							
1,2,4-Trichlorobenzene	5.8	c**	0.2	< 0.019	< 0.019	—	—
1,2-Dichlorobenzene	180	ns	0.58	< 0.019	< 0.019	—	—
1,3-Dichlorobenzene	—		—	< 0.019	< 0.019	—	—
1,4-Dichlorobenzene	2.6	c	0.072	< 0.019	< 0.019	—	—
2,4,5-Trichlorophenol	620	n	—	< 0.025	< 0.024	—	—
2,4,6-Trichlorophenol	6.2	c**	—	< 0.019	< 0.019	—	—
2,4-Dichlorophenol	18	n	—	< 0.02	< 0.019	—	—
2,4-Dimethylphenol	120	n	—	< 0.021	< 0.021	—	—
2,4-Dinitrophenol	12	n	—	< 0.19	< 0.19	—	—
2,4-Dinitrotoluene	1.7	c*	—	< 0.022	< 0.021	—	—
2,6-Dinitrotoluene	0.36	c*	—	< 0.021	< 0.02	—	—
2-Chloronaphthalene	630	n	—	< 0.023	< 0.022	—	—
2-Chlorophenol	39	n	—	< 0.019	< 0.019	—	—
2-Methylnaphthalene	23	n	—	< 0.019	< 0.019	—	—
2-Methylphenol	310	n	—	< 0.019	< 0.019	—	—
2-Nitroaniline	61	n	—	< 0.038	< 0.037	—	—
2-Nitrophenol	—		—	< 0.019	< 0.019	—	—
3&4-Methylphenol	310	n	—	< 0.038	< 0.037	—	—
3,3'-Dichlorobenzidine	1.2	c	—	< 0.019	< 0.019	—	—
3-Nitroaniline	—		—	< 0.038	< 0.037	—	—
4,6-Dinitro-o-cresol	0.49	n	—	< 0.076	< 0.075	—	—
4-Bromophenyl phenyl ether	—		—	< 0.019	< 0.019	—	—
4-Chloro-3-methyl phenol	620	n	—	< 0.019	< 0.019	—	—
4-Chloroaniline	2.7*	c	—	< 0.019	< 0.019	—	—
4-Chlorophenyl phenyl ether	—		—	< 0.028	< 0.028	—	—

Table 5-1
Analytical Results for Subsurface Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID Laboratory ID Date Collected	Residential RSL		MCL-Based SSL	DPT-41 (6-8) FA12959-12 03/02/14	DPT-42 (8-10) FA12959-14 03/03/14	DPT-43 (5-7) FA12959-17 03/03/14	DPT-43 (11-12) FA12959-18 03/03/14
Semi-Volatile Organic Compounds by USEPA Method 8270 (mg/kg)							
4-Nitroaniline	25	c**	—	< 0.038	< 0.037	—	—
4-Nitrophenol	—		—	< 0.15	< 0.15	—	—
Acenaphthene	350	n	—	< 0.024	< 0.024	—	—
Acenaphthylene	350	n	—	< 0.019	< 0.019	—	—
Anthracene	1700	n	—	< 0.019	< 0.019	—	—
Benzo(a)anthracene	0.15	c	—	< 0.019	< 0.019	—	—
Benzo(a)pyrene	0.015	c	0.24	< 0.019	< 0.019	—	—
Benzo(b)fluoranthene	0.15	c	—	< 0.019	< 0.019	—	—
Benzo(g,h,i)perylene	—		—	< 0.019	< 0.019	—	—
Benzo(k)fluoranthene	1.5	c	—	< 0.021	< 0.02	—	—
Benzoic Acid	25000	nm	—	< 0.19	< 0.19	—	—
Benzyl Alcohol	620	n	—	**0.106 J//**	< 0.019	—	—
bis(2-Chloroethoxy)methane	18	n	—	< 0.019	< 0.019	—	—
bis(2-Chloroethyl)ether	0.23	c	—	< 0.019	< 0.019	—	—
bis(2-Chloroisopropyl)ether	—		—	< 0.02	< 0.019	—	—
bis(2-Ethylhexyl)phthalate	38	c*	1.4	< 0.038	< 0.037	—	—
Butyl benzyl phthalate	280	c*	—	< 0.038	< 0.037	—	—
Carbazole	—		—	< 0.019	< 0.019	—	—
Chrysene	15	c	—	< 0.019	< 0.019	—	—
Di-n-butyl phthalate	620	n	—	< 0.038	< 0.037	—	—
Di-n-octyl phthalate	62	n	—	< 0.038	< 0.037	—	—
Dibenzo(a,h)anthracene	0.015	c	—	< 0.019	< 0.019	—	—
Dibenzofuran	7.2	n	—	< 0.019	< 0.019	—	—
Diethyl phthalate	4900	n	—	< 0.038	< 0.037	—	—
Dimethyl phthalate	—		—	< 0.038	< 0.037	—	—
Fluoranthene	230	n	—	< 0.019	< 0.019	—	—
Fluorene	230	n	—	< 0.019	< 0.019	—	—
Hexachlorobenzene	0.33	c	0.013	< 0.019	< 0.019	—	—
Hexachlorobutadiene	6.2	c**	—	< 0.019	< 0.019	—	—
Hexachlorocyclopentadiene	37	n	0.16	< 0.019	< 0.019	—	—
Hexachloroethane	4.3	c**	—	< 0.019	< 0.019	—	—
Indeno(1,2,3-cd)pyrene	0.15	c	—	< 0.019	< 0.019	—	—
Isophorone	560	c*	—	< 0.019	< 0.019	—	—
N-Nitroso-di-n-propylamine	0.076	c	—	< 0.019	< 0.019	—	—
N-Nitrosodiphenylamine	110	c	—	< 0.019	< 0.019	—	—
Naphthalene	3.8	c*	—	< 0.019	< 0.019	—	—
Nitrobenzene	5.1	c*	—	< 0.019	< 0.019	—	—
Pentachlorophenol	0.99	c	0.01	< 0.15	< 0.15	—	—
Phenanthrene	—		—	< 0.019	< 0.019	—	—
Phenol	1800	n	—	< 0.019	< 0.019	—	—
Pyrene	170	n	—	< 0.019	< 0.019	—	—
Metals by USEPA Method 6010 (mg/kg)							
Antimony	3.1	n	0.27	—	—	—	—
Arsenic	0.67	c*	0.29	—	—	—	—
Beryllium	16	n	3.2	—	—	—	—
Cadmium	7	n	—	—	—	—	—
Chromium	12000	nm	180000	—	—	—	—
Copper	310	n	46	—	—	—	—
Lead	400	L	14	—	—	—	—
Nickel	150	n	—	—	—	—	—
Selenium	39	n	0.26	—	—	—	—
Silver	39	n	—	—	—	—	—
Thallium	0.16	n	—	—	—	—	—
Zinc	2300	n	—	—	—	—	—
Mercury by USEPA Method 7471 (mg/kg)							
Mercury	0.94	ns	0.1	—	—	—	—
Hexavalent Chromium by USEPA Method 3060 (mg/kg)							
Hexavalent Chromium	0.3	c	—	—	—	—	—
Soil pH by USEPA Method 9045D (Standard Units)							
Soil pH	—		—	—	—	—	—

Table 5-1
Analytical Results for Subsurface Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID				DPT-44 (7-9)	DPT-45 (2-4)	DPT-46 (1.5-3.5)	DPT-47 (5-7)
Laboratory ID	Residential		MCL-Based	FA12959-16	FA12814-1	FA12909-1	FA12917-14
Date Collected	RSL		SSL	03/03/14	02/25/14	02/28/14	02/28/14
Volatile Organic Compounds by USEPA Method 8260 (mg/kg)							
1,1,1-Trichloroethane	810	ns	0.07	< 0.00064	< 0.00066	< 0.00063	< 0.00071
1,1,2,2-Tetrachloroethane	0.6	c	—	< 0.0009	< 0.00093	< 0.00089	< 0.001
1,1,2-Trichloroethane	0.15	c**	0.0016	< 0.001	< 0.0011	< 0.001	< 0.0011
1,1-Dichloroethane	3.6	c	—	< 0.00064	< 0.00066	< 0.00063	< 0.00071
1,1-Dichloroethylene	23	n	0.0025	< 0.00064	< 0.00066	< 0.00063	< 0.00071
1,2-Dichloroethane	0.46	c*	0.0014	< 0.00064	< 0.00066	< 0.00063	< 0.00071
1,2-Dichloropropane	1	c*	0.0017	< 0.00064	< 0.00066	< 0.00063	< 0.00071
2-Hexanone	20	n	—	< 0.0031	< 0.0032	< 0.0031	< 0.0035
4-Methyl-2-pentanone	530	ns	—	< 0.0032	< 0.0033	< 0.0032	< 0.0035
Acetone	6100	n	—	< 0.0095	< 0.0099	**0.0104 J//**	< 0.011
Benzene	1.2	c*	0.0026	< 0.00064	< 0.00066	< 0.00063	< 0.00071
Bromodichloromethane	0.29	c	0.022	< 0.00064	< 0.00066	< 0.00063	< 0.00071
Bromoform	67	c*	0.021	< 0.00069	< 0.00072	< 0.00068	< 0.00077
Carbon disulfide	77	ns	—	< 0.00064	< 0.00066	< 0.00063	< 0.00071
Carbon tetrachloride	0.65	c	0.0019	< 0.00088	< 0.00092	< 0.00088	< 0.00098
Chlorobenzene	28	n	0.068	< 0.00064	< 0.00066	< 0.00063	< 0.00071
Chloroethane	1400	ns	—	< 0.0014	< 0.0015	< 0.0014	< 0.0016
Chloroform	0.32	c	0.022	< 0.00072	< 0.00075	< 0.00071	< 0.0008
cis-1,2-Dichloroethylene	16	n	0.021	< 0.00064	< 0.00066	< 0.00063	< 0.00071
cis-1,3-Dichloropropene	1.8	c*	—	< 0.00064	< 0.00066	< 0.00063	< 0.00071
Dibromochloromethane	0.73	c	0.021	< 0.00064	< 0.00066	< 0.00063	< 0.00071
Ethylbenzene	5.8	c	0.78	< 0.00064	< 0.00066	< 0.00063	< 0.00071
Methyl bromide	0.68	n	—	< 0.0012	< 0.0012	< 0.0012	< 0.0013
Methyl chloride	11	n	—	< 0.0013	< 0.0013	< 0.0013	< 0.0014
Methyl ethyl ketone	2700	n	—	< 0.0048	< 0.005	< 0.0047	< 0.0053
Methylene chloride	35	c**	0.0013	< 0.0025	< 0.0026	< 0.0025	< 0.0028
Styrene	600	ns	0.11	< 0.00064	< 0.00066	< 0.00063	< 0.00071
Tetrachloroethylene	8.1	c**	0.0023	***0.0243***	< 0.00083	***0.0042 /J/A***	***0.0026 J//***
Toluene	490	ns	0.69	< 0.00064	< 0.00066	< 0.00063	< 0.00071
trans-1,2-Dichloroethylene	160	n	0.029	< 0.00085	< 0.00089	< 0.00085	< 0.00095
trans-1,3-Dichloropropene	1.8	c*	—	< 0.00064	< 0.00066	< 0.00063	< 0.00071
Trichloroethylene	0.41	c**	0.0018	< 0.00065	< 0.00068	< 0.00064	< 0.00072
Vinyl chloride	0.059	c	0.00069	< 0.00065	< 0.00068	< 0.00064	< 0.00072
Xylene (total)	58	ns	9.8	< 0.0017	< 0.0018	< 0.0017	< 0.0019
Semi-Volatile Organic Compounds by USEPA Method 8270 (mg/kg)							
1,2,4-Trichlorobenzene	5.8	c**	0.2	—	—	< 0.02	< 0.019
1,2-Dichlorobenzene	180	ns	0.58	—	—	< 0.02	< 0.019
1,3-Dichlorobenzene	—		—	—	—	< 0.02	< 0.019
1,4-Dichlorobenzene	2.6	c	0.072	—	—	< 0.02	< 0.019
2,4,5-Trichlorophenol	620	n	—	—	—	< 0.026	< 0.024
2,4,6-Trichlorophenol	6.2	c**	—	—	—	< 0.02	< 0.019
2,4-Dichlorophenol	18	n	—	—	—	< 0.021	< 0.019
2,4-Dimethylphenol	120	n	—	—	—	< 0.022	< 0.02
2,4-Dinitrophenol	12	n	—	—	—	< 0.2	< 0.19
2,4-Dinitrotoluene	1.7	c*	—	—	—	< 0.023	< 0.021
2,6-Dinitrotoluene	0.36	c*	—	—	—	< 0.022	< 0.02
2-Chloronaphthalene	630	n	—	—	—	< 0.024	< 0.022
2-Chlorophenol	39	n	—	—	—	< 0.02	< 0.019
2-Methylnaphthalene	23	n	—	—	—	< 0.02	< 0.019
2-Methylphenol	310	n	—	—	—	< 0.02	< 0.019
2-Nitroaniline	61	n	—	—	—	< 0.04	< 0.037
2-Nitrophenol	—		—	—	—	< 0.02	< 0.019
3&4-Methylphenol	310	n	—	—	—	< 0.04	< 0.037
3,3'-Dichlorobenzidine	1.2	c	—	—	—	< 0.02	< 0.019
3-Nitroaniline	—		—	—	—	< 0.04	< 0.037
4,6-Dinitro-o-cresol	0.49	n	—	—	—	< 0.08	< 0.074
4-Bromophenyl phenyl ether	—		—	—	—	< 0.02	< 0.019
4-Chloro-3-methyl phenol	620	n	—	—	—	< 0.02	< 0.019
4-Chloroaniline	2.7*	c	—	—	—	< 0.02	< 0.019
4-Chlorophenyl phenyl ether	—		—	—	—	< 0.03	< 0.028

Table 5-1
Analytical Results for Subsurface Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID				DPT-44 (7-9)	DPT-45 (2-4)	DPT-46 (1.5-3.5)		DPT-47 (5-7)	
Laboratory ID	Residential		MCL-Based	FA12959-16	FA12814-1	FA12909-1		FA12917-14	
Date Collected	RSL		SSL	03/03/14	02/25/14	02/28/14		02/28/14	
Semi-Volatile Organic Compounds by USEPA Method 8270 (mg/kg)									
4-Nitroaniline	25	c**	—	—	—	< 0.04		< 0.037	
4-Nitrophenol	—		—	—	—	< 0.16		< 0.15	
Acenaphthene	350	n	—	—	—	< 0.025		< 0.023	
Acenaphthylene	350	n	—	—	—	< 0.02		< 0.019	
Anthracene	1700	n	—	—	—	< 0.02		< 0.019	
Benzo(a)anthracene	0.15	c	—	—	—	< 0.02		< 0.019	
Benzo(a)pyrene	0.015	c	0.24	—	—	< 0.02		< 0.019	
Benzo(b)fluoranthene	0.15	c	—	—	—	< 0.02		< 0.019	
Benzo(g,h,i)perylene	—		—	—	—	< 0.02		< 0.019	
Benzo(k)fluoranthene	1.5	c	—	—	—	< 0.022		< 0.02	
Benzoic Acid	25000	nm	—	—	—	< 0.2		< 0.19	
Benzyl Alcohol	620	n	—	—	—	< 0.02		< 0.019	
bis(2-Chloroethoxy)methane	18	n	—	—	—	< 0.02		< 0.019	
bis(2-Chloroethyl)ether	0.23	c	—	—	—	< 0.02		< 0.019	
bis(2-Chloroisopropyl)ether	—		—	—	—	< 0.021		< 0.019	
bis(2-Ethylhexyl)phthalate	38	c*	1.4	—	—	< 0.04		< 0.037	
Butyl benzyl phthalate	280	c*	—	—	—	< 0.04		< 0.037	
Carbazole	—		—	—	—	< 0.02		< 0.019	
Chrysene	15	c	—	—	—	< 0.02		< 0.019	
Di-n-butyl phthalate	620	n	—	—	—	< 0.04		< 0.037	
Di-n-octyl phthalate	62	n	—	—	—	< 0.04		< 0.037	
Dibenzo(a,h)anthracene	0.015	c	—	—	—	< 0.02		< 0.019	
Dibenzofuran	7.2	n	—	—	—	< 0.02		< 0.019	
Diethyl phthalate	4900	n	—	—	—	< 0.04		< 0.037	
Dimethyl phthalate	—		—	—	—	< 0.04		< 0.037	
Fluoranthene	230	n	—	—	—	< 0.02		< 0.019	
Fluorene	230	n	—	—	—	< 0.02		< 0.019	
Hexachlorobenzene	0.33	c	0.013	—	—	< 0.02		< 0.019	
Hexachlorobutadiene	6.2	c**	—	—	—	< 0.02		< 0.019	
Hexachlorocyclopentadiene	37	n	0.16	—	—	< 0.02		< 0.019	
Hexachloroethane	4.3	c**	—	—	—	< 0.02		< 0.019	
Indeno(1,2,3-cd)pyrene	0.15	c	—	—	—	< 0.02		< 0.019	
Isophorone	560	c*	—	—	—	< 0.02		< 0.019	
N-Nitroso-di-n-propylamine	0.076	c	—	—	—	< 0.02		< 0.019	
N-Nitrosodiphenylamine	110	c	—	—	—	< 0.02		< 0.019	
Naphthalene	3.8	c*	—	—	—	< 0.02		< 0.019	
Nitrobenzene	5.1	c*	—	—	—	< 0.02		< 0.019	
Pentachlorophenol	0.99	c	0.01	—	—	< 0.16		< 0.15	
Phenanthrene	—		—	—	—	< 0.02		< 0.019	
Phenol	1800	n	—	—	—	< 0.02		< 0.019	
Pyrene	170	n	—	—	—	< 0.02		< 0.019	
Metals by USEPA Method 6010 (mg/kg)									
Antimony	3.1	n	0.27	—	—	< 0.11		< 0.09	
Arsenic	0.67	c*	0.29	—	—	***0.9***		***0.63***	
Beryllium	16	n	3.2	—	—	**0.08**	**J//**	**0.03**	**J//**
Cadmium	7	n	—	—	—	< 0.02		< 0.02	
Chromium	12000	nm	180000	—	—	**13.9**		**7.5**	
Copper	310	n	46	—	—	**1.5**		**1.4**	
Lead	400	L	14	—	—	**8**		**6.1**	
Nickel	150	n	—	—	—	**1.6**	**J//**	**0.7**	**J//**
Selenium	39	n	0.26	—	—	***0.48***	***J//***	**0.15**	**J//**
Silver	39	n	—	—	—	< 0.03		< 0.03	
Thallium	0.16	n	—	—	—	< 0.08		< 0.07	
Zinc	2300	n	—	—	—	**2.1**		**0.78**	**J//**
Mercury by USEPA Method 7471 (mg/kg)									
Mercury	0.94	ns	0.1	—	—	**0.04**	**J//**	**0.0067**	**J//**
Hexavalent Chromium by USEPA Method 3060 (mg/kg)									
Hexavalent Chromium	0.3	c	—	—	—	< 1		< 0.95	
Soil pH by USEPA Method 9045D (Standard Units)									
Soil pH	—		—	—	—	—		—	

Table 5-1
Analytical Results for Subsurface Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID				DPT-48 (7.5-9.5)	DPT-49 (6-8)	DPT-50 (4-6)	DPT-51 (7-9)
Laboratory ID	Residential		MCL-Based	FA12917-15	FA12814-7	FA12814-6	FA12814-8
Date Collected	RSL		SSL	02/28/14	02/26/14	02/26/14	02/26/14
Volatile Organic Compounds by USEPA Method 8260 (mg/kg)							
1,1,1-Trichloroethane	810	ns	0.07	< 0.00063	< 0.00071	< 0.00062	< 0.041
1,1,2,2-Tetrachloroethane	0.6	c	—	< 0.00088	< 0.001	< 0.00088	< 0.057
1,1,2-Trichloroethane	0.15	c**	0.0016	< 0.001	< 0.0012	< 0.001	< 0.066
1,1-Dichloroethane	3.6	c	—	< 0.00063	< 0.00071	< 0.00062	< 0.041
1,1-Dichloroethylene	23	n	0.0025	< 0.00063	< 0.00071	< 0.00062	< 0.041
1,2-Dichloroethane	0.46	c*	0.0014	< 0.00063	< 0.00071	< 0.00062	< 0.041
1,2-Dichloropropane	1	c*	0.0017	< 0.00063	< 0.00071	< 0.00062	< 0.041
2-Hexanone	20	n	—	< 0.0031	< 0.0035	< 0.003	< 0.2
4-Methyl-2-pentanone	530	ns	—	< 0.0031	< 0.0036	< 0.0031	< 0.2
Acetone	6100	n	—	< 0.0094	**0.0114 J//**	< 0.0093	< 0.61
Benzene	1.2	c*	0.0026	< 0.00063	< 0.00071	< 0.00062	< 0.041
Bromodichloromethane	0.29	c	0.022	< 0.00063	< 0.00071	< 0.00062	< 0.041
Bromoform	67	c*	0.021	< 0.00068	< 0.00077	< 0.00067	< 0.044
Carbon disulfide	77	ns	—	< 0.00063	< 0.00071	< 0.00062	< 0.041
Carbon tetrachloride	0.65	c	0.0019	< 0.00087	< 0.00099	< 0.00086	< 0.057
Chlorobenzene	28	n	0.068	< 0.00063	< 0.00071	< 0.00062	< 0.041
Chloroethane	1400	ns	—	< 0.0014	< 0.0016	< 0.0014	< 0.092
Chloroform	0.32	c	0.022	< 0.00071	< 0.00081	< 0.0007	< 0.046
cis-1,2-Dichloroethylene	16	n	0.021	**0.0148**	**0.0028 J//**	< 0.00062	***0.159 J//***
cis-1,3-Dichloropropene	1.8	c*	—	< 0.00063	< 0.00071	< 0.00062	< 0.041
Dibromochloromethane	0.73	c	0.021	< 0.00063	< 0.00071	< 0.00062	< 0.041
Ethylbenzene	5.8	c	0.78	< 0.00063	< 0.00071	< 0.00062	< 0.041
Methyl bromide	0.68	n	—	< 0.0012	< 0.0013	< 0.0012	< 0.076
Methyl chloride	11	n	—	< 0.0013	< 0.0014	< 0.0012	< 0.081
Methyl ethyl ketone	2700	n	—	< 0.0047	< 0.0054	< 0.0047	< 0.3
Methylene chloride	35	c**	0.0013	< 0.0025	< 0.0029	< 0.0025	***0.167 J//***
Styrene	600	ns	0.11	< 0.00063	< 0.00071	< 0.00062	< 0.041
Tetrachloroethylene	8.1	c**	0.0023	***0.0061***	***1.2***	***1580***	***36.1***
Toluene	490	ns	0.69	< 0.00063	< 0.00071	< 0.00062	< 0.041
trans-1,2-Dichloroethylene	160	n	0.029	< 0.00084	< 0.00096	< 0.00083	< 0.055
trans-1,3-Dichloropropene	1.8	c*	—	< 0.00063	< 0.00071	< 0.00062	< 0.041
Trichloroethylene	0.41	c**	0.0018	< 0.00064	***0.0128***	***0.0186***	***5.96***
Vinyl chloride	0.059	c	0.00069	< 0.00064	< 0.00073	< 0.00063	< 0.042
Xylene (total)	58	ns	9.8	< 0.0017	< 0.0019	< 0.0017	< 0.11
Semi-Volatile Organic Compounds by USEPA Method 8270 (mg/kg)							
1,2,4-Trichlorobenzene	5.8	c**	0.2	< 0.019	< 0.019	< 0.019	< 0.019
1,2-Dichlorobenzene	180	ns	0.58	< 0.019	< 0.019	< 0.019	< 0.019
1,3-Dichlorobenzene	—		—	< 0.019	< 0.019	< 0.019	< 0.019
1,4-Dichlorobenzene	2.6	c	0.072	< 0.019	< 0.019	< 0.019	< 0.019
2,4,5-Trichlorophenol	620	n	—	< 0.025	< 0.024	< 0.025	< 0.025
2,4,6-Trichlorophenol	6.2	c**	—	< 0.019	< 0.019	< 0.019	< 0.019
2,4-Dichlorophenol	18	n	—	< 0.02	< 0.019	< 0.02	< 0.02
2,4-Dimethylphenol	120	n	—	< 0.021	< 0.021	< 0.021	< 0.021
2,4-Dinitrophenol	12	n	—	< 0.19	< 0.19	< 0.19	< 0.19
2,4-Dinitrotoluene	1.7	c*	—	< 0.022	< 0.021	< 0.022	< 0.022
2,6-Dinitrotoluene	0.36	c*	—	< 0.021	< 0.02	< 0.021	< 0.021
2-Chloronaphthalene	630	n	—	< 0.023	< 0.022	< 0.023	< 0.023
2-Chlorophenol	39	n	—	< 0.019	< 0.019	< 0.019	< 0.019
2-Methylnaphthalene	23	n	—	< 0.019	< 0.019	< 0.019	**0.92**
2-Methylphenol	310	n	—	< 0.019	< 0.019	< 0.019	< 0.019
2-Nitroaniline	61	n	—	< 0.038	< 0.037	< 0.039	< 0.039
2-Nitrophenol	—		—	< 0.019	< 0.019	< 0.019	< 0.019
3&4-Methylphenol	310	n	—	< 0.038	< 0.037	< 0.039	< 0.039
3,3'-Dichlorobenzidine	1.2	c	—	< 0.019	< 0.019	< 0.019	< 0.019
3-Nitroaniline	—		—	< 0.038	< 0.037	< 0.039	< 0.039
4,6-Dinitro-o-cresol	0.49	n	—	< 0.077	< 0.075	< 0.078	< 0.078
4-Bromophenyl phenyl ether	—		—	< 0.019	< 0.019	< 0.019	< 0.019
4-Chloro-3-methyl phenol	620	n	—	< 0.019	< 0.019	< 0.019	< 0.019
4-Chloroaniline	2.7*	c	—	< 0.019	< 0.019	< 0.019	< 0.019
4-Chlorophenyl phenyl ether	—		—	< 0.029	< 0.028	< 0.029	< 0.029

Table 5-1
Analytical Results for Subsurface Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID				DPT-48 (7.5-9.5)		DPT-49 (6-8)		DPT-50 (4-6)		DPT-51 (7-9)	
Laboratory ID	Residential		MCL-Based	FA12917-15		FA12814-7		FA12814-6		FA12814-8	
Date Collected	RSL		SSL	02/28/14		02/26/14		02/26/14		02/26/14	
Semi-Volatile Organic Compounds by USEPA Method 8270 (mg/kg)											
4-Nitroaniline	25	c**	—	< 0.038		< 0.037		< 0.039		< 0.039	
4-Nitrophenol	—		—	< 0.15		< 0.15		< 0.16		< 0.16	
Acenaphthene	350	n	—	< 0.024		< 0.024		< 0.025		< 0.025	
Acenaphthylene	350	n	—	< 0.019		< 0.019		< 0.019		< 0.019	
Anthracene	1700	n	—	< 0.019		< 0.019		< 0.019		< 0.019	
Benzo(a)anthracene	0.15	c	—	< 0.019		< 0.019		< 0.019		< 0.019	
Benzo(a)pyrene	0.015	c	0.24	< 0.019		< 0.019		< 0.019		< 0.019	
Benzo(b)fluoranthene	0.15	c	—	< 0.019		< 0.019		< 0.019		< 0.019	
Benzo(g,h,i)perylene	—		—	< 0.019		< 0.019		< 0.019		< 0.019	
Benzo(k)fluoranthene	1.5	c	—	< 0.021		< 0.02		< 0.021		< 0.021	
Benzoic Acid	25000	nm	—	< 0.19		< 0.19		< 0.19		< 0.19	
Benzyl Alcohol	620	n	—	< 0.019		< 0.019		< 0.019		< 0.019	
bis(2-Chloroethoxy)methane	18	n	—	< 0.019		< 0.019		< 0.019		< 0.019	
bis(2-Chloroethyl)ether	0.23	c	—	< 0.019		< 0.019		< 0.019		< 0.019	
bis(2-Chloroisopropyl)ether	—		—	< 0.02		< 0.019		< 0.02		< 0.02	
bis(2-Ethylhexyl)phthalate	38	c*	1.4	< 0.038		< 0.037		**0.245**	**J//**	**0.357**	**J//**
Butyl benzyl phthalate	280	c*	—	< 0.038		< 0.037		< 0.039		< 0.039	
Carbazole	—		—	< 0.019		< 0.019		< 0.019		< 0.019	
Chrysene	15	c	—	< 0.019		< 0.019		< 0.019		< 0.019	
Di-n-butyl phthalate	620	n	—	< 0.038		< 0.037		< 0.039		< 0.039	
Di-n-octyl phthalate	62	n	—	< 0.038		< 0.037		< 0.039		< 0.039	
Dibenzo(a,h)anthracene	0.015	c	—	< 0.019		< 0.019		< 0.019		< 0.019	
Dibenzofuran	7.2	n	—	< 0.019		< 0.019		< 0.019		< 0.019	
Diethyl phthalate	4900	n	—	< 0.038		< 0.037		< 0.039		< 0.039	
Dimethyl phthalate	—		—	< 0.038		< 0.037		< 0.039		< 0.039	
Fluoranthene	230	n	—	< 0.019		< 0.019		< 0.019		< 0.019	
Fluorene	230	n	—	< 0.019		< 0.019		< 0.019		< 0.019	
Hexachlorobenzene	0.33	c	0.013	< 0.019		< 0.019		< 0.019		< 0.019	
Hexachlorobutadiene	6.2	c**	—	< 0.019		< 0.019		< 0.019		< 0.019	
Hexachlorocyclopentadiene	37	n	0.16	< 0.019		< 0.019		< 0.019		< 0.019	
Hexachloroethane	4.3	c**	—	< 0.019		< 0.019		< 0.019		< 0.019	
Indeno(1,2,3-cd)pyrene	0.15	c	—	< 0.019		< 0.019		< 0.019		< 0.019	
Isophorone	560	c*	—	< 0.019		< 0.019		< 0.019		< 0.019	
N-Nitroso-di-n-propylamine	0.076	c	—	< 0.019		< 0.019		< 0.019		< 0.019	
N-Nitrosodiphenylamine	110	c	—	< 0.019		< 0.019		< 0.019		< 0.019	
Naphthalene	3.8	c*	—	< 0.019		< 0.019		< 0.019		< 0.019	
Nitrobenzene	5.1	c*	—	< 0.019		< 0.019		< 0.019		< 0.019	
Pentachlorophenol	0.99	c	0.01	< 0.15		< 0.15		< 0.16		< 0.16	
Phenanthrene	—		—	< 0.019		< 0.019		< 0.019		**0.241**	
Phenol	1800	n	—	< 0.019		< 0.019		< 0.019		< 0.019	
Pyrene	170	n	—	< 0.019		< 0.019		< 0.019		< 0.019	
Metals by USEPA Method 6010 (mg/kg)											
Antimony	3.1	n	0.27	< 0.09		< 0.09		< 0.11		< 0.11	
Arsenic	0.67	c*	0.29	***0.48***	***J//***	***0.48***		***1.8***		**0.29**	**J//**
Beryllium	16	n	3.2	**0.02**	**J//**	**0.03**	**J//**	**0.06**	**J//**	**0.03**	**J//**
Cadmium	7	n	—	< 0.02		< 0.02		< 0.02		**0.06**	**J//**
Chromium	12000	nm	180000	**7.1**		**8.3**		**19.6**		**7.8**	
Copper	310	n	46	**1.4**		**1.7**	**/B/V**	**3.9**	**/B/V**	**3.3**	**/B/V**
Lead	400	L	14	**7.4**		**4.4**		**5.9**		**5**	
Nickel	150	n	—	**0.89**	**J//**	**0.73**	**J//**	**1.1**	**J//**	**1.6**	**J//**
Selenium	39	n	0.26	< 0.15		< 0.14		***0.52***	***J//***	< 0.17	
Silver	39	n	—	< 0.03		< 0.03		**0.09**	**J//**	< 0.03	
Thallium	0.16	n	—	< 0.07		< 0.07		< 1.6		< 0.08	
Zinc	2300	n	—	**0.93**	**J//**	**0.98**	**/B/V**	**1.9**	**/B/V**	**22.6**	**/B/V**
Mercury by USEPA Method 7471 (mg/kg)											
Mercury	0.94	ns	0.1	**0.01**	**J//**	**0.02**	**J//**	**0.05**		**0.03**	**J//**
Hexavalent Chromium by USEPA Method 3060 (mg/kg)											
Hexavalent Chromium	0.3	c	—	**3.1**	**/M/M**	< 0.98		**1.7**	**J/B/V**	< 1	
Soil pH by USEPA Method 9045D (Standard Units)											
Soil pH	—		—	—		—		—		—	

Table 5-1
Analytical Results for Subsurface Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID Laboratory ID Date Collected	Residential RSL		MCL-Based SSL	DPT-52 (8-10) FA12814-4 02/26/14	DPT-53 (8-10) FA12814-3 02/26/14	DPT-54 (8-10) FA12814-11 02/26/14
Volatile Organic Compounds by USEPA Method 8260 (mg/kg)						
1,1,1-Trichloroethane	810	ns	0.07	< 0.00059	< 0.00069	< 0.00093
1,1,2,2-Tetrachloroethane	0.6	c	—	< 0.00084	< 0.00098	< 0.0013
1,1,2-Trichloroethane	0.15	c**	0.0016	< 0.00096	< 0.0011	< 0.0015
1,1-Dichloroethane	3.6	c	—	< 0.00059	< 0.00069	< 0.00093
1,1-Dichloroethylene	23	n	0.0025	< 0.00059	< 0.00069	< 0.00093
1,2-Dichloroethane	0.46	c*	0.0014	< 0.00059	< 0.00069	< 0.00093
1,2-Dichloropropane	1	c*	0.0017	< 0.00059	< 0.00069	< 0.00093
2-Hexanone	20	n	—	< 0.0029	< 0.0034	< 0.0045
4-Methyl-2-pentanone	530	ns	—	< 0.003	< 0.0035	< 0.0046
Acetone	6100	n	—	< 0.0089	< 0.01	< 0.014
Benzene	1.2	c*	0.0026	< 0.00059	< 0.00069	< 0.00093
Bromodichloromethane	0.29	c	0.022	< 0.00059	< 0.00069	< 0.00093
Bromoform	67	c*	0.021	< 0.00064	< 0.00075	< 0.001
Carbon disulfide	77	ns	—	< 0.00059	< 0.00069	< 0.00093
Carbon tetrachloride	0.65	c	0.0019	< 0.00082	< 0.00096	< 0.0013
Chlorobenzene	28	n	0.068	< 0.00059	< 0.00069	< 0.00093
Chloroethane	1400	ns	—	< 0.0013	< 0.0016	< 0.0021
Chloroform	0.32	c	0.022	< 0.00067	< 0.00078	< 0.001
cis-1,2-Dichloroethylene	16	n	0.021	**0.0088**	**0.012**	**0.0024** ***J/l***
cis-1,3-Dichloropropene	1.8	c*	—	< 0.00059	< 0.00069	< 0.00093
Dibromochloromethane	0.73	c	0.021	< 0.00059	< 0.00069	< 0.00093
Ethylbenzene	5.8	c	0.78	< 0.00059	< 0.00069	< 0.00093
Methyl bromide	0.68	n	—	< 0.0011	< 0.0013	< 0.0017
Methyl chloride	11	n	—	< 0.0012	< 0.0014	< 0.0019
Methyl ethyl ketone	2700	n	—	< 0.0044	< 0.0052	< 0.007
Methylene chloride	35	c**	0.0013	< 0.0024	< 0.0028	< 0.0037
Styrene	600	ns	0.11	< 0.00059	< 0.00069	< 0.00093
Tetrachloroethylene	8.1	c**	0.0023	***5.92***	***0.938***	***0.0537*** ***/M/m***
Toluene	490	ns	0.69	< 0.00059	< 0.00069	< 0.00093
trans-1,2-Dichloroethylene	160	n	0.029	< 0.0008	< 0.00093	< 0.0012
trans-1,3-Dichloropropene	1.8	c*	—	< 0.00059	< 0.00069	< 0.00093
Trichloroethylene	0.41	c**	0.0018	***1.07*** ***/J/A***	***0.243***	***0.023***
Vinyl chloride	0.059	c	0.00069	< 0.00061	< 0.00071	< 0.00095
Xylene (total)	58	ns	9.8	< 0.0016	< 0.0018	< 0.0025
Semi-Volatile Organic Compounds by USEPA Method 8270 (mg/kg)						
1,2,4-Trichlorobenzene	5.8	c**	0.2	< 0.019	< 0.019	< 0.02
1,2-Dichlorobenzene	180	ns	0.58	< 0.019	< 0.019	< 0.02
1,3-Dichlorobenzene	—		—	< 0.019	< 0.019	< 0.02
1,4-Dichlorobenzene	2.6	c	0.072	< 0.019	< 0.019	< 0.02
2,4,5-Trichlorophenol	620	n	—	< 0.024	< 0.025	< 0.025
2,4,6-Trichlorophenol	6.2	c**	—	< 0.019	< 0.019	< 0.02
2,4-Dichlorophenol	18	n	—	< 0.02	< 0.02	< 0.02
2,4-Dimethylphenol	120	n	—	< 0.021	< 0.021	< 0.022
2,4-Dinitrophenol	12	n	—	< 0.19	< 0.19	< 0.2
2,4-Dinitrotoluene	1.7	c*	—	< 0.021	< 0.022	< 0.022
2,6-Dinitrotoluene	0.36	c*	—	< 0.021	< 0.021	< 0.021
2-Chloronaphthalene	630	n	—	< 0.022	< 0.023	< 0.023
2-Chlorophenol	39	n	—	< 0.019	< 0.019	< 0.02
2-Methylnaphthalene	23	n	—	< 0.019	< 0.019	< 0.02
2-Methylphenol	310	n	—	< 0.019	< 0.019	< 0.02
2-Nitroaniline	61	n	—	< 0.038	< 0.039	< 0.039
2-Nitrophenol	—		—	< 0.019	< 0.019	< 0.02
3&4-Methylphenol	310	n	—	< 0.038	< 0.039	< 0.039
3,3'-Dichlorobenzidine	1.2	c	—	< 0.019	< 0.019	< 0.02
3-Nitroaniline	—		—	< 0.038	< 0.039	< 0.039
4,6-Dinitro-o-cresol	0.49	n	—	< 0.076	< 0.078	< 0.078
4-Bromophenyl phenyl ether	—		—	< 0.019	< 0.019	< 0.02
4-Chloro-3-methyl phenol	620	n	—	< 0.019	< 0.019	< 0.02
4-Chloroaniline	2.7*	c	—	< 0.019	< 0.019	< 0.02
4-Chlorophenyl phenyl ether	—		—	< 0.028	< 0.029	< 0.029

Table 5-1
Analytical Results for Subsurface Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID				DPT-52 (8-10)		DPT-53 (8-10)		DPT-54 (8-10)	
Laboratory ID	Residential		MCL-Based	FA12814-4		FA12814-3		FA12814-11	
Date Collected	RSL		SSL	02/26/14		02/26/14		02/26/14	
Semi-Volatile Organic Compounds by USEPA Method 8270 (mg/kg)									
4-Nitroaniline	25	c**	—	< 0.038		< 0.039		< 0.039	
4-Nitrophenol	—		—	< 0.15		< 0.16		< 0.16	
Acenaphthene	350	n	—	< 0.024		< 0.025		< 0.025	
Acenaphthylene	350	n	—	< 0.019		< 0.019		< 0.02	
Anthracene	1700	n	—	< 0.019		< 0.019		< 0.02	
Benzo(a)anthracene	0.15	c	—	< 0.019		< 0.019		< 0.02	
Benzo(a)pyrene	0.015	c	0.24	< 0.019		< 0.019		< 0.02	
Benzo(b)fluoranthene	0.15	c	—	< 0.019		< 0.019		< 0.02	
Benzo(g,h,i)perylene	—		—	< 0.019		< 0.019		< 0.02	
Benzo(k)fluoranthene	1.5	c	—	< 0.021		< 0.021		< 0.021	
Benzoic Acid	25000	nm	—	< 0.19		< 0.19		< 0.2	
Benzyl Alcohol	620	n	—	< 0.019		< 0.019		< 0.02	
bis(2-Chloroethoxy)methane	18	n	—	< 0.019		< 0.019		< 0.02	
bis(2-Chloroethyl)ether	0.23	c	—	< 0.019		< 0.019		< 0.02	
bis(2-Chloroisopropyl)ether	—		—	< 0.02		< 0.02		< 0.02	
bis(2-Ethylhexyl)phthalate	38	c*	1.4	< 0.038		< 0.039		< 0.039	
Butyl benzyl phthalate	280	c*	—	< 0.038		< 0.039		< 0.039	
Carbazole	—		—	< 0.019		< 0.019		< 0.02	
Chrysene	15	c	—	< 0.019		< 0.019		< 0.02	
Di-n-butyl phthalate	620	n	—	< 0.038		< 0.039		< 0.039	
Di-n-octyl phthalate	62	n	—	< 0.038		< 0.039		< 0.039	
Dibenzo(a,h)anthracene	0.015	c	—	< 0.019		< 0.019		< 0.02	
Dibenzofuran	7.2	n	—	< 0.019		< 0.019		< 0.02	
Diethyl phthalate	4900	n	—	< 0.038		< 0.039		< 0.039	
Dimethyl phthalate	—		—	< 0.038		< 0.039		< 0.039	
Fluoranthene	230	n	—	< 0.019		< 0.019		< 0.02	
Fluorene	230	n	—	< 0.019		< 0.019		< 0.02	
Hexachlorobenzene	0.33	c	0.013	< 0.019		< 0.019		< 0.02	
Hexachlorobutadiene	6.2	c**	—	< 0.019		< 0.019		< 0.02	
Hexachlorocyclopentadiene	37	n	0.16	< 0.019		< 0.019		< 0.02	
Hexachloroethane	4.3	c**	—	< 0.019		< 0.019		< 0.02	
Indeno(1,2,3-cd)pyrene	0.15	c	—	< 0.019		< 0.019		< 0.02	
Isophorone	560	c*	—	< 0.019		< 0.019		< 0.02	
N-Nitroso-di-n-propylamine	0.076	c	—	< 0.019		< 0.019		< 0.02	
N-Nitrosodiphenylamine	110	c	—	< 0.019		< 0.019		< 0.02	
Naphthalene	3.8	c*	—	< 0.019		< 0.019		< 0.02	
Nitrobenzene	5.1	c*	—	< 0.019		< 0.019		< 0.02	
Pentachlorophenol	0.99	c	0.01	< 0.15		< 0.16		< 0.16	
Phenanthrene	—		—	< 0.019		< 0.019		< 0.02	
Phenol	1800	n	—	< 0.019		< 0.019		< 0.02	
Pyrene	170	n	—	< 0.019		< 0.019		< 0.02	
Metals by USEPA Method 6010 (mg/kg)									
Antimony	3.1	n	0.27	< 0.07		< 0.09		< 0.09	/M/m
Arsenic	0.67	c*	0.29	***0.68***	***/J/A***	***0.52***		***1.7***	
Beryllium	16	n	3.2	**0.03**	**J//**	**0.03**	**J//**	**0.06**	**J//**
Cadmium	7	n	—	< 0.02		< 0.02		< 0.02	
Chromium	12000	nm	180000	**6.7**		**7.7**		**12.9**	**/M/m**
Copper	310	n	46	**1**	**/B/V**	**1.1**	**J/B/V**	**3.7**	**/B/V**
Lead	400	L	14	**3.6**		**3.4**		**4.9**	
Nickel	150	n	—	**0.45**	**J//**	**0.51**	**J//**	**1.1**	**J//**
Selenium	39	n	0.26	**0.16**	**J//**	< 0.15		***0.36***	***J//***
Silver	39	n	—	< 0.02		< 0.03		**0.06**	**J//**
Thallium	0.16	n	—	< 0.05		< 0.07		< 0.07	
Zinc	2300	n	—	**0.55**	**J/B/V**	**1**	**/B/V**	**1.6**	**/B/V**
Mercury by USEPA Method 7471 (mg/kg)									
Mercury	0.94	ns	0.1	< 0.0045		**0.0067**	**J//**	**0.03**	**J//**
Hexavalent Chromium by USEPA Method 3060 (mg/kg)									
Hexavalent Chromium	0.3	c	—	< 0.98		< 0.98		**1.4**	**J/B/V**
Soil pH by USEPA Method 9045D (Standard Units)									
Soil pH	—		—	—		—		—	

Table 5-1
Analytical Results for Subsurface Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID				DPT-55 (3-5)		DPT-56 (2-4)		DPT-57 (6-8)	
Laboratory ID	Residential		MCL-Based	FA12814-12		FA12814-10		FA12814-9	
Date Collected	RSL		SSL	02/26/14		02/26/14		02/26/14	
Volatile Organic Compounds by USEPA Method 8260 (mg/kg)									
1,1,1-Trichloroethane	810	ns	0.07	< 0.0007		< 0.00063		< 0.00074	
1,1,2,2-Tetrachloroethane	0.6	c	—	< 0.00098		< 0.00089		< 0.001	
1,1,2-Trichloroethane	0.15	c**	0.0016	< 0.0011		< 0.001		< 0.0012	
1,1-Dichloroethane	3.6	c	—	< 0.0007		< 0.00063		< 0.00074	
1,1-Dichloroethylene	23	n	0.0025	< 0.0007		< 0.00063		< 0.00074	
1,2-Dichloroethane	0.46	c*	0.0014	< 0.0007		< 0.00063		< 0.00074	
1,2-Dichloropropane	1	c*	0.0017	< 0.0007		< 0.00063		< 0.00074	
2-Hexanone	20	n	—	< 0.0034		< 0.0031		< 0.0036	
4-Methyl-2-pentanone	530	ns	—	< 0.0035		< 0.0032		< 0.0037	
Acetone	6100	n	—	**0.0105**	**J//**	< 0.0095		< 0.011	
Benzene	1.2	c*	0.0026	< 0.0007		< 0.00063		< 0.00074	
Bromodichloromethane	0.29	c	0.022	< 0.0007		< 0.00063		< 0.00074	
Bromoform	67	c*	0.021	< 0.00075		< 0.00068		< 0.0008	
Carbon disulfide	77	ns	—	< 0.0007		< 0.00063		< 0.00074	
Carbon tetrachloride	0.65	c	0.0019	< 0.00097		< 0.00088		< 0.001	
Chlorobenzene	28	n	0.068	< 0.0007		< 0.00063		< 0.00074	
Chloroethane	1400	ns	—	< 0.0016		< 0.0014		< 0.0017	
Chloroform	0.32	c	0.022	< 0.00079		< 0.00071		< 0.00084	
cis-1,2-Dichloroethylene	16	n	0.021	< 0.0007		< 0.00063		**0.0018**	**J//**
cis-1,3-Dichloropropene	1.8	c*	—	< 0.0007		< 0.00063		< 0.00074	
Dibromochloromethane	0.73	c	0.021	< 0.0007		< 0.00063		< 0.00074	
Ethylbenzene	5.8	c	0.78	< 0.0007		< 0.00063		< 0.00074	
Methyl bromide	0.68	n	—	< 0.0013		< 0.0012		< 0.0014	
Methyl chloride	11	n	—	< 0.0014		< 0.0013		< 0.0015	
Methyl ethyl ketone	2700	n	—	< 0.0052		< 0.0047		< 0.0056	
Methylene chloride	35	c**	0.0013	< 0.0028		< 0.0025		< 0.003	
Styrene	600	ns	0.11	< 0.0007		< 0.00063		< 0.00074	
Tetrachloroethylene	8.1	c**	0.0023	***0.0069***		***0.0041***		***0.0877***	
Toluene	490	ns	0.69	< 0.0007		< 0.00063		< 0.00074	
trans-1,2-Dichloroethylene	160	n	0.029	< 0.00094		< 0.00085		< 0.001	
trans-1,3-Dichloropropene	1.8	c*	—	< 0.0007		< 0.00063		< 0.00074	
Trichloroethylene	0.41	c**	0.0018	< 0.00071		< 0.00064		***0.0083***	
Vinyl chloride	0.059	c	0.00069	< 0.00071		< 0.00064		< 0.00076	
Xylene (total)	58	ns	9.8	< 0.0019		< 0.0017		< 0.002	
Semi-Volatile Organic Compounds by USEPA Method 8270 (mg/kg)									
1,2,4-Trichlorobenzene	5.8	c**	0.2	< 0.018		< 0.019		< 0.019	
1,2-Dichlorobenzene	180	ns	0.58	< 0.018		< 0.019		< 0.019	
1,3-Dichlorobenzene	—		—	< 0.018		< 0.019		< 0.019	
1,4-Dichlorobenzene	2.6	c	0.072	< 0.018		< 0.019		< 0.019	
2,4,5-Trichlorophenol	620	n	—	< 0.024		< 0.025		< 0.024	
2,4,6-Trichlorophenol	6.2	c**	—	< 0.018		< 0.019		< 0.019	
2,4-Dichlorophenol	18	n	—	< 0.019		< 0.02		< 0.019	
2,4-Dimethylphenol	120	n	—	< 0.02		< 0.021		< 0.02	
2,4-Dinitrophenol	12	n	—	< 0.18		< 0.19		< 0.19	
2,4-Dinitrotoluene	1.7	c*	—	< 0.021		< 0.022		< 0.021	
2,6-Dinitrotoluene	0.36	c*	—	< 0.02		< 0.021		< 0.02	
2-Chloronaphthalene	630	n	—	< 0.022		< 0.023		< 0.022	
2-Chlorophenol	39	n	—	< 0.018		< 0.019		< 0.019	
2-Methylnaphthalene	23	n	—	< 0.018		< 0.019		< 0.019	
2-Methylphenol	310	n	—	< 0.018		< 0.019		< 0.019	
2-Nitroaniline	61	n	—	< 0.037		< 0.038		< 0.037	
2-Nitrophenol	—		—	< 0.018		< 0.019		< 0.019	
3&4-Methylphenol	310	n	—	< 0.037		< 0.038		< 0.037	
3,3'-Dichlorobenzidine	1.2	c	—	< 0.018		< 0.019		< 0.019	
3-Nitroaniline	—		—	< 0.037		< 0.038		< 0.037	
4,6-Dinitro-o-cresol	0.49	n	—	< 0.074		< 0.076		< 0.074	
4-Bromophenyl phenyl ether	—		—	< 0.018		< 0.019		< 0.019	
4-Chloro-3-methyl phenol	620	n	—	< 0.018		< 0.019		< 0.019	
4-Chloroaniline	2.7*	c	—	< 0.018		< 0.019		< 0.019	
4-Chlorophenyl phenyl ether	—		—	< 0.028		< 0.028		< 0.028	

Table 5-1
Analytical Results for Subsurface Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID				DPT-55 (3-5)		DPT-56 (2-4)		DPT-57 (6-8)	
Laboratory ID	Residential		MCL-Based	FA12814-12		FA12814-10		FA12814-9	
Date Collected	RSL		SSL	02/26/14		02/26/14		02/26/14	
Semi-Volatile Organic Compounds by USEPA Method 8270 (mg/kg)									
4-Nitroaniline	25	c**	—	< 0.037		< 0.038		< 0.037	
4-Nitrophenol	—		—	< 0.15		< 0.15		< 0.15	
Acenaphthene	350	n	—	< 0.023		< 0.024		< 0.023	
Acenaphthylene	350	n	—	< 0.018		< 0.019		< 0.019	
Anthracene	1700	n	—	< 0.018		< 0.019		< 0.019	
Benzo(a)anthracene	0.15	c	—	< 0.018		< 0.019		< 0.019	
Benzo(a)pyrene	0.015	c	0.24	< 0.018		< 0.019		< 0.019	
Benzo(b)fluoranthene	0.15	c	—	< 0.018		< 0.019		< 0.019	
Benzo(g,h,i)perylene	—		—	< 0.018		< 0.019		< 0.019	
Benzo(k)fluoranthene	1.5	c	—	< 0.02		< 0.021		< 0.02	
Benzoic Acid	25000	nm	—	< 0.18		< 0.19		< 0.19	
Benzyl Alcohol	620	n	—	< 0.018		< 0.019		< 0.019	
bis(2-Chloroethoxy)methane	18	n	—	< 0.018		< 0.019		< 0.019	
bis(2-Chloroethyl)ether	0.23	c	—	< 0.018		< 0.019		< 0.019	
bis(2-Chloroisopropyl)ether	—		—	< 0.019		< 0.02		< 0.019	
bis(2-Ethylhexyl)phthalate	38	c*	1.4	< 0.037		< 0.038		< 0.037	
Butyl benzyl phthalate	280	c*	—	< 0.037		< 0.038		< 0.037	
Carbazole	—		—	< 0.018		< 0.019		< 0.019	
Chrysene	15	c	—	< 0.018		< 0.019		< 0.019	
Di-n-butyl phthalate	620	n	—	< 0.037		< 0.038		< 0.037	
Di-n-octyl phthalate	62	n	—	< 0.037		< 0.038		< 0.037	
Dibenzo(a,h)anthracene	0.015	c	—	< 0.018		< 0.019		< 0.019	
Dibenzofuran	7.2	n	—	< 0.018		< 0.019		< 0.019	
Diethyl phthalate	4900	n	—	< 0.037		< 0.038		< 0.037	
Dimethyl phthalate	—		—	< 0.037		< 0.038		< 0.037	
Fluoranthene	230	n	—	< 0.018		< 0.019		< 0.019	
Fluorene	230	n	—	< 0.018		< 0.019		< 0.019	
Hexachlorobenzene	0.33	c	0.013	< 0.018		< 0.019		< 0.019	
Hexachlorobutadiene	6.2	c**	—	< 0.018		< 0.019		< 0.019	
Hexachlorocyclopentadiene	37	n	0.16	< 0.018		< 0.019		< 0.019	
Hexachloroethane	4.3	c**	—	< 0.018		< 0.019		< 0.019	
Indeno(1,2,3-cd)pyrene	0.15	c	—	< 0.018		< 0.019		< 0.019	
Isophorone	560	c*	—	< 0.018		< 0.019		< 0.019	
N-Nitroso-di-n-propylamine	0.076	c	—	< 0.018		< 0.019		< 0.019	
N-Nitrosodiphenylamine	110	c	—	< 0.018		< 0.019		< 0.019	
Naphthalene	3.8	c*	—	< 0.018		< 0.019		< 0.019	
Nitrobenzene	5.1	c*	—	< 0.018		< 0.019		< 0.019	
Pentachlorophenol	0.99	c	0.01	< 0.15		< 0.15		< 0.15	
Phenanthrene	—		—	< 0.018		< 0.019		< 0.019	
Phenol	1800	n	—	< 0.018		< 0.019		< 0.019	
Pyrene	170	n	—	< 0.018		< 0.019		< 0.019	
Metals by USEPA Method 6010 (mg/kg)									
Antimony	3.1	n	0.27	< 0.4		< 0.08		< 0.09	
Arsenic	0.67	c*	0.29	***0.94***	***J//***	***1.2***		***0.45***	***J//***
Beryllium	16	n	3.2	**0.14**	**J//**	**0.09**	**J//**	**0.03**	**J//**
Cadmium	7	n	—	**0.2**	**J//**	**0.02**	**J//**	< 0.02	
Chromium	12000	nm	180000	**6.7**		**11.2**		**8.7**	
Copper	310	n	46	**1.6**	**J/B/V**	**1.8**	**/B/V**	**1.4**	**/B/V**
Lead	400	L	14	**3.4**		**5**		**4**	
Nickel	150	n	—	**2.7**	**J//**	**1.1**	**J//**	**0.61**	**J//**
Selenium	39	n	0.26	< 0.6		**0.22**	**J//**	**0.17**	**J//**
Silver	39	n	—	< 0.13		< 0.02		< 0.03	
Thallium	0.16	n	—	< 0.3		< 0.06		< 0.07	
Zinc	2300	n	—	**2.5**	**/B/V**	**0.95**	**/B/V**	**0.62**	**J/B/V**
Mercury by USEPA Method 7471 (mg/kg)									
Mercury	0.94	ns	0.1	**0.02**	**J//**	**0.04**	**J//**	**0.0074**	**J//**
Hexavalent Chromium by USEPA Method 3060 (mg/kg)									
Hexavalent Chromium	0.3	c	—	< 0.94		**2.4**	**/B/V**	< 0.96	
Soil pH by USEPA Method 9045D (Standard Units)									
Soil pH	—		—	—		—		—	

Table 5-1
Analytical Results in Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Notes:

Residential RSL is the soil value from the USEPA Regional Screening Level (RSL) Table, based on risk of 10^{-6} for carcinogens and HQ of 0.1 for noncarcinogens (May 2014).

MCL-Based SSL is the maximum contaminant level (MCL)-based Soil Screening Level (SSL) from the USEPA RSL Table (May 2014). SSL values are based on a dilution attenuation factor of 1.

RSL and SSL for 1,3-dichloropropene was used for cis- and trans-1,3-dichloropropene.

RSL and SSL for 2-methylphenol was used for 3&4-methylphenol.

RSL and SSL for acenaphthene was used for acenaphthylene.

RSL for trivalent chromium was used for total chromium.

RSL and SSL for elemental mercury was used for mercury.

RSL and SSL for nickel soluble salts was used for nickel.

RSL and SSL for thallium sulfate was used for thallium.

Bold font and shading indicate the concentration is detected.

Italics indicates the concentration exceeds the MCL-Based SSL.

Bold outline indicates the concentration exceeds the Residential RSL.

— - Indicates No Standard (for screening criteria) or Not Analyzed (for analytical data).

* - noncancer RSL is less than 100 times the cancer RSL.

** - noncancer RSL is less than 10 times the cancer RSL. In these instances, the more conservative noncancer RSL is shown on the table.

c - RSL is based on cancer effects.

L - See RSL User's Guide (May 2014) for discussion of lead.

m - concentration may exceed the ceiling limit. See RSL User's Guide (May 2014).

n - RSL is based on noncancer effects.

s -concentration may exceed saturation limit. See RSL User's Guide (May 2014).

See Table 5-8 for explanation of data qualifiers.

Table 5-2
Analytical Results for Background Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID	BG-1 (1-2)	BG-1 (16-17)	BG-2 (1.5-2.5)	BG-2 (4-5)	BG-2 (7-8)	BG-2 (12-14)	BG-2 (16-17)	BG-3 (0.5-1.5)
Laboratory ID	FA12917-13	FA12917-12	FA12917-6	FA12917-7	FA12917-8	FA12917-9	FA12917-11	FA12917-1
Date Collected	02/28/14	02/28/14	02/28/14	02/28/14	02/28/14	02/28/14	02/28/14	02/28/14
Metals by USEPA Method 6010 (mg/kg)								
Antimony	< 0.09	< 0.11	< 0.09	< 0.11	< 0.1	< 0.11	< 0.6	< 0.1
Arsenic	**0.33 J//**	**0.57**	**0.47 J//**	**1.2**	**0.92**	**1.5 /J/A**	**2.2 J//**	**0.28 J//**
Beryllium	< 0.02	**0.05 J//**	**0.02 J//**	**0.04 J//**	**0.03 J//**	**0.15 J//**	**0.35 J//**	< 0.02
Cadmium	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.15	< 0.02
Chromium	**1.6**	**12.1**	**2.1**	**22.3**	**12.9**	**23.2**	**16.8**	**1.3**
Copper	**0.47 J//**	**0.77 J//**	**0.37 J//**	**2.2**	**0.95 J//**	**2.5 /J/A**	**4.8 J//**	**0.33 J//**
Lead	**1.1**	**2.4**	**1.4**	**5.7**	**6.8**	**11.5**	**9.4**	**1.2**
Nickel	**0.63 J//**	**0.49 J//**	**0.56 J//**	**0.89 J//**	**0.62 J//**	**0.86 J//**	**2 J//**	**0.38 J//**
Selenium	< 0.14	< 0.16	< 0.14	**0.19 J//**	< 0.15	< 0.16	< 0.89	< 0.15
Silver	< 0.03	< 0.03	< 0.03	**0.05 J//**	< 0.03	< 0.03	< 0.19	< 0.03
Thallium	< 0.07	< 0.07	< 0.07	< 0.08	< 0.07	< 0.8	< 0.08	< 0.07
Zinc	**1.7**	**0.65 J//**	**2.2**	**0.94 J//**	**1.1**	**3.2 /J/A**	**10.6**	**1.1**
Mercury by USEPA Method 7471 (mg/kg)								
Mercury	**0.01 J//**	**0.0084 J//**	**0.01 J//**	**0.13**	**0.02 J//**	**0.02 J//**	< 0.006	**0.0096 J//**
Hexavalent Chromium by USEPA Method 3060 (mg/kg)								
Hexavalent Chromium	< 0.92	< 1	< 0.91	**1.5 J//**	< 0.98	< 1.1	< 1.3	< 0.93

Table 5-2
Analytical Results for Background Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID	BG-3 (2-3)		BG-3 (9-11)		BG-3 (14-16)		BG-3 (18-20)		BG-4 (1-3)		BG-4 (5-7)		BG-4 (9-11)		BG-4 (14-16)	
Laboratory ID	FA12917-2		FA12917-3		FA12917-4		FA12917-5		FA12854-13		FA12854-14		FA12855-2		FA12855-3	
Date Collected	02/28/14		02/28/14		02/28/14		02/28/14		02/27/14		02/27/14		02/27/14		02/27/14	
Metals by USEPA Method 6010 (mg/kg)																
Antimony	< 0.1		< 0.1		< 0.1		< 0.12		< 0.1		< 0.1		< 0.11		< 0.1	
Arsenic	**1.3**		**0.77**		**1**		**0.58**	**J//**	**0.88**		**0.39**	**J//**	**0.35**	**J//**	**0.45**	**J//**
Beryllium	**0.13**	**J//**	**0.04**	**J//**	**0.13**	**J//**	**0.16**	**J//**	**0.11**	**J//**	< 0.02		< 0.02		< 0.02	
Cadmium	< 0.02		< 0.02		< 0.02		< 0.03		< 0.02		< 0.02		< 0.02		< 0.02	
Chromium	**6.4**		**8.7**		**15.6**		**9**		**12.4**		**6.8**		**11.3**		**5.1**	
Copper	**2.2**		**0.98**	**J//**	**1.4**		**1.3**	**J//**	**0.99**	**J//**	**0.61**	**J//**	**0.36**	**J//**	**0.42**	**J//**
Lead	**4.5**		**4.5**		**11.9**		**5.2**		**5.7**		**4.6**		**4.7**		**3.4**	
Nickel	**2.5**		**0.62**	**J//**	**0.65**	**J//**	**0.61**	**J//**	**1.8**	**J//**	**0.67**	**J//**	**0.54**	**J//**	**0.32**	**J//**
Selenium	< 0.15		**0.16**	**J//**	< 0.15		< 0.18		**0.21**	**J//**	< 0.16		< 0.17		< 0.15	
Silver	< 0.03		< 0.03		< 0.03		< 0.03		< 0.03		< 0.03		< 0.03		< 0.03	
Thallium	< 0.07		< 0.07		< 0.07		< 0.08		< 0.07		< 0.07		< 0.08		< 0.07	
Zinc	**3.4**		**0.66**	**J//**	**1.7**		**2.9**		**2.3**		**0.78**	**J//**	**1.2**	**/B/V**	**0.58**	**J/B/V**
Mercury by USEPA Method 7471 (mg/kg)																
Mercury	**0.03**	**J//**	**0.02**	**J//**	**0.02**	**J//**	< 0.0051		**0.04**	**J//**	**0.01**	**J//**	**0.05**		**0.0077**	**J//**
Hexavalent Chromium by USEPA Method 3060 (mg/kg)																
Hexavalent Chromium	**3.8**		< 0.95		< 1.1		< 1.2		**4.7**		< 0.93		< 0.98		< 1	

Table 5-2
Analytical Results for Background Soil Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID	BG-4 (17-19)		BG-5 (1-3)		BG-5 (3-5)		BG-5 (6-7.5)		BG-5 (8-9)		BG-5 (12-13)		BG-5 (16-17)	
Laboratory ID	FA12855-4		FA12854-8		FA12854-9		FA12854-10		FA12854-11		FA12854-7		FA12854-12	
Date Collected	02/27/14		02/27/14		02/27/14		02/27/14		02/27/14		02/27/14		02/27/14	
Metals by USEPA Method 6010 (mg/kg)														
Antimony	< 0.11		< 0.36		< 0.11		< 0.12		< 0.44		< 0.1		< 0.52	
Arsenic	**0.27**	**J//**	**1.6**		**0.39**	**J//**	**3.2**		**1.5**	**J//**	**0.36**	**J//**	**1.3**	**J//**
Beryllium	< 0.02		**0.14**	**J//**	**0.05**	**J//**	**0.07**	**J//**	< 0.11		< 0.02		< 0.13	
Cadmium	< 0.02		**0.8**		< 0.02		< 0.02		< 0.11		< 0.02		< 0.13	
Chromium	**4.3**		**14.4**		**14.4**		**36.7**		**16.3**		**4.2**		**14.6**	
Copper	**0.45**	**J//**	**1.4**	**J//**	**0.86**	**J//**	**0.39**	**J//**	**0.62**	**J//**	**0.57**	**J//**	**1.3**	**J//**
Lead	**1.3**		**4.2**		**3.8**		**7.8**		**10.4**		**1.9**		**8.2**	
Nickel	**0.27**	**J//**	**1.7**	**J//**	**0.43**	**J//**	**0.26**	**J//**	**0.39**	**J//**	**0.45**	**J//**	**0.81**	**J//**
Selenium	< 0.17		< 0.6		**0.29**	**J//**	**0.5**	**J//**	< 0.65		< 0.15		< 0.77	
Silver	< 0.03		< 0.12		< 0.03		**0.19**	**J//**	< 0.14		< 0.03		< 0.17	
Thallium	< 0.08		< 0.28		< 0.08		< 0.88		< 0.33		< 0.07		< 0.39	
Zinc	**0.61**	**J/B/V**	**2.6**		**0.54**	**J//**	**0.66**	**J//**	**1.5**	**J//**	**1.2**		**3.5**	**J//**
Mercury by USEPA Method 7471 (mg/kg)														
Mercury	< 0.0043		**0.05**		**0.01**	**J//**	**0.02**	**J//**	**0.05**		< 0.0044		< 0.0054	
Hexavalent Chromium by USEPA Method 3060 (mg/kg)														
Hexavalent Chromium	< 0.99		**1.4**	**J//**	< 0.98		< 1		**1.5**	**J//**	**2.8**		**2.5**	**J/M/M**

Notes:
Bold font and shading indicate the concentration is detected.

Table 5-3
Analytical Results for Sub-Slab Vapor Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID Lab Sample ID Date Collected	EPA Regional Industrial Air Screening Level	Calculated Shallow (< 5 ft) Soil Gas Standard[1]	SSV-1 JB61406-1 03/07/14	SSV-2 JB61406-4 03/07/14	SSV-3 JB61406-5 03/07/14	SSV-4 JB61406-2 03/07/14
Volatile Organic Compounds by Method TO-15 (µg/m^3)						
1,1,1-Trichloroethane	22000	220000	**1740**	**4440**	< 46	**142**
1,1,2,2-Tetrachloroethane	0.21	2.1	< 120	< 390	< 110	< 0.82
1,1,2-Trichloroethane	0.77	7.7	< 98	< 320	< 87	< 0.65
1,1-Dichloroethane	7.7	77	< 39	< 130	< 34	< 0.27
1,1-Dichloroethylene	880	8800	< 48	< 160	< 44	< 0.33
1,2,4-Trichlorobenzene	8.8	88	< 350	< 1100	< 300	< 2.4
1,2,4-Trimethylbenzene	31	310	< 48	< 150	< 42	**15** **/J/A**
1,2-Dibromoethane	0.02	0.2	< 120	< 400	< 110	< 0.85
1,2-Dichloroethane	0.47	4.7	< 39	< 130	< 34	< 0.27
1,2-Dichloropropane	1.2	12	< 110	< 350	< 97	< 0.74
1,3,5-Trimethylbenzene	—	—	< 44	< 140	< 39	**4.4**
1,3-Butadiene	0.41	4.1	< 27	< 82	< 22	< 0.17
1,4-Dioxane	2.5	25	< 130	< 400	< 110	< 0.86
2,2,4-Trimethylpentane[4]	—	—	< 56	< 190	< 51	< 0.39
2-Chlorotoluene[4]	—	—	< 62	< 200	< 52	< 0.41
2-Hexanone	130	1300	< 61	< 190	< 53	< 0.4
3-Chloropropene[4]	—	—	< 50	< 160	< 44	< 0.34
4-Ethyltoluene	—	—	< 44	< 140	< 39	**4.5**
Acetone	140000	1400000	< 48	< 150	< 43	**45.6** **/J/A**
Acrolein[3]	0.088	0.88	—	—	—	—
Benzene	1.6	16	< 38	< 130	< 35	***1.8*** ***J//***
Benzyl Chloride	0.25	2.5	< 77	< 240	< 67	< 0.51
Bromodichloromethane	0.33	3.3	< 100	< 310	< 87	< 0.66
Bromoethene[4]	—	—	< 37	< 120	< 32	< 0.25
Bromoform	11	110	< 130	< 420	< 110	< 0.89
Bromomethane	22	220	< 39	< 130	< 35	< 0.27
Carbon disulfide	3100	31000	< 31	< 100	< 28	< 0.21
Carbon tetrachloride	2	20	< 42	< 130	< 37	< 0.28
Chlorobenzene	220	2200	< 69	< 220	< 60	< 0.46
Chloroethane	44000	440000	< 32	< 100	< 29	< 0.22
Chloroform	0.53	5.3	< 54	< 170	< 47	< 0.36
Chloromethane	390	3900	< 41	< 130	< 35	**0.89** **J//**
cis-1,2-Dichloroethylene	—	—	< 63	< 210	< 56	< 0.44
cis-1,3-Dichloropropene	3.1 [2]	31	< 50	< 160	< 44	< 0.34
Cyclohexane	26000	260000	< 120	< 380	< 100	< 0.79
Dibromochloromethane	0.45	4.5	< 140	< 470	< 130	< 1
Dichlorodifluoromethane	440	4400	< 45	< 140	< 40	**2.3** **J//**
Ethanol	—	—	< 210	< 660	< 180	**16**
Ethyl Acetate	310	3100	< 120	< 400	< 110	**4.3** **/J/A**
Ethylbenzene	4.9	49	< 52	< 170	< 48	**3.7**
Freon 113	130000	1300000	< 92	< 300	< 84	< 0.63
Freon 114	—	—	< 91	< 280	< 77	< 0.59
Heptane	—	—	< 49	< 150	< 41	**4.9**
Hexachlorobutadiene	0.56	5.6	< 390	< 1300	< 350	< 2.7
Hexane	3100	31000	< 33	< 110	< 29	**4.2** **/J/A**
Isopropyl Alcohol	31000	310000	< 57	< 180	< 49	**352** **/J/A**
m,p-Xylene	440	4400	< 83	< 260	< 74	**26** **/J/A**
m-Dichlorobenzene	—	—	< 90	< 280	< 78	< 0.6
Methyl ethyl ketone	22000	220000	< 100	< 320	< 88	**2.4**
Methyl Isobutyl Ketone	13000	130000	< 70	< 230	< 61	< 0.49
Methyl Tert Butyl Ether	47	470	< 36	< 120	< 32	< 0.25
Methylene chloride	1200	12000	< 97	< 310	< 83	**7.3** **/J/A**
Methylmethacrylate	3100	31000	< 98	< 320	< 86	< 0.66
Naphthalene[3]	0.36	3.6	—	—	—	—
o-Dichlorobenzene	880	8800	< 100	< 340	< 90	< 0.72
o-Xylene	440	4400	< 48	< 160	< 43	**10**
p-Dichlorobenzene	1.1	11	< 78	< 250	< 66	< 0.52
Propylene	13000	130000	< 33	< 100	< 27	< 0.22
Styrene	4400	44000	< 51	< 160	< 43	< 0.34
Tertiary Butyl Alcohol[4]	—	—	< 79	< 250	< 70	**1.8** **J//**

Table 5-3
Analytical Results for Sub-Slab Vapor Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID Lab Sample ID Date Collected	EPA Regional Industrial Air Screening Level	Calculated Shallow (< 5 ft) Soil Gas Standard[1]	SSV-1 JB61406-1 03/07/14	SSV-2 JB61406-4 03/07/14	SSV-3 JB61406-5 03/07/14	SSV-4 JB61406-2 03/07/14
Volatile Organic Compounds by Method TO-15 (µg/m^3)						
Tetrachloroethylene	47	470	***292000***	***821000***	***220000***	***2140***
Tetrahydrofuran	—	—	< 80	< 250	< 68	< 0.53
Toluene	22000	220000	< 45	< 140	< 41	**24**
trans-1,2-Dichloroethylene	—	—	< 35	< 110	< 31	< 0.23
trans-1,3-Dichloropropene	3.1 [2]	31	< 54	< 180	< 50	< 0.38
Trichloroethylene	3	30	< 59	***1200***	< 54	**1.3**
Trichlorofluoromethane	3100	31000	< 46	< 150	< 40	**6.2**
Vinyl Acetate	880	8800	< 120	< 390	< 110	< 0.81
Vinyl chloride	2.8	28	< 26	< 82	< 23	< 0.17
Xylenes (total)[4]	440	4400	< 48	< 160	< 43	**37** **/J/A**

Notes:
EPA Regional Indoor Air Screening Level (TR=1E-6, HQ=1; EPA, May 2014).
— - Indicates No Standard (for screening criteria) or Not Analyzed (for analytical data).
[1]Screening criteria calculated from the EPA Regional Screening Levels using the EPA OSWER attenuation for shallow soil gas of 0.1.
[2]Criterion for 1,3-dichloropropene used as a surrogate value.
[3]Specified in work plan, but not analyzed.
[4]Not specified in work plan, but analyzed.
Bold font and shading indicates the analyte was detected.
Italicized font indicates the concentration exceeds the EPA Regional Indoor Air Screening Level (TR=1E-6, HQ=1; EPA, May 2014).
Bold outline indicates the concentration exceeds the Calculated Shallow (< 5 ft) Soil Gas Standard.
See Table 5-8 for explanation of data qualifiers.

Table 5-4
Groundwater Quality Indicator Parameters
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Well	pH (S.U.)	Conductivity (mS/cm)	Temperature (^{o}C)	Turbidity (NTUs)	Dissolved Oxygen (mg/L)	ORP (mV)
MW-1	3.90	0.037	15.38	5.37	6.06	215.4
MW-2	3.46	0.026	18.42	3.14	8.77	216.1
MW-3	3.83	0.024	10.01	2.22	10.30	208.7
MW-3D	6.31	0.236	14.95	1.46	3.85	144.1
MW-3D1	6.35	0.234	15.43	3.68	0.87	88.5
MW-4	4.30	0.189	18.19	5.94	2.30	372.7
MW-5	4.01	0.028	14.48	0.00	8.71	211.8
MW-6	3.33	0.022	14.39	3.81	5.20	489.0
MW-7	3.91	0.016	13.91	1.70	7.95	214.8
MW-8	4.06	0.062	17.86	0.62	5.10	227.7
MW-9	3.70	0.034	12.14	0.29	4.09	141.5
MW-9D	7.59	0.239	15.32	6.56	0.71	-0.50
MW-10	3.96	0.026	13.52	2.26	6.17	216.5
MW-10D	7.59	0.235	15.18	0.00	5.20	180.2
MW-11	4.67	0.260	15.83	3.76	0.49	100.4
MW-12D	11.22	0.647	22.62	0.89	4.07	31.8
MW-13D	7.77	0.264	18.44	6.01	4.74	306.4
MW-14	3.82	0.023	15.88	0.00	8.74	201.3
MW-14D	7.49	0.230	17.06	0.00	8.08	139.1
MW-15	4.40	0.304	17.58	20.88	0.28	216.4
MW-15D	7.20	0.439	22.14	4.08	6.60	47.9
MW-15D1	7.59	0.201	18.09	60.83	0.16	-94.2
MW-16	3.90	0.038	10.04	13.09	2.50	203.1
MW-16D	6.47	0.314	12.65	0.00	8.37	160.1
MW-17	4.42	0.193	17.96	5.96	0.58	127.1
MW-18	4.67	0.070	17.40	3.77	2.79	150.7
MW-19	5.13	0.187	21.52	0.84	2.34	90.0
MW-20	4.07	0.039	20.71	1.88	4.44	181.8
MW-21	4.68	0.056	21.09	205.6	0.026	87.2
MW-21D	8.84	0.503	20.40	4.60	1.05	721.7
MW-22D	11.22	0.670	19.11	5.31	4.85	394.2
MW-23D	8.50	0.365	21.22	2.91	2.27	258.9

Notes:
^{o}C - degrees Celsius
mg/L - milligrams per liter
mV - millivolts
mS/cm -
ORP - oxidation-reduction potential
NTUs - Nephelometric Turbidity Units
S.U. - standard units

Table 5-5
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID		MW-1		MW-2		MW-3		MW-3D		MW-3D1	
Laboratory ID	USEPA	FA12815-7		FA12815-3		FA13018-2		FA13018-5		FA13018-6	
Date Collected	MCL	02/26/14		02/25/14		03/05/14		03/05/14		03/05/14	
Volatile Organic Compounds by USEPA Method 8260 (µg/L)											
1,1,1-Trichloroethane	200	< 6.7		< 0.34		< 0.34		< 0.34		< 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		**10.4**		< 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	**110**	**/J/A**	< 0.33		< 0.33		**7**		< 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	**69.3**	**J//**	< 2		< 2		< 2		< 2	
Styrene	100	< 4.7		< 0.23		< 0.23		< 0.23		< 0.23	
Tetrachloroethylene	5	**1280**	**/J/A**	**1.6**		**45.1**		**204**		< 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	**11.5**	**J//**	< 0.3		**1.1**		**6**		< 0.3	
Vinyl chloride	2	< 6.5		< 0.33		< 0.33		< 0.33		< 0.33	
Xylene (total)	10,000	< 13		< 0.66		< 0.66		< 0.66		< 0.66	
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)											
1,2,4-Trichlorobenzene	70	< 0.5		—		< 0.5		—		—	
1,2-Dichlorobenzene	600	< 0.5		—		< 0.5		—		—	
1,3-Dichlorobenzene	—	< 0.5		—		< 0.5		—		—	
1,4-Dichlorobenzene	75	< 0.5		—		< 0.5		—		—	
2,4,5-Trichlorophenol	—	< 0.97		—		< 0.97		—		—	
2,4,6-Trichlorophenol	—	< 0.55		—		< 0.55		—		—	
2,4-Dichlorophenol	—	< 0.58		—		< 0.58		—		—	
2,4-Dimethylphenol	—	< 0.5		—		< 0.5		—		—	
2,4-Dinitrophenol	—	< 5.4		—		< 5.4		—		—	
2,4-Dinitrotoluene	—	< 0.57		—		< 0.57		—		—	
2,6-Dinitrotoluene	—	< 0.63		—		< 0.63		—		—	
2-Chloronaphthalene	—	< 0.56		—		< 0.56		—		—	
2-Chlorophenol	—	< 0.52		—		< 0.52		—		—	
2-Methylnaphthalene	—	< 0.53		—		< 0.53		—		—	
2-Methylphenol	—	< 0.5		—		< 0.5		—		—	
2-Nitroaniline	—	< 1.2		—		< 1.2		—		—	
2-Nitrophenol	—	< 0.6		—		< 0.6		—		—	
3&4-Methylphenol	—	< 1.2		—		< 1.2		—		—	
3,3'-Dichlorobenzidine	—	< 0.9		—		< 0.9		—		—	
3-Nitroaniline	—	< 0.61		—		< 0.61		—		—	
4,6-Dinitro-o-cresol	—	< 2		—		< 2		—		—	
4-Bromophenyl phenyl ether	—	< 0.67		—		< 0.67		—		—	
4-Chloro-3-methyl phenol	—	< 0.5		—		< 0.5		—		—	
4-Chloroaniline	—	< 0.5		—		< 0.5		—		—	
4-Chlorophenyl phenyl ether	—	< 0.54		—		< 0.54		—		—	
4-Nitroaniline	—	< 0.76		—		< 0.76		—		—	
4-Nitrophenol	—	< 5	/R/c	—		< 5	/R/c	—		—	
Acenaphthene	—	< 0.5		—		< 0.5		—		—	
Acenaphthylene	—	< 0.5		—		< 0.5		—		—	

Table 5-5
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID		MW-1		MW-2	MW-3		MW-3D		MW-3D1
Laboratory ID	USEPA	FA12815-7		FA12815-3	FA13018-2		FA13018-5		FA13018-6
Date Collected	MCL	02/26/14		02/25/14	03/05/14		03/05/14		03/05/14
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)									
Anthracene	—	< 0.62		—	< 0.62		—		—
Benzo(a)anthracene	—	< 0.64		—	< 0.64		—		—
Benzo(a)pyrene	0.2	< 0.65		—	< 0.65		—		—
Benzo(b)fluoranthene	—	< 0.72		—	< 0.72		—		—
Benzo(g,h,i)perylene	—	< 0.81		—	< 0.81		—		—
Benzo(k)fluoranthene	—	< 0.51		—	< 0.51		—		—
Benzoic Acid	—	< 10	/R/c	—	< 10	/R/c	—		—
Benzyl Alcohol	—	< 1		—	< 1		—		—
bis(2-Chloroethoxy)methane	—	< 0.55		—	< 0.55		—		—
bis(2-Chloroethyl)ether	—	< 0.69		—	< 0.69		—		—
bis(2-Chloroisopropyl)ether	—	< 0.58		—	< 0.58		—		—
bis(2-Ethylhexyl)phthalate	6	< 1.6		—	< 1.6		—		—
Butyl benzyl phthalate	—	< 0.81		—	< 0.81		—		—
Carbazole	—	< 0.62		—	< 0.62		—		—
Chrysene	—	< 0.72		—	< 0.72		—		—
Di-n-butyl phthalate	—	< 1		—	< 1		—		—
Di-n-octyl phthalate	—	< 1		—	< 1		—		—
Dibenzo(a,h)anthracene	—	< 0.81		—	< 0.81		—		—
Dibenzofuran	—	< 0.53		—	< 0.53		—		—
Diethyl phthalate	—	< 1		—	< 1		—		—
Dimethyl phthalate	—	< 0.63		—	< 0.63		—		—
Fluoranthene	—	< 0.7		—	< 0.7		—		—
Fluorene	—	< 0.5		—	< 0.5		—		—
Hexachlorobenzene	1	< 0.66		—	< 0.66		—		—
Hexachlorobutadiene	—	< 0.5		—	< 0.5		—		—
Hexachlorocyclopentadiene	50	< 1		—	< 1		—		—
Hexachloroethane	—	< 0.5		—	< 0.5		—		—
Indeno(1,2,3-cd)pyrene	—	< 0.63		—	< 0.63		—		—
Isophorone	—	< 0.5		—	< 0.5		—		—
N-Nitroso-di-n-propylamine	—	< 0.5		—	< 0.5		—		—
N-Nitrosodiphenylamine	—	< 0.53		—	< 0.53		—		—
Naphthalene	—	< 0.5		—	< 0.5		—		—
Nitrobenzene	—	< 0.5		—	< 0.5		—		—
Pentachlorophenol	1	< 5		—	< 5		—		—
Phenanthrene	—	< 0.6		—	< 0.6		—		—
Phenol	—	< 0.5	/R/c	—	< 0.5		—		—
Pyrene	—	< 0.82		—	< 0.82		—		—
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	—	**209**		—	**7.6**		**7.6**		—
Metals by USEPA Method 6010 (µg/L)									
Antimony	6	< 2.3		—	< 2.3		—		—
Arsenic	10	< 2.4		—	< 2.4		—		—
Beryllium	4	< 0.5		—	< 0.5		—		—
Cadmium	5	< 0.5		—	< 0.5		—		—
Chromium	100	< 2		—	< 2		—		—
Copper	1300 [2]	**1.9**	**J//**	—	< 1		—		—
Lead	15 [2]	< 1.1		—	< 1.1		—		—
Nickel	—	< 0.5		—	< 0.5		—		—
Selenium	50	**2.9**	**J//**	—	< 2.3		—		—
Silver	100 [3]	< 0.77		—	< 0.77		—		—
Thallium	2	< 2		—	< 2		—		—
Zinc	5000 [3]	**11.5**	**J//**	—	**5.8**	**J//**	—		—
Mercury by USEPA Method 7470 (µg/L)									
Mercury	2	< 0.03		—	< 0.03		—		—
Water Quality Parameters by USEPA Method 9056 (µg/L)									
Chloride	250,000 [3]	**7000**		—	**2300**		**6800**		—
Nitrogen, Nitrate	10,000	**440**		—	**560**		**1100**		—
Nitrogen, Nitrite	1000	< 50		—	< 50		< 50		—
Sulfate	250,000 [3]	**4500**	**/J/A**	—	**1500**	**J//**	**2100**		—
Total Organic Carbon by USEPA Method 5310 (µg/L)									
Total Organic Carbon	—	**550**	**J//**	—	**420**	**J//**	**260**	**J//**	—

Table 5-5
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID		MW-4	MW-5	MW-6	MW-7	MW-8
Laboratory ID	USEPA	FA13258-3	FA13018-3	FA13211-4	FA13018-8	FA13147-4
Date Collected	MCL	03/12/14	03/05/14	03/11/14	03/05/14	03/11/14
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	< 0.25	< 0.25	< 0.25	< 0.25	< 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	**0.59 J//**	< 0.31	< 0.31
cis-1,2-Dichloroethylene	70	< 0.33	< 0.33	< 0.33	< 0.33	< 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	< 0.26	**11.7**	< 0.26	< 0.26	**114 //h**
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	< 0.3	**6.8**
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
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)						
1,2,4-Trichlorobenzene	70	—	< 0.49	< 0.49	—	< 0.49
1,2-Dichlorobenzene	600	—	< 0.49	< 0.49	—	< 0.49
1,3-Dichlorobenzene	—	—	< 0.49	< 0.49	—	< 0.49
1,4-Dichlorobenzene	75	—	< 0.49	< 0.49	—	< 0.49
2,4,5-Trichlorophenol	—	—	< 0.95	< 0.95	—	< 0.95
2,4,6-Trichlorophenol	—	—	< 0.54	< 0.54	—	< 0.54
2,4-Dichlorophenol	—	—	< 0.57	< 0.57	—	< 0.57
2,4-Dimethylphenol	—	—	< 0.49	< 0.49	—	< 0.49
2,4-Dinitrophenol	—	—	< 5.3	< 5.3	—	< 5.3
2,4-Dinitrotoluene	—	—	< 0.56	< 0.56	—	< 0.56
2,6-Dinitrotoluene	—	—	< 0.61	< 0.61	—	< 0.61
2-Chloronaphthalene	—	—	< 0.54	< 0.54	—	< 0.54
2-Chlorophenol	—	—	< 0.51	< 0.51	—	< 0.51
2-Methylnaphthalene	—	—	< 0.52	< 0.52	—	< 0.52
2-Methylphenol	—	—	< 0.49	< 0.49	—	< 0.49
2-Nitroaniline	—	—	< 1.2	< 1.2	—	< 1.2
2-Nitrophenol	—	—	< 0.59	< 0.59	—	< 0.59
3&4-Methylphenol	—	—	< 1.1	< 1.1	—	< 1.1
3,3'-Dichlorobenzidine	—	—	< 0.88	< 0.88	—	< 0.88
3-Nitroaniline	—	—	< 0.6	< 0.6	—	< 0.6
4,6-Dinitro-o-cresol	—	—	< 2	< 2	—	< 2
4-Bromophenyl phenyl ether	—	—	< 0.66	< 0.66	—	< 0.66
4-Chloro-3-methyl phenol	—	—	< 0.49	< 0.49	—	< 0.49
4-Chloroaniline	—	—	< 0.49	< 0.49	—	< 0.49
4-Chlorophenyl phenyl ether	—	—	< 0.53	< 0.53	—	< 0.53
4-Nitroaniline	—	—	< 0.75	< 0.75	—	< 0.75
4-Nitrophenol	—	—	< 4.9 /R/c	< 4.9 /R/c	—	< 4.9 /R/c
Acenaphthene	—	—	< 0.49	< 0.49	—	< 0.49
Acenaphthylene	—	—	< 0.49	< 0.49	—	< 0.49

Table 5-5
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID		MW-4	MW-5		MW-6		MW-7	MW-8	
Laboratory ID	USEPA	FA13258-3	FA13018-3		FA13211-4		FA13018-8	FA13147-4	
Date Collected	MCL	03/12/14	03/05/14		03/11/14		03/05/14	03/11/14	
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)									
Anthracene	—	—	< 0.61		< 0.61		—	< 0.61	
Benzo(a)anthracene	—	—	< 0.63		< 0.63		—	< 0.63	
Benzo(a)pyrene	0.2	—	< 0.64		< 0.64		—	< 0.64	
Benzo(b)fluoranthene	—	—	< 0.7		< 0.7		—	< 0.7	
Benzo(g,h,i)perylene	—	—	< 0.79		< 0.79		—	< 0.79	
Benzo(k)fluoranthene	—	—	< 0.5		< 0.5		—	< 0.5	
Benzoic Acid	—	—	< 9.8	/R/c	< 9.8	/R/c	—	< 9.8	/R/c
Benzyl Alcohol	—	—	< 0.98		< 0.98		—	< 0.98	
bis(2-Chloroethoxy)methane	—	—	< 0.54		< 0.54		—	< 0.54	
bis(2-Chloroethyl)ether	—	—	< 0.68		< 0.68		—	< 0.68	
bis(2-Chloroisopropyl)ether	—	—	< 0.57		< 0.57		—	< 0.57	
bis(2-Ethylhexyl)phthalate	6	—	< 1.5		< 1.5		—	< 1.5	
Butyl benzyl phthalate	—	—	< 0.8		< 0.8		—	< 0.8	
Carbazole	—	—	< 0.6		< 0.6		—	< 0.6	
Chrysene	—	—	< 0.71		< 0.71		—	< 0.71	
Di-n-butyl phthalate	—	—	< 0.98		< 0.98		—	< 0.98	
Di-n-octyl phthalate	—	—	< 0.98		< 0.98		—	< 0.98	
Dibenzo(a,h)anthracene	—	—	< 0.8		< 0.8		—	< 0.8	
Dibenzofuran	—	—	< 0.52		< 0.52		—	< 0.52	
Diethyl phthalate	—	—	< 0.98		< 0.98		—	< 0.98	
Dimethyl phthalate	—	—	< 0.62		< 0.62		—	< 0.62	
Fluoranthene	—	—	< 0.69		< 0.69		—	< 0.69	
Fluorene	—	—	< 0.49		< 0.49		—	< 0.49	
Hexachlorobenzene	1	—	< 0.65		< 0.65		—	< 0.65	
Hexachlorobutadiene	—	—	< 0.49		< 0.49		—	< 0.49	
Hexachlorocyclopentadiene	50	—	< 0.98		< 0.98		—	< 0.98	
Hexachloroethane	—	—	< 0.49		< 0.49		—	< 0.49	
Indeno(1,2,3-cd)pyrene	—	—	< 0.62		< 0.62		—	< 0.62	
Isophorone	—	—	< 0.49		< 0.49		—	< 0.49	
N-Nitroso-di-n-propylamine	—	—	< 0.49		< 0.49		—	< 0.49	
N-Nitrosodiphenylamine	—	—	< 0.52		< 0.52		—	< 0.52	
Naphthalene	—	—	< 0.49		< 0.49		—	< 0.49	
Nitrobenzene	—	—	< 0.49		< 0.49		—	< 0.49	
Pentachlorophenol	1	—	< 4.9		< 4.9		—	< 4.9	
Phenanthrene	—	—	< 0.58		< 0.58		—	< 0.58	
Phenol	—	—	< 0.49		< 0.49		—	< 0.49	
Pyrene	—	—	< 0.8		< 0.8		—	< 0.8	
Ethane, Ethene, and Methane by USEPA Method RSK 147 (µg/L)									
Ethane	—	—	—		—		—	—	
Ethene	—	—	—		—		—	—	
Methane	—	—	—		—		—	—	
Metals by USEPA Method 6010 (µg/L)									
Antimony	6	—	< 2.3		< 2.3		—	< 2.3	
Arsenic	10	—	< 2.4		< 2.4		—	< 2.4	
Beryllium	4	—	< 0.5		< 0.5		—	< 0.5	
Cadmium	5	—	< 0.5		< 0.5		—	< 0.5	
Chromium	100	—	< 2		< 2		—	< 2	
Copper	1300 [2]	—	< 1		< 1		—	< 1	
Lead	15 [2]	—	< 1.1		< 1.1		—	< 1.1	
Nickel	—	—	< 0.5		< 0.5		—	< 0.5	
Selenium	50	—	< 2.3		< 2.3		—	< 2.3	
Silver	100 [3]	—	< 0.77		< 0.77		—	< 0.77	
Thallium	2	—	< 2		< 2		—	< 2	
Zinc	5000 [3]	—	**5.7**	**J//**	**18.4**	**J//**	—	**4.7**	**J//**
Mercury by USEPA Method 7470 (µg/L)									
Mercury	2	—	< 0.03		< 0.03		—	< 0.03	
Water Quality Parameters by USEPA Method 9056 (µg/L)									
Chloride	250,000 [3]	—	—		—		—	—	
Nitrogen, Nitrate	10,000	—	—		—		—	—	
Nitrogen, Nitrite	1000	—	—		—		—	—	
Sulfate	250,000 [3]	—	—		—		—	—	
Total Organic Carbon by USEPA Method 5310 (µg/L)									
Total Organic Carbon	—	—	—		—		—	—	

Table 5-5
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID		MW-9	MW-9D	MW-10	MW-10D	MW-11
Laboratory ID	USEPA	FA13051-4	FA13051-5	FA13018-4	FA13018-7	FA13147-5
Date Collected	MCL	03/06/14	03/06/14	03/05/14	03/05/14	03/11/14
Volatile Organic Compounds by USEPA Method 8260 (µg/L)						
1,1,1-Trichloroethane	200	< 1.7	< 0.34	< 0.34	< 0.34	< 0.34
1,1,2,2-Tetrachloroethane	—	< 1.4	< 0.27	< 0.27	< 0.27	< 0.27
1,1,2-Trichloroethane	5	< 1.6	< 0.32	< 0.32	< 0.32	< 0.32
1,1-Dichloroethane	—	< 1.3	< 0.26	< 0.26	< 0.26	< 0.26
1,1-Dichloroethylene	7	< 1.3	< 0.25	**0.36** ***J//***	< 0.25	< 0.25
1,2-Dichloroethane	5	< 1.2	< 0.24	< 0.24	< 0.24	< 0.24
1,2-Dichloropropane	5	< 1.8	< 0.36	< 0.36	< 0.36	< 0.36
2-Hexanone	—	< 10	< 2	< 2	< 2	< 2
4-Methyl-2-pentanone	—	< 5	< 1	< 1	< 1	< 1
Acetone	—	< 53	< 11	< 11	< 11	< 11
Benzene	5	< 1.2	< 0.24	< 0.24	< 0.24	< 0.24
Bromodichloromethane	80 [1]	< 1.3	< 0.26	< 0.26	< 0.26	< 0.26
Bromoform	80 [1]	< 1.9	< 0.38	< 0.38	< 0.38	< 0.38
Carbon disulfide	—	< 1	< 0.2	< 0.2	< 0.2	< 0.2
Carbon tetrachloride	5	< 2	< 0.4	< 0.4	< 0.4	< 0.4
Chlorobenzene	100	< 1.2	< 0.24	< 0.24	< 0.24	< 0.24
Chloroethane	—	< 2.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	80 [1]	< 1.6	< 0.31	< 0.31	< 0.31	< 0.31
cis-1,2-Dichloroethylene	70	**31.5**	< 0.33	**13.9**	< 0.33	< 0.33
cis-1,3-Dichloropropene	—	< 1	< 0.21	< 0.21	< 0.21	< 0.21
Dibromochloromethane	80 [1]	< 1.8	< 0.36	< 0.36	< 0.36	< 0.36
Ethylbenzene	700	< 1.4	< 0.28	< 0.28	< 0.28	< 0.28
Methyl bromide	—	< 2.7	< 0.54	< 0.54	< 0.54	< 0.54
Methyl chloride	—	< 2.7	< 0.53	< 0.53	< 0.53	< 0.53
Methyl ethyl ketone	—	< 7.4	< 1.5	< 1.5	< 1.5	< 1.5
Methylene chloride	5	< 10	< 2	< 2	< 2	< 2
Styrene	100	< 1.2	< 0.23	< 0.23	< 0.23	< 0.23
Tetrachloroethylene	5	**498**	< 0.26	**93.2**	< 0.26	< 0.26
Toluene	1000	< 1	< 0.2	< 0.2	< 0.2	< 0.2
trans-1,2-Dichloroethylene	100	< 1.7	< 0.34	< 0.34	< 0.34	< 0.34
trans-1,3-Dichloropropene	—	< 1.1	< 0.21	< 0.21	< 0.21	< 0.21
Trichloroethylene	5	**55.3**	< 0.3	**15.1**	< 0.3	< 0.3
Vinyl chloride	2	< 1.6	< 0.33	< 0.33	< 0.33	< 0.33
Xylene (total)	10,000	< 3.3	< 0.66	< 0.66	< 0.66	< 0.66
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)						
1,2,4-Trichlorobenzene	70	< 0.5	—	< 0.5	—	—
1,2-Dichlorobenzene	600	< 0.5	—	< 0.5	—	—
1,3-Dichlorobenzene	—	< 0.5	—	< 0.5	—	—
1,4-Dichlorobenzene	75	< 0.5	—	< 0.5	—	—
2,4,5-Trichlorophenol	—	< 0.97	—	< 0.97	—	—
2,4,6-Trichlorophenol	—	< 0.55	—	< 0.55	—	—
2,4-Dichlorophenol	—	< 0.58	—	< 0.58	—	—
2,4-Dimethylphenol	—	< 0.5	—	< 0.5	—	—
2,4-Dinitrophenol	—	< 5.4	—	< 5.4	—	—
2,4-Dinitrotoluene	—	< 0.57	—	< 0.57	—	—
2,6-Dinitrotoluene	—	< 0.63	—	< 0.63	—	—
2-Chloronaphthalene	—	< 0.56	—	< 0.56	—	—
2-Chlorophenol	—	< 0.52	—	< 0.52	—	—
2-Methylnaphthalene	—	< 0.53	—	< 0.53	—	—
2-Methylphenol	—	< 0.5	—	< 0.5	—	—
2-Nitroaniline	—	< 1.2	—	< 1.2	—	—
2-Nitrophenol	—	< 0.6	—	< 0.6	—	—
3&4-Methylphenol	—	< 1.2	—	< 1.2	—	—
3,3'-Dichlorobenzidine	—	< 0.9	—	< 0.9	—	—
3-Nitroaniline	—	< 0.61	—	< 0.61	—	—
4,6-Dinitro-o-cresol	—	< 2	—	< 2	—	—
4-Bromophenyl phenyl ether	—	< 0.67	—	< 0.67	—	—
4-Chloro-3-methyl phenol	—	< 0.5	—	< 0.5	—	—
4-Chloroaniline	—	< 0.5	—	< 0.5	—	—
4-Chlorophenyl phenyl ether	—	< 0.54	—	< 0.54	—	—
4-Nitroaniline	—	< 0.76	—	< 0.76	—	—
4-Nitrophenol	—	< 5 /R/c	—	< 5 /R/c	—	—
Acenaphthene	—	< 0.5	—	< 0.5	—	—
Acenaphthylene	—	< 0.5	—	< 0.5	—	—

Table 5-5
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID		MW-9		MW-9D	MW-10		MW-10D	MW-11
Laboratory ID	USEPA	FA13051-4		FA13051-5	FA13018-4		FA13018-7	FA13147-5
Date Collected	MCL	03/06/14		03/06/14	03/05/14		03/05/14	03/11/14
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)								
Anthracene	—	< 0.62		—	< 0.62		—	—
Benzo(a)anthracene	—	< 0.64		—	< 0.64		—	—
Benzo(a)pyrene	0.2	< 0.65		—	< 0.65		—	—
Benzo(b)fluoranthene	—	< 0.72		—	< 0.72		—	—
Benzo(g,h,i)perylene	—	< 0.81		—	< 0.81		—	—
Benzo(k)fluoranthene	—	< 0.51		—	< 0.51		—	—
Benzoic Acid	—	< 10	/R/c	—	< 10	/R/c	—	—
Benzyl Alcohol	—	< 1		—	< 1		—	—
bis(2-Chloroethoxy)methane	—	< 0.55		—	< 0.55		—	—
bis(2-Chloroethyl)ether	—	< 0.69		—	< 0.69		—	—
bis(2-Chloroisopropyl)ether	—	< 0.58		—	< 0.58		—	—
bis(2-Ethylhexyl)phthalate	6	< 1.6		—	< 1.6		—	—
Butyl benzyl phthalate	—	< 0.81		—	< 0.81		—	—
Carbazole	—	< 0.62		—	< 0.62		—	—
Chrysene	—	< 0.72		—	< 0.72		—	—
Di-n-butyl phthalate	—	< 1		—	< 1		—	—
Di-n-octyl phthalate	—	< 1		—	< 1		—	—
Dibenzo(a,h)anthracene	—	< 0.81		—	< 0.81		—	—
Dibenzofuran	—	< 0.53		—	< 0.53		—	—
Diethyl phthalate	—	< 1		—	< 1		—	—
Dimethyl phthalate	—	< 0.63		—	< 0.63		—	—
Fluoranthene	—	< 0.7		—	< 0.7		—	—
Fluorene	—	< 0.5		—	< 0.5		—	—
Hexachlorobenzene	1	< 0.66		—	< 0.66		—	—
Hexachlorobutadiene	—	< 0.5		—	< 0.5		—	—
Hexachlorocyclopentadiene	50	< 1		—	< 1		—	—
Hexachloroethane	—	< 0.5		—	< 0.5		—	—
Indeno(1,2,3-cd)pyrene	—	< 0.63		—	< 0.63		—	—
Isophorone	—	< 0.5		—	< 0.5		—	—
N-Nitroso-di-n-propylamine	—	< 0.5		—	< 0.5		—	—
N-Nitrosodiphenylamine	—	< 0.53		—	< 0.53		—	—
Naphthalene	—	< 0.5		—	< 0.5		—	—
Nitrobenzene	—	< 0.5		—	< 0.5		—	—
Pentachlorophenol	1	< 5		—	< 5		—	—
Phenanthrene	—	< 0.6		—	< 0.6		—	—
Phenol	—	< 0.5		—	< 0.5		—	—
Pyrene	—	< 0.82		—	< 0.82		—	—
Ethane, Ethene, and Methane by USEPA Method RSK 147 (µg/L)								
Ethane	—	< 0.32		—	< 0.32		—	—
Ethene	—	< 0.43		—	< 0.43		—	—
Methane	—	**8.6**		—	**14.9**		—	—
Metals by USEPA Method 6010 (µg/L)								
Antimony	6	< 2.3		—	< 2.3		—	—
Arsenic	10	< 2.4		—	< 2.4		—	—
Beryllium	4	< 0.5		—	< 0.5		—	—
Cadmium	5	< 0.5		—	< 0.5		—	—
Chromium	100	< 2		—	< 2		—	—
Copper	1300 [2]	**1**	**J//**	—	< 1		—	—
Lead	15 [2]	< 1.1		—	< 1.1		—	—
Nickel	—	< 0.5		—	< 0.5		—	—
Selenium	50	< 2.3		—	< 2.3		—	—
Silver	100 [3]	< 0.77		—	< 0.77		—	—
Thallium	2	< 2		—	< 2		—	—
Zinc	5000 [3]	**6.4**	**J//**	—	**5.4**	**J//**	—	—
Mercury by USEPA Method 7470 (µg/L)								
Mercury	2	< 0.03		—	< 0.03		—	—
Water Quality Parameters by USEPA Method 9056 (µg/L)								
Chloride	250,000 [3]	**2600**		—	**2400**		—	—
Nitrogen, Nitrate	10,000	**50**	**J//**	—	< 50		—	—
Nitrogen, Nitrite	1000	< 50		—	< 50		—	—
Sulfate	250,000 [3]	**4800**		—	**5400**		—	—
Total Organic Carbon by USEPA Method 5310 (µg/L)								
Total Organic Carbon	—	**1200**		—	**760**	**J//**	—	—

Table 5-5
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID		MW-12D	MW-13D	MW-14	MW-14D	MW-15
Laboratory ID	USEPA	FA13147-6	FA13211-5	FA12815-9	FA12815-10	FA12815-2
Date Collected	MCL	03/11/14	03/11/14	02/26/14	02/26/14	02/25/14
Volatile Organic Compounds by USEPA Method 8260 (µg/L)						
1,1,1-Trichloroethane	200	< 0.34	**1**	< 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	< 0.25	**3.6**	< 0.25	**1.6**	< 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	**0.6** J//	< 0.31	< 0.31	< 0.31
cis-1,2-Dichloroethylene	70	< 0.33	< 0.33	< 0.33	**0.95** 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	**40.7**	**94.1**	< 0.26	**81.5**	< 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
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)						
1,2,4-Trichlorobenzene	70	—	—	—	—	—
1,2-Dichlorobenzene	600	—	—	—	—	—
1,3-Dichlorobenzene	—	—	—	—	—	—
1,4-Dichlorobenzene	75	—	—	—	—	—
2,4,5-Trichlorophenol	—	—	—	—	—	—
2,4,6-Trichlorophenol	—	—	—	—	—	—
2,4-Dichlorophenol	—	—	—	—	—	—
2,4-Dimethylphenol	—	—	—	—	—	—
2,4-Dinitrophenol	—	—	—	—	—	—
2,4-Dinitrotoluene	—	—	—	—	—	—
2,6-Dinitrotoluene	—	—	—	—	—	—
2-Chloronaphthalene	—	—	—	—	—	—
2-Chlorophenol	—	—	—	—	—	—
2-Methylnaphthalene	—	—	—	—	—	—
2-Methylphenol	—	—	—	—	—	—
2-Nitroaniline	—	—	—	—	—	—
2-Nitrophenol	—	—	—	—	—	—
3&4-Methylphenol	—	—	—	—	—	—
3,3'-Dichlorobenzidine	—	—	—	—	—	—
3-Nitroaniline	—	—	—	—	—	—
4,6-Dinitro-o-cresol	—	—	—	—	—	—
4-Bromophenyl phenyl ether	—	—	—	—	—	—
4-Chloro-3-methyl phenol	—	—	—	—	—	—
4-Chloroaniline	—	—	—	—	—	—
4-Chlorophenyl phenyl ether	—	—	—	—	—	—
4-Nitroaniline	—	—	—	—	—	—
4-Nitrophenol	—	—	—	—	—	—
Acenaphthene	—	—	—	—	—	—
Acenaphthylene	—	—	—	—	—	—

Table 5-5
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID		MW-12D	MW-13D	MW-14	MW-14D	MW-15
Laboratory ID	USEPA	FA13147-6	FA13211-5	FA12815-9	FA12815-10	FA12815-2
Date Collected	MCL	03/11/14	03/11/14	02/26/14	02/26/14	02/25/14
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)						
Anthracene	—	—	—	—	—	—
Benzo(a)anthracene	—	—	—	—	—	—
Benzo(a)pyrene	0.2	—	—	—	—	—
Benzo(b)fluoranthene	—	—	—	—	—	—
Benzo(g,h,i)perylene	—	—	—	—	—	—
Benzo(k)fluoranthene	—	—	—	—	—	—
Benzoic Acid	—	—	—	—	—	—
Benzyl Alcohol	—	—	—	—	—	—
bis(2-Chloroethoxy)methane	—	—	—	—	—	—
bis(2-Chloroethyl)ether	—	—	—	—	—	—
bis(2-Chloroisopropyl)ether	—	—	—	—	—	—
bis(2-Ethylhexyl)phthalate	6	—	—	—	—	—
Butyl benzyl phthalate	—	—	—	—	—	—
Carbazole	—	—	—	—	—	—
Chrysene	—	—	—	—	—	—
Di-n-butyl phthalate	—	—	—	—	—	—
Di-n-octyl phthalate	—	—	—	—	—	—
Dibenzo(a,h)anthracene	—	—	—	—	—	—
Dibenzofuran	—	—	—	—	—	—
Diethyl phthalate	—	—	—	—	—	—
Dimethyl phthalate	—	—	—	—	—	—
Fluoranthene	—	—	—	—	—	—
Fluorene	—	—	—	—	—	—
Hexachlorobenzene	1	—	—	—	—	—
Hexachlorobutadiene	—	—	—	—	—	—
Hexachlorocyclopentadiene	50	—	—	—	—	—
Hexachloroethane	—	—	—	—	—	—
Indeno(1,2,3-cd)pyrene	—	—	—	—	—	—
Isophorone	—	—	—	—	—	—
N-Nitroso-di-n-propylamine	—	—	—	—	—	—
N-Nitrosodiphenylamine	—	—	—	—	—	—
Naphthalene	—	—	—	—	—	—
Nitrobenzene	—	—	—	—	—	—
Pentachlorophenol	1	—	—	—	—	—
Phenanthrene	—	—	—	—	—	—
Phenol	—	—	—	—	—	—
Pyrene	—	—	—	—	—	—
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	—	< 0.16	**7.5**	—	**7.6**	—
Metals by USEPA Method 6010 (µg/L)						
Antimony	6	—	—	—	—	—
Arsenic	10	—	—	—	—	—
Beryllium	4	—	—	—	—	—
Cadmium	5	—	—	—	—	—
Chromium	100	—	—	—	—	—
Copper	1300 [2]	—	—	—	—	—
Lead	15 [2]	—	—	—	—	—
Nickel	—	—	—	—	—	—
Selenium	50	—	—	—	—	—
Silver	100 [3]	—	—	—	—	—
Thallium	2	—	—	—	—	—
Zinc	5000 [3]	—	—	—	—	—
Mercury by USEPA Method 7470 (µg/L)						
Mercury	2	—	—	—	—	—
Water Quality Parameters by USEPA Method 9056 (µg/L)						
Chloride	250,000 [3]	**12700**	**9800**	—	**5100**	—
Nitrogen, Nitrate	10,000	**2200**	**1700**	—	**280**	—
Nitrogen, Nitrite	1000	< 50	< 50	—	< 50	—
Sulfate	250,000 [3]	**3900**	**660** ***J//***	—	**2700**	—
Total Organic Carbon by USEPA Method 5310 (µg/L)						
Total Organic Carbon	—	**1100**	< 230	—	**320** ***J//***	—

Table 5-5
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID		MW-15D	MW-15D1	MW-16	MW-16D
Laboratory ID	USEPA	FA12815-1	FA12815-5	FA13051-2	FA13051-3
Date Collected	MCL	02/25/14	02/25/14	03/06/14	03/06/14
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	—	**0.24 JI/**	< 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
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)					
1,2,4-Trichlorobenzene	70	—	—	—	—
1,2-Dichlorobenzene	600	—	—	—	—
1,3-Dichlorobenzene	—	—	—	—	—
1,4-Dichlorobenzene	75	—	—	—	—
2,4,5-Trichlorophenol	—	—	—	—	—
2,4,6-Trichlorophenol	—	—	—	—	—
2,4-Dichlorophenol	—	—	—	—	—
2,4-Dimethylphenol	—	—	—	—	—
2,4-Dinitrophenol	—	—	—	—	—
2,4-Dinitrotoluene	—	—	—	—	—
2,6-Dinitrotoluene	—	—	—	—	—
2-Chloronaphthalene	—	—	—	—	—
2-Chlorophenol	—	—	—	—	—
2-Methylnaphthalene	—	—	—	—	—
2-Methylphenol	—	—	—	—	—
2-Nitroaniline	—	—	—	—	—
2-Nitrophenol	—	—	—	—	—
3&4-Methylphenol	—	—	—	—	—
3,3'-Dichlorobenzidine	—	—	—	—	—
3-Nitroaniline	—	—	—	—	—
4,6-Dinitro-o-cresol	—	—	—	—	—
4-Bromophenyl phenyl ether	—	—	—	—	—
4-Chloro-3-methyl phenol	—	—	—	—	—
4-Chloroaniline	—	—	—	—	—
4-Chlorophenyl phenyl ether	—	—	—	—	—
4-Nitroaniline	—	—	—	—	—
4-Nitrophenol	—	—	—	—	—
Acenaphthene	—	—	—	—	—
Acenaphthylene	—	—	—	—	—

Table 5-5
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID		MW-15D	MW-15D1	MW-16	MW-16D	
Laboratory ID	USEPA	FA12815-1	FA12815-5	FA13051-2	FA13051-3	
Date Collected	MCL	02/25/14	02/25/14	03/06/14	03/06/14	
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)						
Anthracene	—	—	—	—	—	
Benzo(a)anthracene	—	—	—	—	—	
Benzo(a)pyrene	0.2	—	—	—	—	
Benzo(b)fluoranthene	—	—	—	—	—	
Benzo(g,h,i)perylene	—	—	—	—	—	
Benzo(k)fluoranthene	—	—	—	—	—	
Benzoic Acid	—	—	—	—	—	
Benzyl Alcohol	—	—	—	—	—	
bis(2-Chloroethoxy)methane	—	—	—	—	—	
bis(2-Chloroethyl)ether	—	—	—	—	—	
bis(2-Chloroisopropyl)ether	—	—	—	—	—	
bis(2-Ethylhexyl)phthalate	6	—	—	—	—	
Butyl benzyl phthalate	—	—	—	—	—	
Carbazole	—	—	—	—	—	
Chrysene	—	—	—	—	—	
Di-n-butyl phthalate	—	—	—	—	—	
Di-n-octyl phthalate	—	—	—	—	—	
Dibenzo(a,h)anthracene	—	—	—	—	—	
Dibenzofuran	—	—	—	—	—	
Diethyl phthalate	—	—	—	—	—	
Dimethyl phthalate	—	—	—	—	—	
Fluoranthene	—	—	—	—	—	
Fluorene	—	—	—	—	—	
Hexachlorobenzene	1	—	—	—	—	
Hexachlorobutadiene	—	—	—	—	—	
Hexachlorocyclopentadiene	50	—	—	—	—	
Hexachloroethane	—	—	—	—	—	
Indeno(1,2,3-cd)pyrene	—	—	—	—	—	
Isophorone	—	—	—	—	—	
N-Nitroso-di-n-propylamine	—	—	—	—	—	
N-Nitrosodiphenylamine	—	—	—	—	—	
Naphthalene	—	—	—	—	—	
Nitrobenzene	—	—	—	—	—	
Pentachlorophenol	1	—	—	—	—	
Phenanthrene	—	—	—	—	—	
Phenol	—	—	—	—	—	
Pyrene	—	—	—	—	—	
Ethane, Ethene, and Methane by USEPA Method RSK 147 (µg/L)						
Ethane	—	—	—	< 0.32	< 0.32	
Ethene	—	—	—	< 0.43	< 0.43	
Methane	—	—	—	**7.9**	< 0.16	
Metals by USEPA Method 6010 (µg/L)						
Antimony	6	—	—	—	—	
Arsenic	10	—	—	—	—	
Beryllium	4	—	—	—	—	
Cadmium	5	—	—	—	—	
Chromium	100	—	—	—	—	
Copper	1300 [2]	—	—	—	—	
Lead	15 [2]	—	—	—	—	
Nickel	—	—	—	—	—	
Selenium	50	—	—	—	—	
Silver	100 [3]	—	—	—	—	
Thallium	2	—	—	—	—	
Zinc	5000 [3]	—	—	—	—	
Mercury by USEPA Method 7470 (µg/L)						
Mercury	2	—	—	—	—	
Water Quality Parameters by USEPA Method 9056 (µg/L)						
Chloride	250,000 [3]	—	—	**4900**	**14000**	
Nitrogen, Nitrate	10,000	—	—	< 50	**2200**	
Nitrogen, Nitrite	1000	—	—	< 50	< 50	
Sulfate	250,000 [3]	—	—	**2900**	**1700**	**J//**
Total Organic Carbon by USEPA Method 5310 (µg/L)						
Total Organic Carbon	—	—	—	**2300**	**300**	**JB//**

Table 5-5
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID		MW-17	MW-18	MW-19		MW-20	
Laboratory ID	USEPA	FA13147-1	FA13147-3	FA13051-6		FA13051-7	
Date Collected	MCL	03/10/14	03/10/14	03/06/14		03/06/14	
Volatile Organic Compounds by USEPA Method 8260 (µg/L)							
1,1,1-Trichloroethane	200	< 0.34	< 0.34	< 67		< 3.4	
1,1,2,2-Tetrachloroethane	—	< 0.27	< 0.27	< 55		< 2.7	
1,1,2-Trichloroethane	5	< 0.32	< 0.32	< 63		< 3.2	
1,1-Dichloroethane	—	< 0.26	< 0.26	< 51		< 2.6	
1,1-Dichloroethylene	7	< 0.25	< 0.25	< 51		< 2.5	
1,2-Dichloroethane	5	< 0.24	< 0.24	< 48		< 2.4	
1,2-Dichloropropane	5	< 0.36	< 0.36	< 71		< 3.6	
2-Hexanone	—	< 2	< 2	< 400		< 20	
4-Methyl-2-pentanone	—	< 1	< 1	< 200		< 10	
Acetone	—	< 11	< 11	< 2100		< 110	
Benzene	5	< 0.24	< 0.24	< 49		< 2.4	
Bromodichloromethane	80 [1]	< 0.26	< 0.26	< 52		< 2.6	
Bromoform	80 [1]	< 0.38	< 0.38	< 77		< 3.8	
Carbon disulfide	—	< 0.2	< 0.2	< 40		< 2	
Carbon tetrachloride	5	< 0.4	< 0.4	< 79		< 4	
Chlorobenzene	100	< 0.24	< 0.24	< 48		< 2.4	
Chloroethane	—	< 0.5	< 0.5	< 100		< 5	
Chloroform	80 [1]	< 0.31	< 0.31	< 62		< 3.1	
cis-1,2-Dichloroethylene	70	< 0.33	< 0.33	< 65		**4**	**J//**
cis-1,3-Dichloropropene	—	< 0.21	< 0.21	< 42		< 2.1	
Dibromochloromethane	80 [1]	< 0.36	< 0.36	< 72		< 3.6	
Ethylbenzene	700	< 0.28	< 0.28	< 56		< 2.8	
Methyl bromide	—	< 0.54	< 0.54	< 110		< 5.4	
Methyl chloride	—	< 0.53	< 0.53	< 110		< 5.3	
Methyl ethyl ketone	—	< 1.5	< 1.5	< 300		< 15	
Methylene chloride	5	< 2	< 2	**639**	**J//**	< 20	
Styrene	100	< 0.23	< 0.23	< 47		< 2.3	
Tetrachloroethylene	5	< 0.26	< 0.26	**14000**		**648**	
Toluene	1000	< 0.2	< 0.2	< 40		< 2	
trans-1,2-Dichloroethylene	100	< 0.34	< 0.34	< 69		< 3.4	
trans-1,3-Dichloropropene	—	< 0.21	< 0.21	< 42		< 2.1	
Trichloroethylene	5	< 0.3	< 0.3	< 60		**5**	**J//**
Vinyl chloride	2	< 0.33	< 0.33	< 65		< 3.3	
Xylene (total)	10,000	< 0.66	< 0.66	< 130		< 6.6	
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)							
1,2,4-Trichlorobenzene	70	—	—	< 0.5		< 0.49	
1,2-Dichlorobenzene	600	—	—	**2.1**	**J//**	< 0.49	
1,3-Dichlorobenzene	—	—	—	< 0.5		< 0.49	
1,4-Dichlorobenzene	75	—	—	< 0.5		< 0.49	
2,4,5-Trichlorophenol	—	—	—	< 0.97		< 0.95	
2,4,6-Trichlorophenol	—	—	—	< 0.55		< 0.54	
2,4-Dichlorophenol	—	—	—	< 0.58		< 0.57	
2,4-Dimethylphenol	—	—	—	< 0.5		< 0.49	
2,4-Dinitrophenol	—	—	—	< 5.4		< 5.3	
2,4-Dinitrotoluene	—	—	—	< 0.57		< 0.56	
2,6-Dinitrotoluene	—	—	—	< 0.63		< 0.61	
2-Chloronaphthalene	—	—	—	< 0.56		< 0.54	
2-Chlorophenol	—	—	—	< 0.52		< 0.51	
2-Methylnaphthalene	—	—	—	< 0.53		< 0.52	
2-Methylphenol	—	—	—	< 0.5		< 0.49	
2-Nitroaniline	—	—	—	< 1.2		< 1.2	
2-Nitrophenol	—	—	—	< 0.6		< 0.59	
3&4-Methylphenol	—	—	—	< 1.2		< 1.1	
3,3'-Dichlorobenzidine	—	—	—	< 0.9		< 0.88	
3-Nitroaniline	—	—	—	< 0.61		< 0.6	
4,6-Dinitro-o-cresol	—	—	—	< 2		< 2	
4-Bromophenyl phenyl ether	—	—	—	< 0.67		< 0.66	
4-Chloro-3-methyl phenol	—	—	—	< 0.5		< 0.49	
4-Chloroaniline	—	—	—	< 0.5		< 0.49	
4-Chlorophenyl phenyl ether	—	—	—	< 0.54		< 0.53	
4-Nitroaniline	—	—	—	< 0.76		< 0.75	
4-Nitrophenol	—	—	—	< 5	/R/c	< 4.9	/R/c
Acenaphthene	—	—	—	< 0.5		< 0.49	
Acenaphthylene	—	—	—	< 0.5		< 0.49	

Table 5-5
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID		MW-17	MW-18	MW-19		MW-20	
Laboratory ID	USEPA	FA13147-1	FA13147-3	FA13051-6		FA13051-7	
Date Collected	MCL	03/10/14	03/10/14	03/06/14		03/06/14	
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)							
Anthracene	—	—	—	< 0.62		< 0.61	
Benzo(a)anthracene	—	—	—	< 0.64		< 0.63	
Benzo(a)pyrene	0.2	—	—	< 0.65		< 0.64	
Benzo(b)fluoranthene	—	—	—	< 0.72		< 0.7	
Benzo(g,h,i)perylene	—	—	—	< 0.81		< 0.79	
Benzo(k)fluoranthene	—	—	—	< 0.51		< 0.5	
Benzoic Acid	—	—	—	< 10	/R/c	< 9.8	/R/c
Benzyl Alcohol	—	—	—	< 1		< 0.98	
bis(2-Chloroethoxy)methane	—	—	—	< 0.55		< 0.54	
bis(2-Chloroethyl)ether	—	—	—	< 0.69		< 0.68	
bis(2-Chloroisopropyl)ether	—	—	—	< 0.58		< 0.57	
bis(2-Ethylhexyl)phthalate	6	—	—	< 1.6		< 1.5	
Butyl benzyl phthalate	—	—	—	< 0.81		< 0.8	
Carbazole	—	—	—	< 0.62		< 0.6	
Chrysene	—	—	—	< 0.72		< 0.71	
Di-n-butyl phthalate	—	—	—	< 1		< 0.98	
Di-n-octyl phthalate	—	—	—	< 1		< 0.98	
Dibenzo(a,h)anthracene	—	—	—	< 0.81		< 0.8	
Dibenzofuran	—	—	—	< 0.53		< 0.52	
Diethyl phthalate	—	—	—	< 1		< 0.98	
Dimethyl phthalate	—	—	—	< 0.63		< 0.62	
Fluoranthene	—	—	—	< 0.7		< 0.69	
Fluorene	—	—	—	< 0.5		< 0.49	
Hexachlorobenzene	1	—	—	< 0.66		< 0.65	
Hexachlorobutadiene	—	—	—	< 0.5		< 0.49	
Hexachlorocyclopentadiene	50	—	—	< 1		< 0.98	
Hexachloroethane	—	—	—	< 0.5		< 0.49	
Indeno(1,2,3-cd)pyrene	—	—	—	< 0.63		< 0.62	
Isophorone	—	—	—	< 0.5		< 0.49	
N-Nitroso-di-n-propylamine	—	—	—	< 0.5		< 0.49	
N-Nitrosodiphenylamine	—	—	—	< 0.53		< 0.52	
Naphthalene	—	—	—	< 0.5		< 0.49	
Nitrobenzene	—	—	—	< 0.5		< 0.49	
Pentachlorophenol	1	—	—	< 5		< 4.9	
Phenanthrene	—	—	—	< 0.6		< 0.58	
Phenol	—	—	—	< 0.5		< 0.49	
Pyrene	—	—	—	< 0.82		< 0.8	
Ethane, Ethene, and Methane by USEPA Method RSK 147 (µg/L)							
Ethane	—	—	—	—		—	
Ethene	—	—	—	—		—	
Methane	—	—	—	—		—	
Metals by USEPA Method 6010 (µg/L)							
Antimony	6	—	—	< 2.3		< 2.3	
Arsenic	10	—	—	< 2.4		< 2.4	
Beryllium	4	—	—	< 0.5		< 0.5	
Cadmium	5	—	—	< 0.5		< 0.5	
Chromium	100	—	—	**6.6**	**J//**	< 2	
Copper	1300 [2]	—	—	**1.6**	**J//**	**1.1**	**J//**
Lead	15 [2]	—	—	< 1.1		< 1.1	
Nickel	—	—	—	**4.8**	**J//**	**0.6**	**J//**
Selenium	50	—	—	< 2.3		< 2.3	
Silver	100 [3]	—	—	< 0.77		< 0.77	
Thallium	2	—	—	< 2		< 2	
Zinc	5000 [3]	—	—	**9.3**	**J//**	**5.7**	**J//**
Mercury by USEPA Method 7470 (µg/L)							
Mercury	2	—	—	**0.04**	**J//**	< 0.03	
Water Quality Parameters by USEPA Method 9056 (µg/L)							
Chloride	250,000 [3]	—	—	—		—	
Nitrogen, Nitrate	10,000	—	—	—		—	
Nitrogen, Nitrite	1000	—	—	—		—	
Sulfate	250,000 [3]	—	—	—		—	
Total Organic Carbon by USEPA Method 5310 (µg/L)							
Total Organic Carbon	—	—	—	—		—	

Table 5-5
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID		MW-21		MW-21D		MW-22D		MW-23D	
Laboratory ID	USEPA	FA13211-1		FA13211-3		FA13211-6		FA13258-1	
Date Collected	MCL	03/11/14		03/11/14		03/11/14		03/12/14	
Volatile Organic Compounds by USEPA Method 8260 (µg/L)									
1,1,1-Trichloroethane	200	< 67		< 0.67		< 0.34		< 0.34	
1,1,2,2-Tetrachloroethane	—	< 55		< 0.55		< 0.27		< 0.27	
1,1,2-Trichloroethane	5	< 63		< 0.63		< 0.32		< 0.32	
1,1-Dichloroethane	—	< 51		< 0.51		< 0.26		< 0.26	
1,1-Dichloroethylene	7	< 51		**1.5**	**J//**	**2.5**		< 0.25	
1,2-Dichloroethane	5	< 48		< 0.48		< 0.24		< 0.24	
1,2-Dichloropropane	5	< 71		< 0.71		< 0.36		< 0.36	
2-Hexanone	—	< 400		< 4		< 2		< 2	
4-Methyl-2-pentanone	—	< 200		< 2		< 1		< 1	
Acetone	—	< 2100		< 21		< 11		< 11	
Benzene	5	< 49		< 0.49		< 0.24		< 0.24	
Bromodichloromethane	80 [1]	< 52		**10.4**		**7.2**		< 0.26	
Bromoform	80 [1]	< 77		< 0.77		< 0.38		< 0.38	
Carbon disulfide	—	< 40		**1.8**	**J//**	< 0.2		< 0.2	
Carbon tetrachloride	5	< 79		< 0.79		< 0.4		< 0.4	
Chlorobenzene	100	< 48		< 0.48		< 0.24		< 0.24	
Chloroethane	—	< 100		< 1		< 0.5		< 0.5	
Chloroform	80 [1]	< 62		**131**		**180**		< 0.31	
cis-1,2-Dichloroethylene	70	**466**		**0.84**	**J//**	**0.35**	**J//**	< 0.33	
cis-1,3-Dichloropropene	—	< 42		< 0.42		< 0.21		< 0.21	
Dibromochloromethane	80 [1]	< 72		**1.8**	**J//**	**0.68**	**J//**	< 0.36	
Ethylbenzene	700	< 56		< 0.56		< 0.28		< 0.28	
Methyl bromide	—	< 110		< 1.1		< 0.54		< 0.54	
Methyl chloride	—	< 110		< 1.1		< 0.53		< 0.53	
Methyl ethyl ketone	—	< 300		< 3		< 1.5		< 1.5	
Methylene chloride	5	**765**	**J//**	**13.3**		< 2		< 2	
Styrene	100	< 47		< 0.47		< 0.23		< 0.23	
Tetrachloroethylene	5	**16300**		**283**		**99.8**		< 0.26	
Toluene	1000	< 40		**0.41**	**J//**	< 0.2		< 0.2	
trans-1,2-Dichloroethylene	100	< 69		< 0.69		< 0.34		< 0.34	
trans-1,3-Dichloropropene	—	< 42		< 0.42		< 0.21		< 0.21	
Trichloroethylene	5	**209**		< 0.6		**0.33**	**J//**	< 0.3	
Vinyl chloride	2	< 65		< 0.65		< 0.33		< 0.33	
Xylene (total)	10,000	< 130		< 1.3		< 0.66		< 0.66	
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)									
1,2,4-Trichlorobenzene	70	< 0.49		< 0.48		—		—	
1,2-Dichlorobenzene	600	**9.1**		< 0.48		—		—	
1,3-Dichlorobenzene	—	< 0.49		< 0.48		—		—	
1,4-Dichlorobenzene	75	< 0.49		< 0.48		—		—	
2,4,5-Trichlorophenol	—	< 0.95	/J/i	< 0.94	/R/G	—		—	
2,4,6-Trichlorophenol	—	< 0.54	/J/i	< 0.53	/R/G	—		—	
2,4-Dichlorophenol	—	< 0.57	/J/i	< 0.55	/R/G	—		—	
2,4-Dimethylphenol	—	< 0.49	/J/i	< 0.48	/R/G	—		—	
2,4-Dinitrophenol	—	< 5.3	/J/i	< 5.2	/R/G	—		—	
2,4-Dinitrotoluene	—	< 0.56		< 0.55		—		—	
2,6-Dinitrotoluene	—	< 0.61		< 0.6		—		—	
2-Chloronaphthalene	—	< 0.54		< 0.53		—		—	
2-Chlorophenol	—	< 0.51	/J/i	< 0.5	/R/G	—		—	
2-Methylnaphthalene	—	**7.4**		< 0.51		—		—	
2-Methylphenol	—	< 0.49	/J/i	< 0.48	/R/G	—		—	
2-Nitroaniline	—	< 1.2		< 1.1		—		—	
2-Nitrophenol	—	< 0.59	/J/i	< 0.57	/R/G	—		—	
3&4-Methylphenol	—	< 1.1	/J/i	< 1.1	/R/G	—		—	
3,3'-Dichlorobenzidine	—	< 0.88		< 0.87		—		—	
3-Nitroaniline	—	< 0.6		< 0.58		—		—	
4,6-Dinitro-o-cresol	—	< 2		< 1.9		—		—	
4-Bromophenyl phenyl ether	—	< 0.66		< 0.64		—		—	
4-Chloro-3-methyl phenol	—	< 0.49	/J/i	< 0.48	/R/G	—		—	
4-Chloroaniline	—	< 0.49		< 0.48		—		—	
4-Chlorophenyl phenyl ether	—	< 0.53		< 0.52		—		—	
4-Nitroaniline	—	< 0.75		< 0.73		—		—	
4-Nitrophenol	—	< 4.9	/JR/ic	< 4.8	/R/G	—		—	
Acenaphthene	—	< 0.49		< 0.48		—		—	
Acenaphthylene	—	< 0.49		< 0.48		—		—	

Table 5-5
Analytical Results for Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID		MW-21		MW-21D		MW-22D	MW-23D
Laboratory ID	USEPA	FA13211-1		FA13211-3		FA13211-6	FA13258-1
Date Collected	MCL	03/11/14		03/11/14		03/11/14	03/12/14
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)							
Anthracene	—	< 0.61		< 0.59		—	—
Benzo(a)anthracene	—	< 0.63		< 0.62		—	—
Benzo(a)pyrene	0.2	< 0.64		< 0.63		—	—
Benzo(b)fluoranthene	—	< 0.7		< 0.69		—	—
Benzo(g,h,i)perylene	—	< 0.79		< 0.77		—	—
Benzo(k)fluoranthene	—	< 0.5		< 0.49		—	—
Benzoic Acid	—	< 9.8	/R/c	< 9.6	/R/c	—	—
Benzyl Alcohol	—	< 0.98		< 0.96		—	—
bis(2-Chloroethoxy)methane	—	< 0.54		< 0.53		—	—
bis(2-Chloroethyl)ether	—	< 0.68		< 0.66		—	—
bis(2-Chloroisopropyl)ether	—	< 0.57		< 0.56		—	—
bis(2-Ethylhexyl)phthalate	6	< 1.5		< 1.5		—	—
Butyl benzyl phthalate	—	< 0.8		< 0.78		—	—
Carbazole	—	< 0.6		< 0.59		—	—
Chrysene	—	< 0.71		< 0.69		—	—
Di-n-butyl phthalate	—	< 0.98		< 0.96		—	—
Di-n-octyl phthalate	—	< 0.98		< 0.96		—	—
Dibenzo(a,h)anthracene	—	< 0.8		< 0.78		—	—
Dibenzofuran	—	< 0.52		< 0.51		—	—
Diethyl phthalate	—	< 0.98		< 0.96		—	—
Dimethyl phthalate	—	< 0.62		< 0.61		—	—
Fluoranthene	—	< 0.69		< 0.67		—	—
Fluorene	—	**0.61**	**J//**	< 0.48		—	—
Hexachlorobenzene	1	< 0.65		< 0.64		—	—
Hexachlorobutadiene	—	< 0.49		< 0.48		—	—
Hexachlorocyclopentadiene	50	< 0.98		< 0.96		—	—
Hexachloroethane	—	< 0.49		< 0.48		—	—
Indeno(1,2,3-cd)pyrene	—	< 0.62		< 0.6		—	—
Isophorone	—	< 0.49		< 0.48		—	—
N-Nitroso-di-n-propylamine	—	< 0.49		< 0.48		—	—
N-Nitrosodiphenylamine	—	< 0.52		< 0.51		—	—
Naphthalene	—	**2.4**	**J//**	< 0.48		—	—
Nitrobenzene	—	< 0.49		< 0.48		—	—
Pentachlorophenol	1	< 4.9	/J/i	< 4.8	/R/G	—	—
Phenanthrene	—	< 0.58		< 0.57		—	—
Phenol	—	< 0.49	/J/i	< 0.48	/R/G	—	—
Pyrene	—	< 0.8		< 0.78		—	—
Ethane, Ethene, and Methane by USEPA Method RSK 147 (µg/L)							
Ethane	—	—		—		—	—
Ethene	—	—		—		—	—
Methane	—	—		—		—	—
Metals by USEPA Method 6010 (µg/L)							
Antimony	6	< 2.3		< 2.3		—	—
Arsenic	10	**3.2**	**J//**	< 2.4		—	—
Beryllium	4	**1.5**	**J//**	< 0.5		—	—
Cadmium	5	< 0.5		< 0.5		—	—
Chromium	100	< 2		**10.5**		—	—
Copper	1300 [2]	< 1		< 1		—	—
Lead	15 [2]	**6.7**		< 1.1		—	—
Nickel	—	< 0.5		< 0.5		—	—
Selenium	50	< 2.3		**6.5**	**J//**	—	—
Silver	100 [3]	< 0.77		< 0.77		—	—
Thallium	2	< 2		< 2		—	—
Zinc	5000 [3]	**10.9**	**J//**	**7.1**	**J//**	—	—
Mercury by USEPA Method 7470 (µg/L)							
Mercury	2	< 0.03		< 0.03		—	—
Water Quality Parameters by USEPA Method 9056 (µg/L)							
Chloride	250,000 [3]	—		—		—	—
Nitrogen, Nitrate	10,000	—		—		—	—
Nitrogen, Nitrite	1000	—		—		—	—
Sulfate	250,000 [3]	—		—		—	—
Total Organic Carbon by USEPA Method 5310 (µg/L)							
Total Organic Carbon	—	—		—		—	—

Table 5-5
Analytical Results in Groundwater Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Notes:

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 0.08 mg/L.

[2] Action Level.

[3] 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 5-8 for explanation of data qualifiers.

Table 5-6
Analytical Results for Investigation-Derived Waste Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID Laboratory ID Date Collected	USEPA Toxicity Characteristic	IDW-1 FA13258-9 3/13/2014	IDW-2 FA13258-10 3/13/2014	IDW-3 FA13258-11 3/13/2014	IDW-4 FA13258-12 3/13/2014	IDW-5 FA13258-4L 3/12/2014	IDW-6 FA13258-5L 3/12/2014	IDW-7 FA13258-6L 3/12/2014	IDW-8 FA13258-7L 3/12/2014	IDW-9 FA13258-8L 3/13/2014
Volatile Organic Compounds by Method 8260B (µg/L)										
1,1,1-Trichloroethane	NS	< 0.34	< 1.7	< 34	< 0.34	—	—	—	—	—
1,1,2,2-Tetrachloroethane	NS	< 0.27	< 1.4	< 27	< 0.27	—	—	—	—	—
1,1,2-Trichloroethane	NS	< 0.32	< 1.6	< 32	< 0.32	—	—	—	—	—
1,1-Dichloroethane	NS	< 0.26	< 1.3	< 26	< 0.26	—	—	—	—	—
1,1-Dichloroethylene	700	< 0.25	< 1.3	< 25	**0.58 J/**	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
1,2-Dichloroethane	500	< 0.24	< 1.2	< 24	< 0.24	< 2.4	< 2.4	< 2.4	< 2.4	< 2.4
1,2-Dichloropropane	NS	< 0.36	< 1.8	< 36	< 0.36	—	—	—	—	—
2-Hexanone	NS	< 2.0	< 10	< 200	< 2.0	—	—	—	—	—
4-Methyl-2-pentanone	NS	< 1.0	< 5.0	< 100	< 1.0	—	—	—	—	—
Acetone	NS	< 11	< 53	< 1100	< 11	—	—	—	—	—
Benzene	500	< 0.24	< 1.2	< 24	< 0.24	< 2.4	< 2.4	< 2.4	< 2.4	< 2.4
Bromodichloromethane	NS	< 0.26	< 1.3	< 26	< 0.26	—	—	—	—	—
Bromoform	NS	< 0.38	< 1.9	< 38	< 0.38	—	—	—	—	—
Carbon disulfide	NS	< 0.20	< 1.0	< 20	< 0.20	—	—	—	—	—
Carbon tetrachloride	500	< 0.40	< 2.0	< 40	< 0.40	< 4	< 4	< 4	< 4	< 4
Chlorobenzene	100,000	< 0.24	< 1.2	< 24	< 0.24	< 2.4	< 2.4	< 2.4	< 2.4	< 2.4
Chloroethane	NS	< 0.50	< 2.5	< 50	< 0.50	—	—	—	—	—
Chloroform	6000	< 0.31	< 1.6	< 31	< 0.31	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1
cis-1,2-Dichloroethylene	NS	< 0.33	< 1.6	**206**	< 0.33	—	—	—	—	—
cis-1,3-Dichloropropene	NS	< 0.21	< 1.0	< 21	< 0.21	—	—	—	—	—
Dibromochloromethane	NS	< 0.36	< 1.8	< 36	< 0.36	—	—	—	—	—
Ethylbenzene	NS	< 0.28	< 1.4	< 28	< 0.28	—	—	—	—	—
Methyl bromide	NS	< 0.54	< 2.7	< 54	< 0.54	—	—	—	—	—
Methyl chloride	NS	< 0.53	< 2.7	< 53	< 0.53	—	—	—	—	—
Methyl ethyl ketone	200,000	< 1.5	< 7.4	< 150	< 1.5	< 15	< 15	< 15	< 15	< 15
Methylene chloride	NS	< 2.0	**20.8 J/**	**329 J/**	< 2.0	—	—	—	—	—
p-Dichlorobenzene	NS	—	—	—	—	< 2	< 2	< 2	< 2	< 2
Styrene	NS	< 0.23	< 1.2	< 23	< 0.23	—	—	—	—	—
Tetrachloroethylene	700	**3.8**	**384**	**6710**	**23.2**	< 2.6	< 2.6	< 2.6	< 2.6	< 2.6
Toluene	NS	**0.23 J/**	< 1.0	< 20	< 0.20	—	—	—	—	—
trans-1,2-Dichloroethylene	NS	< 0.34	< 1.7	< 34	< 0.34	—	—	—	—	—
trans-1,3-Dichloropropene	NS	< 0.21	< 1.1	< 21	< 0.21	—	—	—	—	—
Trichloroethylene	500	< 0.30	**1.6 J/**	**86.5 J/**	< 0.30	< 3	< 3	< 3	< 3	< 3
Vinyl chloride	200	< 0.33	< 1.6	< 33	< 0.33	< 3.3	< 3.3	< 3.3	< 3.3	< 3.3
Xylene (total)	NS	< 0.66	< 3.3	< 66	< 0.66	—	—	—	—	—
Semivolatile Organic Compoundsby Method 8270D (µg/L)										
1,2,4-Trichlorobenzene	NS	< 0.48	< 0.48	< 0.48	< 0.48	—	—	—	—	—
1,2-Dichlorobenzene	NS	< 0.48	< 0.48	**2.3 J/**	< 0.48	—	—	—	—	—
1,3-Dichlorobenzene	NS	< 0.48	< 0.48	< 0.48	< 0.48	—	—	—	—	—
1,4-Dichlorobenzene	7500	< 0.48	< 0.48	< 0.48	< 0.48	< 5	< 5	< 5	< 5	< 5
2,4,5-Trichlorophenol	400,000	< 0.94	< 0.94	< 0.94	< 0.94	< 9.7	< 9.7	< 9.7	< 9.7	< 9.7
2,4,6-Trichlorophenol	2000	< 0.53	< 0.53	< 0.53	< 0.53	< 5.5	< 5.5	< 5.5	< 5.5	< 5.5
2,4-Dichlorophenol	NS	< 0.55	< 0.55	< 0.55	< 0.55	—	—	—	—	—
2,4-Dimethylphenol	NS	< 0.48	< 0.48	< 0.48	< 0.48	—	—	—	—	—
2,4-Dinitrophenol	NS	< 5.2	< 5.2	< 5.2	< 5.2	—	—	—	—	—
2,4-Dinitrotoluene	130	< 0.55	< 0.55	< 0.55	< 0.55	< 5.7	< 5.7	< 5.7	< 5.7	< 5.7
2,6-Dinitrotoluene	NS	< 0.60	< 0.60	< 0.60	< 0.60	—	—	—	—	—

Table 5-6
Analytical Results for Investigation-Derived Waste Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID Laboratory ID Date Collected	USEPA Toxicity Characteristic	IDW-1 FA13258-9 3/13/2014	IDW-2 FA13258-10 3/13/2014	IDW-3 FA13258-11 3/13/2014	IDW-4 FA13258-12 3/13/2014	IDW-5 FA13258-4L 3/12/2014	IDW-6 FA13258-5L 3/12/2014	IDW-7 FA13258-6L 3/12/2014	IDW-8 FA13258-7L 3/12/2014	IDW-9 FA13258-8L 3/13/2014
Semivolatile Organic Compoundsby Method 8270D (µg/L)										
2-Chloronaphthalene	NS	< 0.53	< 0.53	< 0.53	< 0.53	—	—	—	—	—
2-Chlorophenol	NS	< 0.50	< 0.50	< 0.50	< 0.50	—	—	—	—	—
2-Methylnaphthalene	NS	< 0.51	< 0.51	< 0.51	< 0.51	—	—	—	—	—
2-Methylphenol	200,000	< 0.48	< 0.48	< 0.48	< 0.48	< 5	< 5	< 5	< 5	< 5
2-Nitroaniline	NS	< 1.1	< 1.1	< 1.1	< 1.1	—	—	—	—	—
2-Nitrophenol	NS	< 0.57	< 0.57	< 0.57	< 0.57	—	—	—	—	—
3&4-Methylphenol	200,000	< 1.1	< 1.1	< 1.1	< 1.1	< 12	< 12	< 12	< 12	< 12
3,3'-Dichlorobenzidine	NS	< 0.87	< 0.87	< 0.87	< 0.87	—	—	—	—	—
3-Nitroaniline	NS	< 0.58	< 0.58	< 0.58	< 0.58	—	—	—	—	—
4,6-Dinitro-o-cresol	NS	< 1.9	< 1.9	< 1.9	< 1.9	—	—	—	—	—
4-Bromophenyl phenyl ether	NS	< 0.64	< 0.64	< 0.64	< 0.64	—	—	—	—	—
4-Chloro-3-methyl phenol	NS	< 0.48	< 0.48	< 0.48	< 0.48	—	—	—	—	—
4-Chloroaniline	NS	< 0.48	< 0.48	< 0.48	< 0.48	—	—	—	—	—
4-Chlorophenyl phenyl ether	NS	< 0.52	< 0.52	< 0.52	< 0.52	—	—	—	—	—
4-Nitroaniline	NS	< 0.73	< 0.73	< 0.73	< 0.73	—	—	—	—	—
4-Nitrophenol	NS	< 4.8	< 4.8	< 4.8	< 4.8	—	—	—	—	—
Acenaphthene	NS	< 0.48	< 0.48	< 0.48	< 0.48	—	—	—	—	—
Acenaphthylene	NS	< 0.48	< 0.48	< 0.48	< 0.48	—	—	—	—	—
Anthracene	NS	< 0.59	< 0.59	< 0.59	< 0.59	—	—	—	—	—
Benzo(a)anthracene	NS	< 0.62	< 0.62	< 0.62	< 0.62	—	—	—	—	—
Benzo(a)pyrene	NS	< 0.63	< 0.63	< 0.63	< 0.63	—	—	—	—	—
Benzo(b)fluoranthene	NS	< 0.69	< 0.69	< 0.69	< 0.69	—	—	—	—	—
Benzo(g,h,i)perylene	NS	< 0.77	< 0.77	< 0.77	< 0.77	—	—	—	—	—
Benzo(k)fluoranthene	NS	< 0.49	< 0.49	< 0.49	< 0.49	—	—	—	—	—
Benzoic Acid	NS	< 9.6 /R/c	**20.2 J/J/c**	< 9.6 /R/c	< 9.6 /R/c	—	—	—	—	—
Benzyl Alcohol	NS	< 0.96	**4.1 J/**	< 0.96	< 0.96	—	—	—	—	—
bis(2-Chloroethoxy)methane	NS	< 0.53	< 0.53	< 0.53	< 0.53	—	—	—	—	—
bis(2-Chloroethyl)ether	NS	< 0.66	< 0.66	< 0.66	< 0.66	—	—	—	—	—
bis(2-Chloroisopropyl)ether	NS	< 0.56	< 0.56	< 0.56	< 0.56	—	—	—	—	—
bis(2-Ethylhexyl)phthalate	NS	< 1.5	< 1.5	< 1.5	< 1.5	—	—	—	—	—
Butyl benzyl phthalate	NS	< 0.78	< 0.78	< 0.78	< 0.78	—	—	—	—	—
Carbazole	NS	< 0.59	< 0.59	< 0.59	< 0.59	—	—	—	—	—
Chrysene	NS	< 0.69	< 0.69	< 0.69	< 0.69	—	—	—	—	—
Dibenzo(a,h)anthracene	NS	< 0.78	< 0.78	< 0.78	< 0.78	—	—	—	—	—
Dibenzofuran	NS	< 0.51	< 0.51	< 0.51	< 0.51	—	—	—	—	—
Diethyl phthalate	NS	< 0.96	< 0.96	< 0.96	< 0.96	—	—	—	—	—
Dimethyl phthalate	NS	< 0.61	< 0.61	< 0.61	< 0.61	—	—	—	—	—
Di-n-butyl phthalate	NS	< 0.96	< 0.96	< 0.96	< 0.96	—	—	—	—	—
Di-n-octyl phthalate	NS	< 0.96	< 0.96	< 0.96	< 0.96	—	—	—	—	—
Fluoranthene	NS	< 0.67	< 0.67	< 0.67	< 0.67	—	—	—	—	—
Fluorene	NS	< 0.48	< 0.48	< 0.48	< 0.48	—	—	—	—	—
Hexachlorobenzene	130	< 0.64	< 0.64	< 0.64	< 0.64	< 6.6	< 6.6	< 6.6	< 6.6	< 6.6
Hexachlorobutadiene	500	< 0.48	< 0.48	< 0.48	< 0.48	< 5	< 5	< 5	< 5	< 5
Hexachlorocyclopentadiene	NS	< 0.96	< 0.96	< 0.96	< 0.96	—	—	—	—	—
Hexachloroethane	3000	< 0.48	< 0.48	< 0.48	< 0.48	< 5	< 5	< 5	< 5	< 5
Indeno(1,2,3-cd)pyrene	NS	< 0.60	< 0.60	< 0.60	< 0.60	—	—	—	—	—
Isophorone	NS	< 0.48	< 0.48	< 0.48	< 0.48	—	—	—	—	—
Naphthalene	NS	< 0.48	< 0.48	< 0.48	< 0.48	—	—	—	—	—
Nitrobenzene	2000	< 0.48	< 0.48	< 0.48	< 0.48	< 5	< 5	< 5	< 5	< 5

Table 5-6
Analytical Results for Investigation-Derived Waste Samples
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID	USEPA	IDW-1	IDW-2	IDW-3	IDW-4	IDW-5	IDW-6	IDW-7	IDW-8	IDW-9
Laboratory ID	Toxicity	FA13258-9	FA13258-10	FA13258-11	FA13258-12	FA13258-4L	FA13258-5L	FA13258-6L	FA13258-7L	FA13258-8L
Date Collected	Characteristic	3/13/2014	3/13/2014	3/13/2014	3/13/2014	3/12/2014	3/12/2014	3/12/2014	3/12/2014	3/13/2014
Semivolatile Organic Compoundsby Method 8270D (µg/L)										
N-Nitroso-di-n-propylamine	NS	< 0.48	< 0.48	< 0.48	< 0.48	—	—	—	—	—
N-Nitrosodiphenylamine	NS	< 0.51	< 0.51	< 0.51	< 0.51	—	—	—	—	—
Pentachlorophenol	100,000	< 4.8	< 4.8	< 4.8	< 4.8	< 50	< 50	< 50	< 50	< 50
Phenanthrene	NS	< 0.57	< 0.57	< 0.57	< 0.57	—	—	—	—	—
Phenol	NS	< 0.48	< 0.48	< 0.48	< 0.48	—	—	—	—	—
Pyrene	NS	< 0.78	< 0.78	< 0.78	< 0.78	—	—	—	—	—
Pyridine	5000	—	—	—	—	< 20	< 20	< 20	< 20	< 20
Metals by Method 6010C/7470B (µg/L)										
Antimony	NS	< 2.3	< 2.3	< 2.3	< 2.3	< 23	< 23	< 23	< 23	< 23
Arsenic	5000	< 2.4	< 2.4	< 2.4	< 2.4	< 24	< 24	< 24	< 24	< 24
Beryllium	NS	< 0.50	< 0.50	< 0.50	< 0.50	< 5	< 5	< 5	< 5	< 5
Cadmium	1000	< 0.50	< 0.50	< 0.50	< 0.50	< 5	< 5	< 5	< 5	< 5
Chromium	5000	< 2.0	**5.2 J/**	**3.6 J/**	**12.5**	< 20	< 20	< 20	< 20	**61 J/**
Copper	NS	< 1.0	**3.5 J/**	< 1.0	< 1.0	**20 J/**	< 10	< 10	< 10	< 10
Lead	5000	< 1.1	< 1.1	< 1.1	< 1.1	< 11	< 11	< 11	< 11	< 11
Mercury	200	< 0.030	< 0.030	< 0.030	< 0.030	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel	NS	**0.90 J/**	**4.3 J/**	< 0.50	< 0.50	< 5	**9 J/**	< 5	< 5	**9 J/**
Selenium	1000	< 2.3	< 2.3	< 2.3	< 2.3	**35 J/**	**36 J/**	**26 J/**	**29 J/**	**28 J/**
Silver	5000	< 0.77	< 0.77	< 0.77	< 0.77	< 7.7	< 7.7	< 7.7	< 7.7	< 7.7
Thallium	NS	< 2.0	< 2.0	< 2.0	< 2.0	< 20	< 20	< 20	< 20	< 20
Zinc	NS	**43.3**	**17.0 J/**	**11.4 J/**	**9.8 J/**	< 100	< 100	< 100	< 100	< 100

Notes:
— - Not Analyzed or Not Available
IDW - Investigation Derived Waste
NS - No Standard
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.
Bold outline indicates the concentration exceeds the USEPA Toxicity Characteristic value.
See Table 5-8 for explanation of data qualifiers.

Table 5-7
QA/QC Sample Results
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Summary of Calculated Relative Percent Differences in Soil Field Duplicate Samples

Sample ID **Lab Sample ID** **Date Collected**	BG-2 (12-14) FA12917-9 02/28/14	BG-2 (12-14)-A FA12917-10 02/28/14	Relative Percent Difference	DPT-34 (8-10) FA12959-1 03/01/14	DPT-34 (8-10)-A FA12959-2 03/01/14	Relative Percent Difference
Volatile Organic Compounds by Method 8260B (mg/kg)						
1,1,1-Trichloroethane	—	—	—	< 0.00085	**0.002 J//**	NC
1,1,2,2-Tetrachloroethane	—	—	—	< 0.0012	< 0.001	NC
1,1,2-Trichloroethane	—	—	—	< 0.0014	< 0.0011	NC
1,1-Dichloroethane	—	—	—	< 0.00085	< 0.00071	NC
1,1-Dichloroethylene	—	—	—	< 0.00085	< 0.00071	NC
1,2-Dichloroethane	—	—	—	< 0.00085	< 0.00071	NC
1,2-Dichloropropane	—	—	—	< 0.00085	< 0.00071	NC
2-Hexanone	—	—	—	< 0.0042	< 0.0035	NC
4-Methyl-2-pentanone	—	—	—	< 0.0043	< 0.0035	NC
Acetone	—	—	—	< 0.013	< 0.011	NC
Benzene	—	—	—	< 0.00085	< 0.00071	NC
Bromodichloromethane	—	—	—	< 0.00085	< 0.00071	NC
Bromoform	—	—	—	< 0.00092	< 0.00076	NC
Carbon disulfide	—	—	—	< 0.00085	< 0.00071	NC
Carbon tetrachloride	—	—	—	< 0.0012	< 0.00098	NC
Chlorobenzene	—	—	—	< 0.00085	< 0.00071	NC
Chloroethane	—	—	—	< 0.0019	< 0.0016	NC
Chloroform	—	—	—	< 0.00096	< 0.0008	NC
cis-1,2-Dichloroethylene	—	—	—	< 0.00085	< 0.00071	NC
cis-1,3-Dichloropropene	—	—	—	< 0.00085	< 0.00071	NC
Dibromochloromethane	—	—	—	< 0.00085	< 0.00071	NC
Ethylbenzene	—	—	—	< 0.00085	< 0.00071	NC
Methyl bromide	—	—	—	< 0.0016	< 0.0013	NC
Methyl chloride	—	—	—	< 0.0017	< 0.0014	NC
Methyl ethyl ketone	—	—	—	< 0.0064	< 0.0053	NC
Methylene chloride	—	—	—	< 0.0034	< 0.0028	NC
Styrene	—	—	—	< 0.00085	< 0.00071	NC
Tetrachloroethylene	—	—	—	**0.371**	**0.459**	21
Toluene	—	—	—	< 0.00085	< 0.00071	NC
trans-1,2-Dichloroethylene	—	—	—	< 0.0011	< 0.00095	NC
trans-1,3-Dichloropropene	—	—	—	< 0.00085	< 0.00071	NC
Trichloroethylene	—	—	—	< 0.00087	< 0.00072	NC
Vinyl chloride	—	—	—	< 0.00087	< 0.00072	NC
Xylene (total)	—	—	—	< 0.0023	< 0.0019	NC
Semivolatile Organic Compounds by Method 8270D (mg/kg)						
1,2,4-Trichlorobenzene	—	—	—	< 0.019	< 0.019	NC
1,2-Dichlorobenzene	—	—	—	< 0.019	< 0.019	NC
1,3-Dichlorobenzene	—	—	—	< 0.019	< 0.019	NC
1,4-Dichlorobenzene	—	—	—	< 0.019	< 0.019	NC
2,4,5-Trichlorophenol	—	—	—	< 0.024	< 0.024	NC
2,4,6-Trichlorophenol	—	—	—	< 0.019	< 0.019	NC
2,4-Dichlorophenol	—	—	—	< 0.019	< 0.019	NC
2,4-Dimethylphenol	—	—	—	< 0.021	< 0.021	NC
2,4-Dinitrophenol	—	—	—	< 0.19	< 0.19	NC
2,4-Dinitrotoluene	—	—	—	< 0.021	< 0.021	NC
2,6-Dinitrotoluene	—	—	—	< 0.02	< 0.021	NC
2-Chloronaphthalene	—	—	—	< 0.022	< 0.022	NC
2-Chlorophenol	—	—	—	< 0.019	< 0.019	NC
2-Methylnaphthalene	—	—	—	< 0.019	< 0.019	NC
2-Methylphenol	—	—	—	< 0.019	**0.0223 J//**	NC
2-Nitroaniline	—	—	—	< 0.037	< 0.037	NC
2-Nitrophenol	—	—	—	< 0.019	< 0.019	NC
3&4-Methylphenol	—	—	—	< 0.037	< 0.037	NC
3,3'-Dichlorobenzidine	—	—	—	< 0.019	< 0.019	NC
3-Nitroaniline	—	—	—	< 0.037	< 0.037	NC
4,6-Dinitro-o-cresol	—	—	—	< 0.074	< 0.075	NC
4-Bromophenyl phenyl ether	—	—	—	< 0.019	< 0.019	NC
4-Chloro-3-methyl phenol	—	—	—	< 0.019	< 0.019	NC
4-Chloroaniline	—	—	—	< 0.019	< 0.019	NC

Table 5-7
QA/QC Sample Results
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Summary of Calculated Relative Percent Differences in Soil Field Duplicate Samples

Sample ID / **Lab Sample ID** / **Date Collected**	BG-2 (12-14) FA12917-9 02/28/14	BG-2 (12-14)-A FA12917-10 02/28/14	Relative Percent Difference	DPT-34 (8-10) FA12959-1 03/01/14	DPT-34 (8-10)-A FA12959-2 03/01/14	Relative Percent Difference
Semivolatile Organic Compounds by Method 8270D (mg/kg)						
4-Chlorophenyl phenyl ether	—	—	—	< 0.028	< 0.028	NC
4-Nitroaniline	—	—	—	< 0.037	< 0.037	NC
4-Nitrophenol	—	—	—	< 0.15	< 0.15	NC
Acenaphthene	—	—	—	< 0.024	< 0.024	NC
Acenaphthylene	—	—	—	< 0.019	< 0.019	NC
Anthracene	—	—	—	< 0.019	< 0.019	NC
Benzo(a)anthracene	—	—	—	< 0.019	< 0.019	NC
Benzo(a)pyrene	—	—	—	< 0.019	< 0.019	NC
Benzo(b)fluoranthene	—	—	—	< 0.019	< 0.019	NC
Benzo(g,h,i)perylene	—	—	—	< 0.019	< 0.019	NC
Benzo(k)fluoranthene	—	—	—	< 0.02	< 0.02	NC
Benzoic Acid	—	—	—	< 0.19	< 0.19	NC
Benzyl Alcohol	—	—	—	< 0.019	**0.0299 J//**	NC
bis(2-Chloroethoxy)methane	—	—	—	< 0.019	< 0.019	NC
bis(2-Chloroethyl)ether	—	—	—	< 0.019	< 0.019	NC
bis(2-Chloroisopropyl)ether	—	—	—	< 0.019	< 0.019	NC
bis(2-Ethylhexyl)phthalate	—	—	—	< 0.037	< 0.037	NC
Butyl benzyl phthalate	—	—	—	< 0.037	< 0.037	NC
Carbazole	—	—	—	< 0.019	< 0.019	NC
Chrysene	—	—	—	< 0.019	< 0.019	NC
Di-n-butyl phthalate	—	—	—	< 0.037	< 0.037	NC
Di-n-octyl phthalate	—	—	—	< 0.037	< 0.037	NC
Dibenzo(a,h)anthracene	—	—	—	< 0.019	< 0.019	NC
Dibenzofuran	—	—	—	< 0.019	< 0.019	NC
Diethyl phthalate	—	—	—	< 0.037	< 0.037	NC
Dimethyl phthalate	—	—	—	< 0.037	< 0.037	NC
Fluoranthene	—	—	—	< 0.019	< 0.019	NC
Fluorene	—	—	—	< 0.019	< 0.019	NC
Hexachlorobenzene	—	—	—	< 0.019	< 0.019	NC
Hexachlorobutadiene	—	—	—	< 0.019	< 0.019	NC
Hexachlorocyclopentadiene	—	—	—	< 0.019	< 0.019	NC
Hexachloroethane	—	—	—	< 0.019	< 0.019	NC
Indeno(1,2,3-cd)pyrene	—	—	—	< 0.019	< 0.019	NC
Isophorone	—	—	—	< 0.019	< 0.019	NC
N-Nitroso-di-n-propylamine	—	—	—	< 0.019	< 0.019	NC
N-Nitrosodiphenylamine	—	—	—	< 0.019	< 0.019	NC
Naphthalene	—	—	—	< 0.019	< 0.019	NC
Nitrobenzene	—	—	—	< 0.019	< 0.019	NC
Pentachlorophenol	—	—	—	< 0.15	< 0.15	NC
Phenanthrene	—	—	—	< 0.019	< 0.019	NC
Phenol	—	—	—	< 0.019	< 0.019	NC
Pyrene	—	—	—	< 0.019	< 0.019	NC
Metals by Method 6010C (mg/kg)						
Antimony	< 0.11	< 0.12	NC	< 0.09	< 0.09	NC
Arsenic	**1.5 /J/A**	**6.2**	122	**1.2**	**0.98**	20
Beryllium	**0.15 J//**	**0.2 J//**	NC	**0.02 J//**	**0.02 J//**	NC
Cadmium	< 0.02	< 0.03	NC	< 0.02	< 0.02	NC
Chromium	**23.2**	**29.7**	25	**14.7**	**14.7**	0
Copper	**2.5 /J/A**	**3.7**	39	**43.3**	**52.7**	20
Lead	**11.5**	**12.9**	11	**3**	**3.2**	6
Nickel	**0.86 J//**	**1.3 J//**	NC	**0.71 J//**	**0.95 J//**	NC
Selenium	< 0.16	< 0.18	NC	< 0.14	< 0.15	NC
Silver	< 0.03	< 0.03	NC	**0.04 J//**	< 0.03	NC
Thallium	< 0.8	< 0.9	NC	< 0.07	< 0.07	NC
Zinc	**3.2 /J/A**	**4.7**	38	**29.3**	**35.1**	18
Mercury by Method 7471B (mg/kg)						
Mercury	**0.02 J//**	**0.04 J//**	NC	**0.01 J//**	**0.01 J//**	NC
Hexavalent Chromium by Method 7196A (mg/kg)						
Chromium, Hexavalent	< 1.1	< 1.1	NC	< 0.96	0.97 J//	NC
Soil pH by Method 9045D (Standard Units)						
Soil pH	—	—	—	3.87	3.97	3

Table 5-7
QA/QC Sample Results
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Summary of Calculated Relative Percent Differences in Soil Field Duplicate Samples

Sample ID **Lab Sample ID** **Date Collected**	DPT-36 (5-7) FA12959-3 03/01/14	DPT-36 (5-7)-A FA12959-4 03/01/14	Relative Percent Difference	DPT-45 (2-4) FA12814-1 02/25/14	DPT-45 (2-4)-A FA12814-2 02/25/14	Relative Percent Difference
Volatile Organic Compounds by Method 8260B (mg/kg)						
1,1,1-Trichloroethane	< 0.0007	< 0.00075	NC	< 0.00066	< 0.00064	NC
1,1,2,2-Tetrachloroethane	< 0.00099	< 0.0011	NC	< 0.00093	< 0.0009	NC
1,1,2-Trichloroethane	< 0.0011	< 0.0012	NC	< 0.0011	< 0.001	NC
1,1-Dichloroethane	< 0.0007	< 0.00075	NC	< 0.00066	< 0.00064	NC
1,1-Dichloroethylene	< 0.0007	< 0.00075	NC	< 0.00066	< 0.00064	NC
1,2-Dichloroethane	< 0.0007	< 0.00075	NC	< 0.00066	< 0.00064	NC
1,2-Dichloropropane	< 0.0007	< 0.00075	NC	< 0.00066	< 0.00064	NC
2-Hexanone	< 0.0034	< 0.0037	NC	< 0.0032	< 0.0031	NC
4-Methyl-2-pentanone	< 0.0035	< 0.0037	NC	< 0.0033	< 0.0032	NC
Acetone	< 0.011	< 0.011	NC	< 0.0099	< 0.0096	NC
Benzene	< 0.0007	< 0.00075	NC	< 0.00066	< 0.00064	NC
Bromodichloromethane	< 0.0007	< 0.00075	NC	< 0.00066	< 0.00064	NC
Bromoform	< 0.00076	< 0.00081	NC	< 0.00072	< 0.00069	NC
Carbon disulfide	< 0.0007	< 0.00075	NC	< 0.00066	< 0.00064	NC
Carbon tetrachloride	< 0.00097	< 0.001	NC	< 0.00092	< 0.00089	NC
Chlorobenzene	< 0.0007	< 0.00075	NC	< 0.00066	< 0.00064	NC
Chloroethane	< 0.0016	< 0.0017	NC	< 0.0015	< 0.0014	NC
Chloroform	< 0.00079	< 0.00085	NC	< 0.00075	< 0.00072	NC
cis-1,2-Dichloroethylene	< 0.0007	< 0.00075	NC	< 0.00066	< 0.00064	NC
cis-1,3-Dichloropropene	< 0.0007	< 0.00075	NC	< 0.00066	< 0.00064	NC
Dibromochloromethane	< 0.0007	< 0.00075	NC	< 0.00066	< 0.00064	NC
Ethylbenzene	< 0.0007	< 0.00075	NC	< 0.00066	< 0.00064	NC
Methyl bromide	< 0.0013	< 0.0014	NC	< 0.0012	< 0.0012	NC
Methyl chloride	< 0.0014	< 0.0015	NC	< 0.0013	< 0.0013	NC
Methyl ethyl ketone	< 0.0052	< 0.0056	NC	< 0.005	< 0.0048	NC
Methylene chloride	< 0.0028	< 0.003	NC	< 0.0026	< 0.0026	NC
Styrene	< 0.0007	< 0.00075	NC	< 0.00066	< 0.00064	NC
Tetrachloroethylene	**0.0139 /J/A**	**0.0039**	112	< 0.00083	< 0.00081	NC
Toluene	< 0.0007	< 0.00075	NC	< 0.00066	< 0.00064	NC
trans-1,2-Dichloroethylene	< 0.00094	< 0.001	NC	< 0.00089	< 0.00086	NC
trans-1,3-Dichloropropene	< 0.0007	< 0.00075	NC	< 0.00066	< 0.00064	NC
Trichloroethylene	< 0.00071	< 0.00076	NC	< 0.00068	< 0.00065	NC
Vinyl chloride	< 0.00071	< 0.00076	NC	< 0.00068	< 0.00065	NC
Xylene (total)	< 0.0019	< 0.002	NC	< 0.0018	< 0.0017	NC
Semivolatile Organic Compounds by Method 8270D (mg/kg)						
1,2,4-Trichlorobenzene	< 0.018	< 0.018	NC	—	—	—
1,2-Dichlorobenzene	< 0.018	< 0.018	NC	—	—	—
1,3-Dichlorobenzene	< 0.018	< 0.018	NC	—	—	—
1,4-Dichlorobenzene	< 0.018	< 0.018	NC	—	—	—
2,4,5-Trichlorophenol	< 0.024	< 0.024	NC	—	—	—
2,4,6-Trichlorophenol	< 0.018	< 0.018	NC	—	—	—
2,4-Dichlorophenol	< 0.019	< 0.019	NC	—	—	—
2,4-Dimethylphenol	< 0.02	< 0.02	NC	—	—	—
2,4-Dinitrophenol	< 0.18	< 0.18	NC	—	—	—
2,4-Dinitrotoluene	< 0.021	< 0.021	NC	—	—	—
2,6-Dinitrotoluene	< 0.02	< 0.02	NC	—	—	—
2-Chloronaphthalene	< 0.022	< 0.022	NC	—	—	—
2-Chlorophenol	< 0.018	< 0.018	NC	—	—	—
2-Methylnaphthalene	< 0.018	< 0.018	NC	—	—	—
2-Methylphenol	< 0.018	**0.0951 J//**	NC	—	—	—
2-Nitroaniline	< 0.037	< 0.037	NC	—	—	—
2-Nitrophenol	< 0.018	< 0.018	NC	—	—	—
3&4-Methylphenol	< 0.037	< 0.037	NC	—	—	—
3,3'-Dichlorobenzidine	< 0.018	< 0.018	NC	—	—	—
3-Nitroaniline	< 0.037	< 0.037	NC	—	—	—
4,6-Dinitro-o-cresol	< 0.073	< 0.074	NC	—	—	—
4-Bromophenyl phenyl ether	< 0.018	< 0.018	NC	—	—	—
4-Chloro-3-methyl phenol	< 0.018	< 0.018	NC	—	—	—
4-Chloroaniline	< 0.018	< 0.018	NC	—	—	—

Table 5-7
QA/QC Sample Results
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Summary of Calculated Relative Percent Differences in Soil Field Duplicate Samples

Sample ID **Lab Sample ID** **Date Collected**	DPT-36 (5-7) FA12959-3 03/01/14	DPT-36 (5-7)-A FA12959-4 03/01/14	Relative Percent Difference	DPT-45 (2-4) FA12814-1 02/25/14	DPT-45 (2-4)-A FA12814-2 02/25/14	Relative Percent Difference
Semivolatile Organic Compounds by Method 8270D (mg/kg)						
4-Chlorophenyl phenyl ether	< 0.027	< 0.027	NC	—	—	—
4-Nitroaniline	< 0.037	< 0.037	NC	—	—	—
4-Nitrophenol	< 0.15	< 0.15	NC	—	—	—
Acenaphthene	< 0.023	< 0.023	NC	—	—	—
Acenaphthylene	< 0.018	< 0.018	NC	—	—	—
Anthracene	< 0.018	< 0.018	NC	—	—	—
Benzo(a)anthracene	< 0.018	< 0.018	NC	—	—	—
Benzo(a)pyrene	< 0.018	< 0.018	NC	—	—	—
Benzo(b)fluoranthene	< 0.018	< 0.018	NC	—	—	—
Benzo(g,h,i)perylene	< 0.018	< 0.018	NC	—	—	—
Benzo(k)fluoranthene	< 0.02	< 0.02	NC	—	—	—
Benzoic Acid	< 0.18	< 0.18	NC	—	—	—
Benzyl Alcohol	< 0.018	**0.128 J//**	NC	—	—	—
bis(2-Chloroethoxy)methane	< 0.018	< 0.018	NC	—	—	—
bis(2-Chloroethyl)ether	< 0.018	< 0.018	NC	—	—	—
bis(2-Chloroisopropyl)ether	< 0.019	< 0.019	NC	—	—	—
bis(2-Ethylhexyl)phthalate	< 0.037	< 0.037	NC	—	—	—
Butyl benzyl phthalate	< 0.037	< 0.037	NC	—	—	—
Carbazole	< 0.018	< 0.018	NC	—	—	—
Chrysene	< 0.018	< 0.018	NC	—	—	—
Di-n-butyl phthalate	< 0.037	< 0.037	NC	—	—	—
Di-n-octyl phthalate	< 0.037	< 0.037	NC	—	—	—
Dibenzo(a,h)anthracene	< 0.018	< 0.018	NC	—	—	—
Dibenzofuran	< 0.018	< 0.018	NC	—	—	—
Diethyl phthalate	< 0.037	< 0.037	NC	—	—	—
Dimethyl phthalate	< 0.037	< 0.037	NC	—	—	—
Fluoranthene	< 0.018	< 0.018	NC	—	—	—
Fluorene	< 0.018	< 0.018	NC	—	—	—
Hexachlorobenzene	< 0.018	< 0.018	NC	—	—	—
Hexachlorobutadiene	< 0.018	< 0.018	NC	—	—	—
Hexachlorocyclopentadiene	< 0.018	< 0.018	NC	—	—	—
Hexachloroethane	< 0.018	< 0.018	NC	—	—	—
Indeno(1,2,3-cd)pyrene	< 0.018	< 0.018	NC	—	—	—
Isophorone	< 0.018	< 0.018	NC	—	—	—
N-Nitroso-di-n-propylamine	< 0.018	< 0.018	NC	—	—	—
N-Nitrosodiphenylamine	< 0.018	< 0.018	NC	—	—	—
Naphthalene	< 0.018	< 0.018	NC	—	—	—
Nitrobenzene	< 0.018	< 0.018	NC	—	—	—
Pentachlorophenol	< 0.15	< 0.15	NC	—	—	—
Phenanthrene	< 0.018	< 0.018	NC	—	—	—
Phenol	< 0.018	< 0.018	NC	—	—	—
Pyrene	< 0.018	< 0.018	NC	—	—	—
Metals by Method 6010C (mg/kg)						
Antimony	—	—	—	—	—	—
Arsenic	—	—	—	—	—	—
Beryllium	—	—	—	—	—	—
Cadmium	—	—	—	—	—	—
Chromium	—	—	—	—	—	—
Copper	—	—	—	—	—	—
Lead	—	—	—	—	—	—
Nickel	—	—	—	—	—	—
Selenium	—	—	—	—	—	—
Silver	—	—	—	—	—	—
Thallium	—	—	—	—	—	—
Zinc	—	—	—	—	—	—
Mercury by Method 7471B (mg/kg)						
Mercury	—	—	—	—	—	—
Hexavalent Chromium by Method 7196A (mg/kg)						
Chromium, Hexavalent	—	—	—	—	—	—
Soil pH by Method 9045D (Standard Units)						
Soil pH	—	—	—	—	—	—

Table 5-7
QA/QC Sample Results
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Summary of Calculated Relative Percent Differences in Soil Field Duplicate Samples

Sample ID **Lab Sample ID** **Date Collected**	DPT-46 (1.5-3.5) FA12909-1 02/28/14	DPT-46 (1.5-3.5)-A FA12909-2 02/28/14	Relative Percent Difference	DPT-52 (8-10) FA12814-4 02/26/14	DPT-52 (8-10)-A FA12814-5 02/26/14	Relative Percent Difference
Volatile Organic Compounds by Method 8260B (mg/kg)						
1,1,1-Trichloroethane	< 0.00063	< 0.00077	NC	< 0.00059	< 0.00059	NC
1,1,2,2-Tetrachloroethane	< 0.00089	< 0.0011	NC	< 0.00084	< 0.00083	NC
1,1,2-Trichloroethane	< 0.001	< 0.0012	NC	< 0.00096	< 0.00095	NC
1,1-Dichloroethane	< 0.00063	< 0.00077	NC	< 0.00059	< 0.00059	NC
1,1-Dichloroethylene	< 0.00063	< 0.00077	NC	< 0.00059	< 0.00059	NC
1,2-Dichloroethane	< 0.00063	< 0.00077	NC	< 0.00059	< 0.00059	NC
1,2-Dichloropropane	< 0.00063	< 0.00077	NC	< 0.00059	< 0.00059	NC
2-Hexanone	< 0.0031	< 0.0038	NC	< 0.0029	< 0.0029	NC
4-Methyl-2-pentanone	< 0.0032	< 0.0039	NC	< 0.003	< 0.0029	NC
Acetone	**0.0104 J//**	**0.0266 J//**	NC	< 0.0089	< 0.0088	NC
Benzene	< 0.00063	< 0.00077	NC	< 0.00059	< 0.00059	NC
Bromodichloromethane	< 0.00063	< 0.00077	NC	< 0.00059	< 0.00059	NC
Bromoform	< 0.00068	< 0.00084	NC	< 0.00064	< 0.00064	NC
Carbon disulfide	< 0.00063	< 0.00077	NC	< 0.00059	< 0.00059	NC
Carbon tetrachloride	< 0.00088	< 0.0011	NC	< 0.00082	< 0.00082	NC
Chlorobenzene	< 0.00063	< 0.00077	NC	< 0.00059	< 0.00059	NC
Chloroethane	< 0.0014	< 0.0017	NC	< 0.0013	< 0.0013	NC
Chloroform	< 0.00071	< 0.00087	NC	< 0.00067	< 0.00066	NC
cis-1,2-Dichloroethylene	< 0.00063	< 0.00077	NC	**0.0088**	**0.0075**	16
cis-1,3-Dichloropropene	< 0.00063	< 0.00077	NC	< 0.00059	< 0.00059	NC
Dibromochloromethane	< 0.00063	< 0.00077	NC	< 0.00059	< 0.00059	NC
Ethylbenzene	< 0.00063	< 0.00077	NC	< 0.00059	< 0.00059	NC
Methyl bromide	< 0.0012	< 0.0014	NC	< 0.0011	< 0.0011	NC
Methyl chloride	< 0.0013	< 0.0015	NC	< 0.0012	< 0.0012	NC
Methyl ethyl ketone	< 0.0047	< 0.0058	NC	< 0.0044	< 0.0044	NC
Methylene chloride	< 0.0025	< 0.0031	NC	< 0.0024	< 0.0024	NC
Styrene	< 0.00063	< 0.00077	NC	< 0.00059	< 0.00059	NC
Tetrachloroethylene	**0.0042 /J/A**	**0.0077**	59	**5.92**	**6.4**	8
Toluene	< 0.00063	< 0.00077	NC	< 0.00059	< 0.00059	NC
trans-1,2-Dichloroethylene	< 0.00085	< 0.001	NC	< 0.0008	< 0.00079	NC
trans-1,3-Dichloropropene	< 0.00063	< 0.00077	NC	< 0.00059	< 0.00059	NC
Trichloroethylene	< 0.00064	< 0.00079	NC	**1.07 /J/A**	**0.682**	44
Vinyl chloride	< 0.00064	< 0.00079	NC	< 0.00061	< 0.0006	NC
Xylene (total)	< 0.0017	< 0.0021	NC	< 0.0016	< 0.0016	NC
Semivolatile Organic Compounds by Method 8270D (mg/kg)						
1,2,4-Trichlorobenzene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
1,2-Dichlorobenzene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
1,3-Dichlorobenzene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
1,4-Dichlorobenzene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
2,4,5-Trichlorophenol	< 0.026	< 0.027	NC	< 0.024	< 0.024	NC
2,4,6-Trichlorophenol	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
2,4-Dichlorophenol	< 0.021	< 0.021	NC	< 0.02	< 0.019	NC
2,4-Dimethylphenol	< 0.022	< 0.023	NC	< 0.021	< 0.02	NC
2,4-Dinitrophenol	< 0.2	< 0.21	NC	< 0.19	< 0.19	NC
2,4-Dinitrotoluene	< 0.023	< 0.023	NC	< 0.021	< 0.021	NC
2,6-Dinitrotoluene	< 0.022	< 0.023	NC	< 0.021	< 0.02	NC
2-Chloronaphthalene	< 0.024	< 0.025	NC	< 0.022	< 0.022	NC
2-Chlorophenol	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
2-Methylnaphthalene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
2-Methylphenol	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
2-Nitroaniline	< 0.04	< 0.041	NC	< 0.038	< 0.037	NC
2-Nitrophenol	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
3&4-Methylphenol	< 0.04	< 0.041	NC	< 0.038	< 0.037	NC
3,3'-Dichlorobenzidine	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
3-Nitroaniline	< 0.04	< 0.041	NC	< 0.038	< 0.037	NC
4,6-Dinitro-o-cresol	< 0.08	< 0.082	NC	< 0.076	< 0.074	NC
4-Bromophenyl phenyl ether	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
4-Chloro-3-methyl phenol	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
4-Chloroaniline	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC

Table 5-7
QA/QC Sample Results
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Summary of Calculated Relative Percent Differences in Soil Field Duplicate Samples

Sample ID Lab Sample ID Date Collected	DPT-46 (1.5-3.5) FA12909-1 02/28/14	DPT-46 (1.5-3.5)-A FA12909-2 02/28/14	Relative Percent Difference	DPT-52 (8-10) FA12814-4 02/26/14	DPT-52 (8-10)-A FA12814-5 02/26/14	Relative Percent Difference
Semivolatile Organic Compounds by Method 8270D (mg/kg)						
4-Chlorophenyl phenyl ether	< 0.03	< 0.031	NC	< 0.028	< 0.028	NC
4-Nitroaniline	< 0.04	< 0.041	NC	< 0.038	< 0.037	NC
4-Nitrophenol	< 0.16	< 0.16	NC	< 0.15	< 0.15	NC
Acenaphthene	< 0.025	< 0.026	NC	< 0.024	< 0.023	NC
Acenaphthylene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Anthracene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Benzo(a)anthracene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Benzo(a)pyrene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Benzo(b)fluoranthene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Benzo(g,h,i)perylene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Benzo(k)fluoranthene	< 0.022	< 0.022	NC	< 0.021	< 0.02	NC
Benzoic Acid	< 0.2	< 0.21	NC	< 0.19	< 0.19	NC
Benzyl Alcohol	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
bis(2-Chloroethoxy)methane	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
bis(2-Chloroethyl)ether	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
bis(2-Chloroisopropyl)ether	< 0.021	< 0.021	NC	< 0.02	< 0.019	NC
bis(2-Ethylhexyl)phthalate	< 0.04	< 0.041	NC	< 0.038	< 0.037	NC
Butyl benzyl phthalate	< 0.04	< 0.041	NC	< 0.038	< 0.037	NC
Carbazole	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Chrysene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Di-n-butyl phthalate	< 0.04	< 0.041	NC	< 0.038	< 0.037	NC
Di-n-octyl phthalate	< 0.04	< 0.041	NC	< 0.038	< 0.037	NC
Dibenzo(a,h)anthracene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Dibenzofuran	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Diethyl phthalate	< 0.04	< 0.041	NC	< 0.038	< 0.037	NC
Dimethyl phthalate	< 0.04	< 0.041	NC	< 0.038	< 0.037	NC
Fluoranthene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Fluorene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Hexachlorobenzene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Hexachlorobutadiene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Hexachlorocyclopentadiene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Hexachloroethane	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Indeno(1,2,3-cd)pyrene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Isophorone	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
N-Nitroso-di-n-propylamine	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
N-Nitrosodiphenylamine	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Naphthalene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Nitrobenzene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Pentachlorophenol	< 0.16	< 0.16	NC	< 0.15	< 0.15	NC
Phenanthrene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Phenol	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Pyrene	< 0.02	< 0.021	NC	< 0.019	< 0.019	NC
Metals by Method 6010C (mg/kg)						
Antimony	< 0.11	< 0.09	NC	< 0.07	< 0.07	NC
Arsenic	**0.9**	**0.69**	26	**0.68 /J/A**	**0.43**	45
Beryllium	**0.08 J//**	**0.08 J//**	NC	**0.03 J//**	**0.03 J//**	NC
Cadmium	< 0.02	< 0.02	NC	< 0.02	< 0.01	NC
Chromium	**13.9**	**12**	15	**6.7**	**5.7**	16
Copper	**1.5**	**1.7**	13	**1 /B/V**	**0.92 J/B/V**	NC
Lead	**8**	**8.4**	5	**3.6**	**3.4**	6
Nickel	**1.6 J//**	**1.6 J//**	NC	**0.45 J//**	**0.41 J//**	NC
Selenium	**0.48 J//**	**0.42 J//**	NC	**0.16 J//**	**0.12 J//**	NC
Silver	< 0.03	< 0.03	NC	< 0.02	< 0.02	NC
Thallium	< 0.08	< 0.06	NC	< 0.05	< 0.05	NC
Zinc	**2.1**	**2.2**	5	**0.55 J/B/V**	**0.55 J/B/V**	NC
Mercury by Method 7471B (mg/kg)						
Mercury	**0.04 J//**	**0.05**	NC	< 0.0045	**0.009 J//**	NC
Hexavalent Chromium by Method 7196A (mg/kg)						
Chromium, Hexavalent	< 1	**1.8 J//**	NC	< 0.98	< 0.97	NC
Soil pH by Method 9045D (Standard Units)						
Soil pH	—	—	—	—	—	—

Notes:
— - Indicates Not Analyzed
-A - Indicates a field duplicate sample.
NC - Not Calculated
Bold font and shading indicate the concentration is detected.
See Table 5-8 for explanation of data qualifiers.

Table 5-7
QA/QC Sample Results
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Summary of Calculated Relative Percent Differences in Soil Gas Field Duplicate Samples

Sample ID / **Lab Sample ID** / **Date Collected**	SSV-4 JB61406-2 03/07/14		SSV-4-A JB61406-3 03/07/14		Relative Percent Difference
Volatile Organic Compounds by Method TO-15 (µg/m^3)					
1,1,1-Trichloroethane	**142**		**139**		2
1,1,2,2-Tetrachloroethane	< 0.82		< 0.82		NC
1,1,2-Trichloroethane	< 0.65		< 0.65		NC
1,1-Dichloroethane	< 0.27		< 0.27		NC
1,1-Dichloroethylene	< 0.33		< 0.33		NC
1,2,4-Trichlorobenzene	< 2.4		< 2.4		NC
1,2,4-Trimethylbenzene	**15**	**/J/A**	**4.3**		111
1,2-Dibromoethane	< 0.85		< 0.85		NC
1,2-Dichloroethane	< 0.27		< 0.27		NC
1,2-Dichloropropane	< 0.74		< 0.74		NC
1,3,5-Trimethylbenzene	**4.4**		< 0.29		NC
1,3-Butadiene	< 0.17		< 0.17		NC
1,4-Dioxane	< 0.86		< 0.86		NC
2,2,2-Trimethylpentane[2]	< 0.39		< 0.39		NC
2-Chlorotoluene[2]	< 0.41		< 0.41		NC
2-Hexanone	< 0.4		< 0.4		NC
3-Chloropropene[2]	< 0.34		< 0.34		NC
4-Ethyltoluene	**4.5**		< 0.29		NC
Acetone	**45.6**	**/J/A**	**93.8**		69
Acrolein[1]	—		—		NC
Benzene	**1.8**	**J//**	**1.8**	**J//**	NC
Benzyl Chloride	< 0.51		< 0.51		NC
Bromodichloromethane	< 0.66		< 0.66		NC
Bromoethene[2]	< 0.25		< 0.25		NC
Bromoform	< 0.89		< 0.89		NC
Bromomethane	< 0.27		< 0.27		NC
Carbon disulfide	< 0.21		**1.7**	**J//**	NC
Carbon tetrachloride	< 0.28		< 0.28		NC
Chlorobenzene	< 0.46		< 0.46		NC
Chloroethane	< 0.22		< 0.22		NC
Chloroform	< 0.36		< 0.36		NC
Chloromethane	**0.89**	**J//**	**1.5**	**J//**	NC
cis-1,2-Dichloroethylene	< 0.44		< 0.44		NC
cis-1,3-Dichloropropene	< 0.34		< 0.34		NC
Cyclohexane	< 0.79		< 0.79		NC
Dibromochloromethane	< 1		< 1		NC
Dichlorodifluoromethane	**2.3**	**J//**	**2.4**	**J//**	NC
Ethanol	**16**		**18**		12
Ethyl Acetate	**4.3**	**/J/A**	**16**		115
Ethylbenzene	**3.7**		**2.4**	**J//**	NC
Freon 113	< 0.63		**10**		NC
Freon 114	< 0.59		< 0.59		NC
Heptane	**4.9**		**5.3**		8
Hexachlorobutadiene	< 2.7		< 2.7		NC
Hexane	**4.2**	**/J/A**	**7**		50
Isopropyl Alcohol	**352**	**/J/A**	**868**		85
m,p-Xylene	**26**	**/J/A**	**7.8**		108
m-Dichlorobenzene	< 0.6		**2.9**	**J//**	NC
Methyl ethyl ketone	**2.4**		**2.9**		19
Methyl Isobutyl Ketone	< 0.49		< 0.49		NC
Methyl Tert Butyl Ether	< 0.25		< 0.25		NC
Methylene chloride	**7.3**	**/J/A**	**18**		85
Methylmethacrylate	< 0.66		< 0.66		NC
Naphthalene[1]	—		—		NC
o-Dichlorobenzene	< 0.72		< 0.72		NC
o-Xylene	**10**		**2.4**	**J//**	NC
p-Dichlorobenzene	< 0.52		< 0.52		NC
Propylene	< 0.22		< 0.22		NC

Table 5-7
QA/QC Sample Results
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Summary of Calculated Relative Percent Differences in Soil Gas Field Duplicate Samples

Sample ID **Lab Sample ID** **Date Collected**	SSV-4 JB61406-2 03/07/14	SSV-4-A JB61406-3 03/07/14	Relative Percent Difference
Volatile Organic Compounds by Method TO-15 (µg/m^3)			
Styrene	< 0.34	< 0.34	NC
Tertiary Butyl Alcohol[2]	**1.8 J//**	**2.4 J//**	NC
Tetrachloroethylene	**2140**	**2500**	16
Tetrahydrofuran	< 0.53	< 0.53	NC
Toluene	**24**	**21**	13
trans-1,2-Dichloroethylene	< 0.23	< 0.23	NC
trans-1,3-Dichloropropene	< 0.38	< 0.38	NC
Trichloroethylene	**1.3**	< 0.42	NC
Trichlorofluoromethane	**6.2**	**6.2**	0
Vinyl Acetate	< 0.81	< 0.81	NC
Vinyl chloride	< 0.17	< 0.17	NC
Xylenes (total)2	**37 /J/A**	**10**	115

Notes:
— - Indicates Not Analyzed
-A - Indicates a field duplicate sample.
NC - Not Calculated
[1]Specified in work plan, but not analyzed.
[2]Not specified in work plan, but analyzed.
Bold font and shading indicate the concentration is detected.
See Table 5-8 for explanation of data qualifiers.

Table 5-7
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	MW-1		MW-1-A		Relative	MW-2	MW-2-A	Relative
Laboratory ID	FA12815-7		FA12815-8		Percent	FA12815-3	FA12815-4	Percent
Date Collected	02/26/14		02/26/14		Difference	02/25/14	02/25/14	Difference
Volatile Organic Compounds by USEPA Method 8260 (µg/L)								
1,1,1-Trichloroethane	< 6.7		< 0.34		NC	< 0.34	< 0.34	NC
1,1,2,2-Tetrachloroethane	< 5.5		< 0.27		NC	< 0.27	< 0.27	NC
1,1,2-Trichloroethane	< 6.3		< 0.32		NC	< 0.32	< 0.32	NC
1,1-Dichloroethane	< 5.1		< 0.26		NC	< 0.26	< 0.26	NC
1,1-Dichloroethylene	< 5.1		< 0.25		NC	< 0.25	< 0.25	NC
1,2-Dichloroethane	< 4.8		< 0.24		NC	< 0.24	< 0.24	NC
1,2-Dichloropropane	< 7.1		< 0.36		NC	< 0.36	< 0.36	NC
2-Hexanone	< 40		< 2		NC	< 2	< 2	NC
4-Methyl-2-pentanone	< 20		< 1		NC	< 1	< 1	NC
Acetone	< 210		< 11		NC	< 11	< 11	NC
Benzene	< 4.9		< 0.24		NC	< 0.24	< 0.24	NC
Bromodichloromethane	< 5.2		< 0.26		NC	< 0.26	< 0.26	NC
Bromoform	< 7.7		< 0.38		NC	< 0.38	< 0.38	NC
Carbon disulfide	< 4		< 0.2		NC	< 0.2	< 0.2	NC
Carbon tetrachloride	< 7.9		< 0.4		NC	< 0.4	< 0.4	NC
Chlorobenzene	< 4.8		< 0.24		NC	< 0.24	< 0.24	NC
Chloroethane	< 10		< 0.5		NC	< 0.5	< 0.5	NC
Chloroform	< 6.2		< 0.31		NC	< 0.31	< 0.31	NC
cis-1,2-Dichloroethylene	**110**	**/J/A**	**11.3**		163	< 0.33	< 0.33	NC
cis-1,3-Dichloropropene	< 4.2		< 0.21		NC	< 0.21	< 0.21	NC
Dibromochloromethane	< 7.2		< 0.36		NC	< 0.36	< 0.36	NC
Ethylbenzene	< 5.6		< 0.28		NC	< 0.28	< 0.28	NC
Methyl bromide	< 11		< 0.54		NC	< 0.54	< 0.54	NC
Methyl chloride	< 11		< 0.53		NC	< 0.53	< 0.53	NC
Methyl ethyl ketone	< 30		< 1.5		NC	< 1.5	< 1.5	NC
Methylene chloride	**69.3**	**J//**	**5.4**		NC	< 2	< 2	NC
Styrene	< 4.7		< 0.23		NC	< 0.23	< 0.23	NC
Tetrachloroethylene	**1280**	**/J/A**	**88.5**		174	**1.6**	**1.5**	6
Toluene	< 4		< 0.2		NC	< 0.2	< 0.2	NC
trans-1,2-Dichloroethylene	< 6.9		< 0.34		NC	< 0.34	< 0.34	NC
trans-1,3-Dichloropropene	< 4.2		< 0.21		NC	< 0.21	< 0.21	NC
Trichloroethylene	**11.5**	**J//**	**0.99**	**J//**	NC	< 0.3	< 0.3	NC
Vinyl chloride	< 6.5		< 0.33		NC	< 0.33	< 0.33	NC
Xylene (total)	< 13		< 0.66		NC	< 0.66	< 0.66	NC
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)								
1,2,4-Trichlorobenzene	< 0.5		< 0.5		NC	—	—	NC
1,2-Dichlorobenzene	< 0.5		< 0.5		NC	—	—	NC
1,3-Dichlorobenzene	< 0.5		< 0.5		NC	—	—	NC
1,4-Dichlorobenzene	< 0.5		< 0.5		NC	—	—	NC
2,4,5-Trichlorophenol	< 0.97		< 0.97		NC	—	—	NC
2,4,6-Trichlorophenol	< 0.55		< 0.55		NC	—	—	NC
2,4-Dichlorophenol	< 0.58		< 0.58		NC	—	—	NC
2,4-Dimethylphenol	< 0.5		< 0.5		NC	—	—	NC
2,4-Dinitrophenol	< 5.4		< 5.4		NC	—	—	NC
2,4-Dinitrotoluene	< 0.57		< 0.57		NC	—	—	NC
2,6-Dinitrotoluene	< 0.63		< 0.63		NC	—	—	NC
2-Chloronaphthalene	< 0.56		< 0.56		NC	—	—	NC
2-Chlorophenol	< 0.52		< 0.52		NC	—	—	NC
2-Methylnaphthalene	< 0.53		< 0.53		NC	—	—	NC
2-Methylphenol	< 0.5		< 0.5		NC	—	—	NC
2-Nitroaniline	< 1.2		< 1.2		NC	—	—	NC
2-Nitrophenol	< 0.6		< 0.6		NC	—	—	NC
3&4-Methylphenol	< 1.2		< 1.2		NC	—	—	NC
3,3'-Dichlorobenzidine	< 0.9		< 0.9		NC	—	—	NC
3-Nitroaniline	< 0.61		< 0.61		NC	—	—	NC
4,6-Dinitro-o-cresol	< 2		< 2		NC	—	—	NC
4-Bromophenyl phenyl ether	< 0.67		< 0.67		NC	—	—	NC
4-Chloro-3-methyl phenol	< 0.5		< 0.5		NC	—	—	NC
4-Chloroaniline	< 0.5		< 0.5		NC	—	—	NC
4-Chlorophenyl phenyl ether	< 0.54		< 0.54		NC	—	—	NC
4-Nitroaniline	< 0.76		< 0.76		NC	—	—	NC
4-Nitrophenol	< 5	/R/c	< 5	/R/c	NC	—	—	NC
Acenaphthene	< 0.5		< 0.5		NC	—	—	NC
Acenaphthylene	< 0.5		< 0.5		NC	—	—	NC

Table 5-7
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	MW-1		MW-1-A		Relative	MW-2	MW-2-A	Relative
Laboratory ID	FA12815-7		FA12815-8		Percent	FA12815-3	FA12815-4	Percent
Date Collected	02/26/14		02/26/14		Difference	02/25/14	02/25/14	Difference
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)								
Anthracene	< 0.62		< 0.62		NC	—	—	NC
Benzo(a)anthracene	< 0.64		< 0.64		NC	—	—	NC
Benzo(a)pyrene	< 0.65		< 0.65		NC	—	—	NC
Benzo(b)fluoranthene	< 0.72		< 0.72		NC	—	—	NC
Benzo(g,h,i)perylene	< 0.81		< 0.81		NC	—	—	NC
Benzo(k)fluoranthene	< 0.51		< 0.51		NC	—	—	NC
Benzoic Acid	< 10	/R/c	< 10	/R/c	NC	—	—	NC
Benzyl Alcohol	< 1		< 1		NC	—	—	NC
bis(2-Chloroethoxy)methane	< 0.55		< 0.55		NC	—	—	NC
bis(2-Chloroethyl)ether	< 0.69		< 0.69		NC	—	—	NC
bis(2-Chloroisopropyl)ether	< 0.58		< 0.58		NC	—	—	NC
bis(2-Ethylhexyl)phthalate	< 1.6		< 1.6		NC	—	—	NC
Butyl benzyl phthalate	< 0.81		< 0.81		NC	—	—	NC
Carbazole	< 0.62		< 0.62		NC	—	—	NC
Chrysene	< 0.72		< 0.72		NC	—	—	NC
Di-n-butyl phthalate	< 1		< 1		NC	—	—	NC
Di-n-octyl phthalate	< 1		< 1		NC	—	—	NC
Dibenzo(a,h)anthracene	< 0.81		< 0.81		NC	—	—	NC
Dibenzofuran	< 0.53		< 0.53		NC	—	—	NC
Diethyl phthalate	< 1		< 1		NC	—	—	NC
Dimethyl phthalate	< 0.63		< 0.63		NC	—	—	NC
Fluoranthene	< 0.7		< 0.7		NC	—	—	NC
Fluorene	< 0.5		< 0.5		NC	—	—	NC
Hexachlorobenzene	< 0.66		< 0.66		NC	—	—	NC
Hexachlorobutadiene	< 0.5		< 0.5		NC	—	—	NC
Hexachlorocyclopentadiene	< 1		< 1		NC	—	—	NC
Hexachloroethane	< 0.5		< 0.5		NC	—	—	NC
Indeno(1,2,3-cd)pyrene	< 0.63		< 0.63		NC	—	—	NC
Isophorone	< 0.5		< 0.5		NC	—	—	NC
N-Nitroso-di-n-propylamine	< 0.5		< 0.5		NC	—	—	NC
N-Nitrosodiphenylamine	< 0.53		< 0.53		NC	—	—	NC
Naphthalene	< 0.5		< 0.5		NC	—	—	NC
Nitrobenzene	< 0.5		< 0.5		NC	—	—	NC
Pentachlorophenol	< 5		< 5		NC	—	—	NC
Phenanthrene	< 0.6		< 0.6		NC	—	—	NC
Phenol	< 0.5	/R/c	< 0.5	/R/c	NC	—	—	NC
Pyrene	< 0.82		< 0.82		NC	—	—	NC
Ethane, Ethene, and Methane by USEPA Method RSK 147 (µg/L)								
Ethane	< 0.32		< 0.32		NC	—	—	NC
Ethene	< 0.43		< 0.43		NC	—	—	NC
Methane	**209**		**222**		6	—	—	NC
Metals by USEPA Method 6010 (µg/L)								
Antimony	< 2.3		< 2.3		NC	—	—	NC
Arsenic	< 2.4		< 2.4		NC	—	—	NC
Beryllium	< 0.5		< 0.5		NC	—	—	NC
Cadmium	< 0.5		< 0.5		NC	—	—	NC
Chromium	< 2		< 2		NC	—	—	NC
Copper	**1.9**	**J//**	**1.5**	**J//**	NC	—	—	NC
Lead	< 1.1		< 1.1		NC	—	—	NC
Nickel	< 0.5		< 0.5		NC	—	—	NC
Selenium	**2.9**	**J//**	**3.2**	**J//**	NC	—	—	NC
Silver	< 0.77		< 0.77		NC	—	—	NC
Thallium	< 2		< 2		NC	—	—	NC
Zinc	**11.5**	**J//**	**11**	**J//**	NC	—	—	NC
Mercury by USEPA Method 7470 (µg/L)								
Mercury	< 0.03		< 0.03		NC	—	—	NC
Water Quality Parameters by USEPA Method 9056 (µg/L)								
Chloride	**7000**		**7200**		3	—	—	NC
Nitrogen, Nitrate	**440**		**450**		2	—	—	NC
Nitrogen, Nitrite	< 50		< 50		NC	—	—	NC
Sulfate	**4500**	**/J/A**	**6700**		39	—	—	NC
Total Organic Carbon by USEPA Method 5310 (µg/L)								
Total Organic Carbon	**550**	**J//**	**670**	**J//**	NC	—	—	NC

Notes:
— - Indicates Not Analyzed
-A - Indicates a field duplicate sample.
NC - Not Calculated
RPD - Relative Percent Difference
Bold font and shading indicate the concentration is detected.
See Table 5-8 for explanation of data qualifiers.

Table 5-7
QA/QC Sampling Results
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID	MW-3-C	MW-15D-C	MW-16-C	MW-17-C	MW-21-C
Laboratory ID	FA13018-1	FA12815-6	FA13051-1	FA13147-2	FA13211-2
Date Collected	03/05/14	02/25/14	03/06/14	03/10/14	03/11/14
Volatile Organic Compounds by USEPA Method 8260 (µg/L)					
1,1,1-Trichloroethane	< 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	< 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	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
1,2-Dichloroethane	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
1,2-Dichloropropane	< 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	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
Bromodichloromethane	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26
Bromoform	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38
Carbon disulfide	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Carbon tetrachloride	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Chlorobenzene	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
Chloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31
cis-1,2-Dichloroethylene	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33
cis-1,3-Dichloropropene	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21
Dibromochloromethane	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36
Ethylbenzene	< 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	< 2	< 2	< 2	< 2	< 2
Styrene	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23
Tetrachloroethylene	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26
Toluene	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
trans-1,2-Dichloroethylene	< 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	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Vinyl chloride	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33
Xylene (total)	< 0.66	< 0.66	< 0.66	< 0.66	< 0.66
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)					
1,2,4-Trichlorobenzene	—	—	—	—	—
1,2-Dichlorobenzene	—	—	—	—	—
1,3-Dichlorobenzene	—	—	—	—	—
1,4-Dichlorobenzene	—	—	—	—	—
2,4,5-Trichlorophenol	—	—	—	—	—
2,4,6-Trichlorophenol	—	—	—	—	—
2,4-Dichlorophenol	—	—	—	—	—
2,4-Dimethylphenol	—	—	—	—	—
2,4-Dinitrophenol	—	—	—	—	—
2,4-Dinitrotoluene	—	—	—	—	—
2,6-Dinitrotoluene	—	—	—	—	—
2-Chloronaphthalene	—	—	—	—	—
2-Chlorophenol	—	—	—	—	—
2-Methylnaphthalene	—	—	—	—	—
2-Methylphenol	—	—	—	—	—
2-Nitroaniline	—	—	—	—	—
2-Nitrophenol	—	—	—	—	—
3&4-Methylphenol	—	—	—	—	—
3,3'-Dichlorobenzidine	—	—	—	—	—
3-Nitroaniline	—	—	—	—	—
4,6-Dinitro-o-cresol	—	—	—	—	—
4-Bromophenyl phenyl ether	—	—	—	—	—
4-Chloro-3-methyl phenol	—	—	—	—	—
4-Chloroaniline	—	—	—	—	—
4-Chlorophenyl phenyl ether	—	—	—	—	—
4-Nitroaniline	—	—	—	—	—
4-Nitrophenol	—	—	—	—	—
Acenaphthene	—	—	—	—	—
Acenaphthylene	—	—	—	—	—

Table 5-7
QA/QC Sampling Results
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID	MW-3-C	MW-15D-C	MW-16-C	MW-17-C	MW-21-C
Laboratory ID	FA13018-1	FA12815-6	FA13051-1	FA13147-2	FA13211-2
Date Collected	03/05/14	02/25/14	03/06/14	03/10/14	03/11/14
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)					
Anthracene	—	—	—	—	—
Benzo(a)anthracene	—	—	—	—	—
Benzo(a)pyrene	—	—	—	—	—
Benzo(b)fluoranthene	—	—	—	—	—
Benzo(g,h,i)perylene	—	—	—	—	—
Benzo(k)fluoranthene	—	—	—	—	—
Benzoic Acid	—	—	—	—	—
Benzyl Alcohol	—	—	—	—	—
bis(2-Chloroethoxy)methane	—	—	—	—	—
bis(2-Chloroethyl)ether	—	—	—	—	—
bis(2-Chloroisopropyl)ether	—	—	—	—	—
bis(2-Ethylhexyl)phthalate	—	—	—	—	—
Butyl benzyl phthalate	—	—	—	—	—
Carbazole	—	—	—	—	—
Chrysene	—	—	—	—	—
Di-n-butyl phthalate	—	—	—	—	—
Di-n-octyl phthalate	—	—	—	—	—
Dibenzo(a,h)anthracene	—	—	—	—	—
Dibenzofuran	—	—	—	—	—
Diethyl phthalate	—	—	—	—	—
Dimethyl phthalate	—	—	—	—	—
Fluoranthene	—	—	—	—	—
Fluorene	—	—	—	—	—
Hexachlorobenzene	—	—	—	—	—
Hexachlorobutadiene	—	—	—	—	—
Hexachlorocyclopentadiene	—	—	—	—	—
Hexachloroethane	—	—	—	—	—
Indeno(1,2,3-cd)pyrene	—	—	—	—	—
Isophorone	—	—	—	—	—
N-Nitroso-di-n-propylamine	—	—	—	—	—
N-Nitrosodiphenylamine	—	—	—	—	—
Naphthalene	—	—	—	—	—
Nitrobenzene	—	—	—	—	—
Pentachlorophenol	—	—	—	—	—
Phenanthrene	—	—	—	—	—
Phenol	—	—	—	—	—
Pyrene	—	—	—	—	—
Metals by USEPA Method 6010 (µg/L)					
Antimony	—	—	—	—	—
Arsenic	—	—	—	—	—
Beryllium	—	—	—	—	—
Cadmium	—	—	—	—	—
Chromium	—	—	—	—	—
Copper	—	—	—	—	—
Lead	—	—	—	—	—
Nickel	—	—	—	—	—
Selenium	—	—	—	—	—
Silver	—	—	—	—	—
Thallium	—	—	—	—	—
Zinc	—	—	—	—	—
Mercury by USEPA Method 7470 (µg/L)					
Mercury	—	—	—	—	—
Hexavalent Chromium by USEPA Method 7196 (µg/L)					
Hexavalent Chromium	—	—	—	—	—

Table 5-7
QA/QC Sampling Results
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID	MW-23D-C	DPT-39 (8-10)-C	DPT-29-(2-4)-D	DPT-39 (8-10)-D	DPT-57 (6-8)-D
Laboratory ID	FA13258-2	FA12959-13	FA12855-1	FA12959-10	FA12815-11
Date Collected	03/12/14	03/02/14	02/27/14	03/02/14	02/26/14
Volatile Organic Compounds by USEPA Method 8260 (µg/L)					
1,1,1-Trichloroethane	< 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	< 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	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
1,2-Dichloroethane	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
1,2-Dichloropropane	< 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	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
Bromodichloromethane	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26
Bromoform	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38
Carbon disulfide	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Carbon tetrachloride	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Chlorobenzene	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
Chloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31
cis-1,2-Dichloroethylene	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33
cis-1,3-Dichloropropene	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21
Dibromochloromethane	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36
Ethylbenzene	< 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	< 2	< 2	< 2	< 2	< 2
Styrene	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23
Tetrachloroethylene	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26
Toluene	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
trans-1,2-Dichloroethylene	< 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	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Vinyl chloride	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33
Xylene (total)	< 0.66	< 0.66	< 0.66	< 0.66	< 0.66
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)					
1,2,4-Trichlorobenzene	—	—	< 0.48	< 0.48	< 0.49
1,2-Dichlorobenzene	—	—	< 0.48	< 0.48	< 0.49
1,3-Dichlorobenzene	—	—	< 0.48	< 0.48	< 0.49
1,4-Dichlorobenzene	—	—	< 0.48	< 0.48	< 0.49
2,4,5-Trichlorophenol	—	—	< 0.94	< 0.94	< 0.95
2,4,6-Trichlorophenol	—	—	< 0.53	< 0.53	< 0.54
2,4-Dichlorophenol	—	—	< 0.55	< 0.55	< 0.57
2,4-Dimethylphenol	—	—	< 0.48	< 0.48	< 0.49
2,4-Dinitrophenol	—	—	< 5.2	< 5.2	< 5.3
2,4-Dinitrotoluene	—	—	< 0.55	< 0.55	< 0.56
2,6-Dinitrotoluene	—	—	< 0.6	< 0.6	< 0.61
2-Chloronaphthalene	—	—	< 0.53	< 0.53	< 0.54
2-Chlorophenol	—	—	< 0.5	< 0.5	< 0.51
2-Methylnaphthalene	—	—	< 0.51	< 0.51	< 0.52
2-Methylphenol	—	—	< 0.48	< 0.48	< 0.49
2-Nitroaniline	—	—	< 1.1	< 1.1	< 1.2
2-Nitrophenol	—	—	< 0.57	< 0.57	< 0.59
3&4-Methylphenol	—	—	< 1.1	< 1.1	< 1.1
3,3'-Dichlorobenzidine	—	—	< 0.87	< 0.87	< 0.88
3-Nitroaniline	—	—	< 0.58	< 0.58	< 0.6
4,6-Dinitro-o-cresol	—	—	< 1.9	< 1.9	< 2
4-Bromophenyl phenyl ether	—	—	< 0.64	< 0.64	< 0.66
4-Chloro-3-methyl phenol	—	—	< 0.48	< 0.48	< 0.49
4-Chloroaniline	—	—	< 0.48	< 0.48	< 0.49
4-Chlorophenyl phenyl ether	—	—	< 0.52	< 0.52	< 0.53
4-Nitroaniline	—	—	< 0.73	< 0.73	< 0.75
4-Nitrophenol	—	—	< 4.8	< 4.8	< 4.9
Acenaphthene	—	—	< 0.48	< 0.48	< 0.49
Acenaphthylene	—	—	< 0.48	< 0.48	< 0.49

Table 5-7
QA/QC Sampling Results
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Sample ID	MW-23D-C	DPT-39 (8-10)-C	DPT-29-(2-4)-D		DPT-39 (8-10)-D		DPT-57 (6-8)-D	
Laboratory ID	FA13258-2	FA12959-13	FA12855-1		FA12959-10		FA12815-11	
Date Collected	03/12/14	03/02/14	02/27/14		03/02/14		02/26/14	
Semi-Volatile Organic Compounds by USEPA Method 8270 (µg/L)								
Anthracene	—	—	< 0.59		< 0.59		< 0.61	
Benzo(a)anthracene	—	—	< 0.62		< 0.62		< 0.63	
Benzo(a)pyrene	—	—	< 0.63		< 0.63		< 0.64	
Benzo(b)fluoranthene	—	—	< 0.69		< 0.69		< 0.7	
Benzo(g,h,i)perylene	—	—	< 0.77		< 0.77		< 0.79	
Benzo(k)fluoranthene	—	—	< 0.49		< 0.49		< 0.5	
Benzoic Acid	—	—	< 9.6	/RM/cD	< 9.6	/R/c	< 9.8	/R/c
Benzyl Alcohol	—	—	< 0.96		< 0.96		< 0.98	
bis(2-Chloroethoxy)methane	—	—	< 0.53		< 0.53		< 0.54	
bis(2-Chloroethyl)ether	—	—	< 0.66		< 0.66		< 0.68	
bis(2-Chloroisopropyl)ether	—	—	< 0.56		< 0.56		< 0.57	
bis(2-Ethylhexyl)phthalate	—	—	< 1.5		< 1.5		< 1.5	
Butyl benzyl phthalate	—	—	< 0.78		< 0.78		< 0.8	
Carbazole	—	—	< 0.59		< 0.59		< 0.6	
Chrysene	—	—	< 0.69		< 0.69		< 0.71	
Di-n-butyl phthalate	—	—	< 0.96		< 0.96		< 0.98	
Di-n-octyl phthalate	—	—	< 0.96		< 0.96		< 0.98	
Dibenzo(a,h)anthracene	—	—	< 0.78		< 0.78		< 0.8	
Dibenzofuran	—	—	< 0.51		< 0.51		< 0.52	
Diethyl phthalate	—	—	< 0.96		< 0.96		< 0.98	
Dimethyl phthalate	—	—	< 0.61		< 0.61		< 0.62	
Fluoranthene	—	—	< 0.67		< 0.67		< 0.69	
Fluorene	—	—	< 0.48		< 0.48		< 0.49	
Hexachlorobenzene	—	—	< 0.64		< 0.64		< 0.65	
Hexachlorobutadiene	—	—	< 0.48		< 0.48		< 0.49	
Hexachlorocyclopentadiene	—	—	< 0.96		< 0.96		< 0.98	
Hexachloroethane	—	—	< 0.48		< 0.48		< 0.49	
Indeno(1,2,3-cd)pyrene	—	—	< 0.6		< 0.6		< 0.62	
Isophorone	—	—	< 0.48		< 0.48		< 0.49	
N-Nitroso-di-n-propylamine	—	—	< 0.48		< 0.48		< 0.49	
N-Nitrosodiphenylamine	—	—	< 0.51		< 0.51		< 0.52	
Naphthalene	—	—	< 0.48		< 0.48		< 0.49	
Nitrobenzene	—	—	< 0.48		< 0.48		< 0.49	
Pentachlorophenol	—	—	< 4.8		< 4.8		< 4.9	
Phenanthrene	—	—	< 0.57		< 0.57		< 0.58	
Phenol	—	—	< 0.48		< 0.48		< 0.49	
Pyrene	—	—	< 0.78		< 0.78		< 0.8	
Metals by USEPA Method 6010 (µg/L)								
Antimony	—	—	< 2.3		—		< 2.3	
Arsenic	—	—	< 2.4		—		< 2.4	
Beryllium	—	—	< 0.5		—		< 0.5	
Cadmium	—	—	< 0.5		—		< 0.5	
Chromium	—	—	< 2		—		< 2	
Copper	—	—	< 1		—		**1.1**	**J//**
Lead	—	—	< 1.1		—		< 1.1	
Nickel	—	—	< 0.5		—		< 0.5	
Selenium	—	—	< 2.3		—		< 2.3	
Silver	—	—	< 0.77		—		< 0.77	
Thallium	—	—	< 2		—		< 2	
Zinc	—	—	**4.7**	**J//**	—		**4.1**	**J//**
Mercury by USEPA Method 7470 (µg/L)								
Mercury	—	—	< 0.03		—		< 0.03	
Hexavalent Chromium by USEPA Method 7196 (µg/L)								
Hexavalent Chromium	—	—	< 8		—		**10**	

Notes:
USEPA MCL - United States Environmental Protection Agency Maximum Contaminant Level (April, 2012)
[1] 1998 Final Rule for Disinfectants and Disinfection By-products.
[2] Action Level.
[3] Secondary Standard.
— - Indicates No Standard (for screening criteria) or Not Analyzed (for analytical data)
-C - Indicates a trip blank.
-D - Indicates a field rinsate.
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, but were the same values as the USEPA MCLs.
See Table 5-8 for explanation of data qualifiers.

Table 5-8
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
B	Analyte was detected in the associated method blank.
J	Estimated concentration above the method detection limit and below the reporting limit.

Result Data Qualifiers

Qualifier	Description
B	The analyte was found in an associated blank as well as in the sample.
J	The analyte was positively identified. The quantitation is estimation.
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
A	Percent difference between the primary and duplicate sample exceeded the established criteria.
c	Laboratory control recovery below the established criteria.
D	Percent difference of matrix spike duplicate exceeded the established criteria.
G	Surrogate recovery below 10%.
h	Holding time exceeded by less than two times.
i	Surrogate recovery below the established criteria.
m	Matrix spike recovery below established criteria.
M	Matrix spike recovery exceeded established criteria.
V	Detected in the associated equipment rinsate blank.

Table 6-1
Occurrence, Distribution and Selection of Chemicals of Potential Concern in On-Site Groundwater
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Current/Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical	Minimum [1] Concentration		Maximum [1] Concentration		Units	Location of Maximum Concentration	Detection Frequency	Range of Reporting Limits [2]	Concentration Used for Screening [3]	Background Value [4]	Screening Toxicity Value (Residential) [5]		COPC Flag (Y/N)	Rationale for Selection or Deletion [6]
On-Site [7] Groundwater	***Volatile Organic Compounds***														
	1,1,1-Trichloroethane	1		1		ug/L	MW-13D	1/21	0.34 - 67	1	NA	800	n	N	BSL
	1,1-Dichloroethylene	0.36	J//	10.4		ug/L	MW-3D	4/21	0.25 - 51	10.4	NA	28	n	N	BSL
	Bromodichloromethane	**10.4**		**10.4**		**ug/L**	**MW-21D**	**1/21**	**0.26 - 52**	**10.4**	**NA**	**0.13**	**c**	**Y**	**ASL**
	Carbon disulfide	1.8	J//	1.8	J//	ug/L	MW-21D	1/21	0.2 - 40	1.8	NA	81	n	N	BSL
	Chloroform	**0.59**	**J//**	**131**		**ug/L**	**MW-21D**	**3/21**	**0.31 - 62**	**131**	**NA**	**0.22**	**c**	**Y**	**ASL**
	cis-1,2-Dichloroethylene	**0.84**	**J//**	**466**		**ug/L**	**MW-21**	**7/21**	**0.33 - 65**	**466**	**NA**	**3.6**	**n**	**Y**	**ASL**
	Dibromochloromethane	**1.8**	**J//**	**1.8**	**J//**	**ug/L**	**MW-21D**	**1/21**	**0.36 - 72**	**1.8**	**NA**	**0.17**	**c**	**Y**	**ASL**
	Methylene chloride	**5.4**		**765**	**J//**	**ug/L**	**MW-21**	**4/21**	**2 - 400**	**765**	**NA**	**11**	**c****	**Y**	**ASL**
	Tetrachloroethylene	**1.55**		**16300**		**ug/L**	**MW-21**	**14/21**	**0.26 - 51**	**16300**	**NA**	**4.1**	**c****	**Y**	**ASL**
	Toluene	0.41	J//	0.41	J//	ug/L	MW-21D	1/21	0.2 - 40	0.41	NA	110	n	N	BSL
	Trichloroethylene	**1.1**		**209**		**ug/L**	**MW-21**	**8/21**	**0.3 - 60**	**209**	**NA**	**0.28**	**c****	**Y**	**ASL**
	Semivolatile Organic Compounds														
	1,2-Dichlorobenzene	2.1	J//	9.1		ug/L	MW-21	2/11	0.48 - 0.5	9.1	NA	30	n	N	BSL
	2-Methylnaphthalene	**7.4**		**7.4**		**ug/L**	**MW-21**	**1/11**	**0.51 - 0.53**	**7.4**	**NA**	**3.6**	**n**	**Y**	**ASL**
	Fluorene	0.61	J//	0.61	J//	ug/L	MW-21	1/11	0.48 - 0.5	0.61	NA	29	n	N	BSL
	Naphthalene	**2.4**	**J//**	**2.4**	**J//**	**ug/L**	**MW-21**	**1/11**	**0.48 - 0.5**	**2.4**	**NA**	**0.17**	**c***	**Y**	**ASL**
	Inorganics														
	Arsenic	**3.2**	**J//**	**3.2**	**J//**	**ug/L**	**MW-21**	**1/11**	**2.4**	**3.2**	**NA**	**0.052**	**c**	**Y**	**ASL**
	Beryllium	1.5	J//	1.5	J//	ug/L	MW-21	1/11	0.5	1.5	NA	2.5	n	N	BSL
	Chromium	**6.6**	**J//**	**10.5**		**ug/L**	**MW-21D**	**2/11**	**2**	**10.5**	**NA**	**0.035**	**c**	**Y**	**ASL**
	Copper	1	J//	1.7	J//	ug/L	MW-1	4/11	1	1.7	NA	80	n	N	BSL
	Lead	6.7		6.7		ug/L	MW-21	1/11	1.1	6.7	NA	15		N	BSL
	Mercury	0.04	J//	0.04	J//	ug/L	MW-19	1/11	0.03	0.04	NA	0.063	n	N	BSL
	Nickel	0.6	J//	4.8	J//	ug/L	MW-19	2/11	0.5	4.8	NA	39	n	N	BSL
	Selenium	3.05	J//	6.5	J//	ug/L	MW-21D	2/11	2.3	6.5	NA	10	n	N	BSL
	Zinc	4.7	J//	18.4	J//	ug/L	MW-6	11/11	3	18.4	NA	600	n	N	BSL

Table 6-1
Occurrence, Distribution and Selection of Chemicals of Potential Concern in On-Site Groundwater
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Current/Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical	Minimum (1) Concentration	Maximum (1) Concentration	Units	Location of Maximum Concentration	Detection Frequency	Range of Reporting Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Value (Residential) (5)	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)

Notes:

(1) Minimum/maximum detected concentration.
(2) Lab Detection Limits are shown.
(3) Maximum concentration used for screening.
(4) Background values are not available for groundwater.
(5) Screening values are the tapwater values from the USEPA Regional Screening Level Table, based on risk of 10^{-6} for carcinogens and HQ of 0.1 for noncarcinogens (USEPA, May 2014).
The USEPA Action Level was used for lead.
The RSL for nickel soluble salts was used for nickel.
The RSL for hexavalent chromium was conservatively used for total chromium due to the lack of hexavalent chromium data in groundwater.
(6) Rationale Codes:
Selection Reason: Above Screening Level (ASL)
Deletion Reason: Below Screening Level (BSL)
(7) Groundwater samples collected from on-site locations.
Chemicals in **bold** are retained as COPCs.

Definitions:

* - noncancer RSL is less than 100 times the cancer RSL.
** - noncancer RSL is less than 10 times the cancer RSL. In these instances, the more conservative noncancer RSL is shown on the table.
c - RSL is based on carcinogenic effects.
COPC - Chemical of Potential Concern
n - RSL is based on noncarcinogenic effects.
NA - not available
ug/L - micrograms per liter

Table 6-2
Occurrence, Distribution and Selection of Chemicals of Potential Concern in Off-Site Groundwater
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Current/Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical	Minimum (1) Concentration		Maximum (1) Concentration		Units	Location of Maximum Concentration	Detection Frequency	Range of Reporting Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Value (Residential) (5)		COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
Off-Site (7) Groundwater	***Volatile Organic Compounds***														
	1,1-Dichloroethylene	1.6		2.5		ug/L	MW-22D	2/11	0.25	2.5	NA	28	n	N	BSL
	Bromodichloromethane	**7.2**		**7.2**		**ug/L**	**MW-22D**	**1/11**	**0.26**	**7.2**	**NA**	**0.13**	**c**	**Y**	**ASL**
	Carbon disulfide	0.24	J//	0.24	J//	ug/L	MW-15D	1/11	0.2	0.24	NA	81	n	N	BSL
	Chloroform	**180**		**180**		**ug/L**	**MW-22D**	**1/11**	**0.31 - 0.78**	**180**	**NA**	**0.22**	**c**	**Y**	**ASL**
	cis-1,2-Dichloroethylene	0.35	J//	0.95	J//	ug/L	MW-14D	2/11	0.33	0.95	NA	3.6	n	N	BSL
	Dibromochloromethane	**0.68**	**J//**	**0.68**	**J//**	**ug/L**	**MW-22D**	**1/11**	**0.36**	**0.68**	**NA**	**0.17**	**c**	**Y**	**ASL**
	Tetrachloroethylene	**81.5**		**99.8**		**ug/L**	**MW-22D**	**2/11**	**0.26**	**99.8**	**NA**	**4.1**	**c****	**Y**	**ASL**
	Trichloroethylene	**0.33**	**J//**	**0.56**	**J//**	**ug/L**	**MW-14D**	**2/11**	**0.3**	**0.56**	**NA**	**0.28**	**c****	**Y**	**ASL**

Notes:

(1) Minimum/maximum detected concentration.
(2) Lab Detection Limits are shown.
(3) Maximum concentration used for screening.
(4) Background values are not available for groundwater.
(5) Screening values are the tapwater values from the USEPA Regional Screening Level Table, based on risk of 10^{-6} for carcinogens and HQ of 0.1 for noncarcinogens (USEPA, May 2014).
(6) Rationale Codes:
Selection Reason: Above Screening Level (ASL)
Deletion Reason: Below Screening Level (BSL)
(7) Groundwater samples collected from off-site locations.

Chemicals in **bold** are retained as COPCs.

Definitions:

** - noncancer RSL is less than 10 times the cancer RSL. In these instances, the more conservative noncancer RSL is shown on the table.
c - RSL is based on carcinogenic effects.
COPC - Chemical of Potential Concern
n - RSL is based on noncarcinogenic effects.
NA - not available
ug/L - micrograms per liter

Table 6-3
Occurrence, Distribution and Selection of Chemicals of Potential Concern in Subsurface Soil
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Current/Future
Medium: Subsurface Soil
Exposure Medium: Subsurface Soil

Exposure Point	Chemical	Minimum (1) Concentration		Maximum (1) Concentration		Units	Location of Maximum Concentration	Detection Frequency	Range of Reporting Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Value (Residential) (5)		COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
Subsurface Soil (7)	***Volatile Organic Compounds***														
	1,1,1-Trichloroethane	0.0248	/M/mD	0.0248	/M/mD	mg/kg	DPT-35 (3-5)	1/8	0.0006 - 0.00079	0.0248	NA	810	ns	N	BSL
	1,1-Dichloroethylene	0.003	J//	0.003	J//	mg/kg	DPT-35 (3-5)	1/8	0.0006 - 0.00079	0.003	NA	23	n	N	BSL
	Acetone	0.0105	J//	0.0185	J//	mg/kg	DPT-46 (1.5-3.5)	2/8	0.009 - 0.012	0.0185	NA	6100	n	N	BSL
	Chloroform	0.0018	J//	0.0018	J//	mg/kg	DPT-35 (3-5)	1/8	0.00068 - 0.00089	0.0018	NA	0.32	c	N	BSL
	cis-1,2-Dichloroethylene	0.0222	/M/D	0.0222	/M/D	mg/kg	DPT-35 (3-5)	1/8	0.0006 - 0.00079	0.0222	NA	16	n	N	BSL
	Tetrachloroethylene	**0.0041**		**85.4**		**mg/kg**	**DPT-35 (3-5)**	**5/8**	**0.00075 - 0.68**	**85.4**	**NA**	**8.1**	**c****	**Y**	**ASL**
	Trichloroethylene	0.0322		0.0322		mg/kg	DPT-35 (3-5)	1/8	0.00061 - 0.0008	0.0322	NA	0.41	c**	N	BSL
	Xylene (total)	0.0199		0.0199		mg/kg	DPT-35 (3-5)	1/8	0.0016 - 0.0021	0.0199	NA	58	ns	N	BSL
	Semivolatile Organic Compounds														
	2-Methylnaphthalene	0.219		0.219		mg/kg	DPT-35 (3-5)	1/7	0.018 - 0.021	0.219	NA	23	n	N	BSL
	Benzyl Alcohol	0.0878	J//	0.0878	J//	mg/kg	DPT-40 (2-4)	1/7	0.018 - 0.021	0.0878	NA	620	n	N	BSL
	bis(2-Ethylhexyl)phthalate	0.463		0.463		mg/kg	DPT-35 (3-5)	1/7	0.036 - 0.041	0.463	NA	38	c*	N	BSL
	Dibenzofuran	0.0345	J//	0.0345	J//	mg/kg	DPT-35 (3-5)	1/7	0.018 - 0.021	0.0345	NA	7.2	n	N	BSL
	Di-n-butyl phthalate	0.0767	J//	0.0767	J//	mg/kg	DPT-35 (3-5)	1/7	0.036 - 0.041	0.0767	NA	620	n	N	BSL
	Isophorone	0.557		0.557		mg/kg	DPT-35 (3-5)	1/7	0.018 - 0.021	0.557	NA	560	c*	N	BSL
	Naphthalene	0.082	J//	0.082	J//	mg/kg	DPT-35 (3-5)	1/7	0.018 - 0.021	0.082	NA	3.8	c*	N	BSL
	Phenanthrene	0.134	J//	0.134	J//	mg/kg	DPT-35 (3-5)	1/7	0.018 - 0.021	0.134	NA	170	n	N	BSL
	Inorganics														
	Arsenic	0.65		1.2		mg/kg	DPT-56 (2-4)	5/5	0.083 - 0.4	1.2	1.61	0.67	c*	N	BKG
	Beryllium	0.03	J//	0.14	J//	mg/kg	DPT-55 (3-5)	5/5	0.021 - 0.1	0.14	0.13	16	n	N	BSL
	Cadmium	0.02	J//	0.2	J//	mg/kg	DPT-55 (3-5)	2/5	0.021 - 0.1	0.2	0.22	7	n	N	BSL, BKG
	Chromium	6.7		18.7		mg/kg	DPT-29 (2-4)	5/5	0.042 - 0.2	18.7	18.73	12000	nm	N	BSL, BKG
	Chromium, Hexavalent	**1.3**	**J//**	**3.8**		**mg/kg**	**DPT-29 (2-4)**	**4/5**	**0.94 - 1.1**	**3.8**	**3.32**	**0.3**	**c**	**Y**	**ASL**
	Copper	0.65	J//	1.8	/B/V	mg/kg	DPT-56 (2-4)	5/5	0.042 - 0.2	1.8	2.21	310	n	N	BSL, BKG
	Lead	3.3		8.2		mg/kg	DPT-46 (1.5-3.5)	5/5	0.067 - 0.32	8.2	6.90	400	L	N	BSL
	Mercury	0.01	J//	0.05		mg/kg	DPT-46 (1.5-3.5)	5/5	0.0042 - 0.0049	0.05	0.07	0.94	ns	N	BSL, BKG
	Nickel	0.34	J//	2.7	J//	mg/kg	DPT-55 (3-5)	5/5	0.021 - 0.1	2.7	2.22	150	n	N	BSL
	Selenium	0.22	J//	0.45	J//	mg/kg	DPT-46 (1.5-3.5)	3/5	0.12 - 0.6	0.45	0.32	39	n	N	BSL
	Zinc	0.48	J//	2.5	/B/V	mg/kg	DPT-55 (3-5)	5/5	0.12 - 0.6	2.5	3.70	2300	n	N	BSL, BKG

Table 6-3
Occurrence, Distribution and Selection of Chemicals of Potential Concern in Subsurface Soil
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Current/Future
Medium: Subsurface Soil
Exposure Medium: Subsurface Soil

Exposure Point	Chemical	Minimum (1) Concentration	Maximum (1) Concentration	Units	Location of Maximum Concentration	Detection Frequency	Range of Reporting Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Value (Residential) (5)	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)

Notes:

(1) Minimum/maximum detected concentration.

(2) Lab Detection Limits are shown.

(3) Maximum concentration used for screening.

(4) Soil background value is two times the mean background concentration from locations BG-1 (1-2), BG-2 (1.5-2.5) and (4-5), BG-3 (0.5-1.5) and (2-3), BG-4 (1-3), and BG-5 (1-3) and (3-5).

(5) Screening values are the residential soil values from the USEPA Regional Screening Level Table, based on risk of 10^{-6} for carcinogens and HQ of 0.1 for noncarcinogens (USEPA, May 2014).
RSL for pyrene was used for phenanthrene.
RSL for trivalent chromium was used for total chromium.
RSL for elemental mercury was used for mercury.
RSL for nickel soluble salts was used for nickel.

(6) Rationale Codes:
Selection Reason: Above Screening Level (ASL)
Deletion Reason: Below Screening Level (BSL); Below Background Level (BKG)

(7) Subsurface Soil data represent soil from the 1.5 to 5 foot below land surface depth interval.

Chemicals in **bold** are retained as COPCs.

Definitions:

* - noncancer RSL is less than 100 times the cancer RSL.

** - noncancer RSL is less than 10 times the cancer RSL. In these instances, the more conservative noncancer RSL is shown on the table.

c - RSL is based on carcinogenic effects.

COPC - Chemical of Potential Concern

L - See RSL User's Guide (May 2014) for discussion of lead.

m - concentration may exceed the ceiling limit. See RSL User's Guide (May 2014).

mg/kg - milligrams per kilogram

n - RSL is based on noncarcinogenic effects.

NA - not applicable or not available

s -concentration may exceed saturation limit. See RSL User's Guide (May 2014).

Table 6-4
Comparison of Maximum Concentrations in Soil Gas with
Target Sub-Slab and Exterior Soil Gas Concentrations from VISL Calculator
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Compounds Detected in Sub-Slab Soil Gas	Maximum Concentration	Location	Target Sub-Slab and Exterior Soil Gas Concentration from VISL Calculator	
			Residential (TR = 1E-6; HQ =0.1)	Commercial (TR = 1E-6; HQ =0.1)
1,1,1-Trichloroethane	4440	SSV-2	5200	22,000
1,2,4-Trimethylbenzene	**9.65**	**SSV-4**	**7.3**	31
1,3,5-Trimethylbenzene	4.4	SSV-4	—	—
4-Ethyltoluene	4.5	SSV-4	—	—
Acetone	69.7	SSV-4	32,000	140,000
Benzene	1.8	SSV-4	3.1	16
Carbon disulfide	1.7	SSV-4	730	3100
Chloromethane	1.195	SSV-4	94	390
Dichlorodifluoromethane	2.35	SSV-4	100	440
Ethanol	17	SSV-4	—	—
Ethyl acetate	10.15	SSV-4	73	310
Ethylbenzene	3.7	SSV-4	9.7	49
Freon 113	10	SSV-4	31,000	130,000
Heptane	5.1	SSV-4	—	—
Hexane	5.6	SSV-4	730	3100
Isopropyl alcohol	610	SSV-4	—	—
m,p-Xylene	16.9	SSV-4	100	440
m-Dichlorobenzene	2.9	SSV-4	—	—
Methyl ethyl ketone	2.65	SSV-4	5200	22,000
Methylene chloride	12.65	SSV-4	630	2600
o-Xylene	10	SSV-4	100	440
Tertiary butyl alcohol	2.1	SSV-4	—	—
Tetrachloroethylene	**821,000**	**SSV-2**	**42**	**180**
Toluene	22.5	SSV-4	5200	22,000
Trichloroethylene	**1200**	**SSV-2**	**2.1**	**8.8**
Trichlorofluoromethane	6.2	SSV-4	730	3100
Xylenes (total)	23.5	SSV-4	100	440

Notes:
— No inhalation toxicity information.
VISL - Vapor Intrusion Screening Level
All units are shown in ug/m^3 (parts per billion).
Chemicals in **bold** have a concentration which exceeds the Target Sub-Slab and Exterior Soil Gas Concentration for either or both the Residential and Commercial scenarios.

Table 6-5
Exposure Point Concentration Summary — On-Site Groundwater
Reasonable Maximum Exposure
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic [1] Mean	95% UCL [2] (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic [3]	Rationale
On-Site Groundwater	***Volatile Organic Compounds***								
	Bromodichloromethane	ug/L	10.4	NC	10.4	10.4	ug/L	Max	Footnote (4)
	Chloroform	ug/L	131	NC	131	131	ug/L	Max	Footnote (4)
	cis-1,2-Dichloroethylene	ug/L	176.9	601.7 95% Student's-t UCL	466	466	ug/L	Max	Footnote (4)
	Dibromochloromethane	ug/L	1.8	NC	1.8 J//	1.8	ug/L	Max	Footnote (4)
	Methylene chloride	ug/L	239	552 95% KM (t) UCL	765 J//	552	ug/L	95% UCL	Footnote (2)
	Tetrachloroethylene	ug/L	2201	15801 99% KM (Chebyshev) UCL	16300	15801	ug/L	95% UCL	Footnote (2)
	Trichloroethylene	ug/L	56.5	140.30 95% Student's-t UCL	209	140.30	ug/L	95% UCL	Footnote (2)
	SemiVolatile Organic Compounds								
	2-Methylnaphthalene	ug/L	7.4	NC	7.4	7.4	ug/L	Max	Footnote (4)
	Naphthalene	ug/L	2.4	NC	2.4 J//	2.4	ug/L	Max	Footnote (4)
	Inorganics								
	Arsenic	ug/L	3.2	NC	3.2 J//	3.2	ug/L	Max	Footnote (4)
	Chromium	ug/L	2.4	5.25 95% KM (t) UCL	10.5	5.25	ug/L	95% UCL	Footnote (2)

Notes:

(1) Arithmetic mean of highly concentrated area of the plume, using one-half the laboratory detection limit for nondetected results.

(2) 95% Upper Confidence Limit (UCL) was calculated using USEPA's ProUCL Version 5.0.00 statistical software package. Method used to compute selected UCL is shown.
KM - Kaplan-Meier
NC - Not calculated due to low number of detected results.

(3) Statistic: Maximum Detected Value (Max); 95% UCL (95% UCL).

(4) The 95% UCL either could not be calculated or exceeded the maximum concentration; the maximum value was selected as the exposure point concentration.

Table 6-6
Exposure Point Concentration Summary - Vapors from On-Site Groundwater Used for Showering
Reasonable Maximum Exposure
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Air

Exposure Point	Chemical of Potential Concern	Units	Arithmetic (1) Mean	95% UCL (2) (Distribution)	Maximum Concentration (Qualifier)	Input into Foster-Chrostowski Model				Inhalation Exposure Concentration (5)	
						Value	Units	Statistic (3)	Rationale	Value	Units
	Volatile Organic Compounds										
Vapors from On-Site Groundwater Used for Showering	2-Methylnaphthalene	ug/L	7.4	NC	7.4	7.4	ug/L	Max	Footnote (4)	5.07E-01	ug/m3
	Bromodichloromethane	ug/L	10.4	NC	10.4	10.4	ug/L	Max	Footnote (4)	8.72E-01	ug/m3
	Chloroform	ug/L	131	NC	131	131	ug/L	Max	Footnote (4)	1.33E+01	ug/m3
	cis-1,2-Dichloroethylene	ug/L	176.9	601.7 95% Student's-t UCL	466	466	ug/L	Max	Footnote (4)	5.25E+01	ug/m3
	Dibromochloromethane	ug/L	1.8	NC	1.8 J//	1.8	ug/L	Max	Footnote (4)	1.15E-01	ug/m3
	Methylene chloride	ug/L	239	552 95% KM (t) UCL	765 J//	552	ug/L	95% UCL	Footnote (2)	6.53E+01	ug/m3
	Naphthalene	ug/L	2.4	NC	2.4 J//	2.4	ug/L	Max	Footnote (4)	1.64E-01	ug/m3
	Tetrachloroethylene	ug/L	2201	15801 99% KM (Chebyshev) UCL	16300	15801	ug/L	95% UCL	Footnote (2)	1.45E+03	ug/m3
	Trichloroethylene	ug/L	56.5	140.3 95% Student's-t UCL	209	140.3	ug/L	95% UCL	Footnote (2)	1.42E+01	ug/m3

Notes:

(1) Arithmetic mean of highly concentrated area of the plume, using one-half the laboratory detection limit for nondetected results.

(2) 95% Upper Confidence Limit (UCL) was calculated using USEPA's ProUCL Version 5.0.00 statistical software package. Method used to compute selected UCL is shown.
KM - Kaplan-Meier
NC - Not calculated due to low number of detected results.

(3) Statistic: Maximum Detected Value (Max); 95% UCL (95% UCL).

(4) The 95% UCL was not calculated or was greater than the maximum concentration and the maximum concentration was selected as input to the Foster-Chrostowski Model.

(5) Inhalation exposure (or dose) per showering event as calculated by the Foster-Chrostowski Model. See Table F-3.

2-methylnaphthalene and naphthalene are considered volatile organic compounds, based on their molecular weight and Henry's Law Constant values.

Table 6-7
Exposure Point Concentration Summary — Off-Site Groundwater
Reasonable Maximum Exposure
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic [1] Mean	95% UCL [2] (Distribution)	Maximum Concentration (Qualifier)		Exposure Point Concentration			
							Value	Units	Statistic [3]	Rationale
Off-Site Groundwater	***Volatile Organic Compounds***									
	Bromodichloromethane	ug/L	7.2	NC	7.2		7.2	ug/L	Max	Footnote (4)
	Chloroform	ug/L	180	NC	180		180	ug/L	Max	Footnote (4)
	Dibromochloromethane	ug/L	0.68	NC	0.68	J//	0.68	ug/L	Max	Footnote (4)
	Tetrachloroethylene	ug/L	60.5	NC	99.8		99.8	ug/L	Max	Footnote (4)
	Trichloroethylene	ug/L	NC	NC	0.56	J//	0.56	ug/L	Max	Footnote (4)

Notes:
(1) Arithmetic mean of highly concentrated area of the plume, using one-half the laboratory detection limit for nondetected results.
No definitive plume for trichloroethylene exists off-site.
(2) 95% Upper Confidence Limit (UCL) was not calculated due to low number of detected results.
(3) Statistic: Maximum Detected Value (Max); 95% UCL (95% UCL).
(4) The 95% UCL was not calculated and the maximum value was selected as the exposure point concentration.
NC - Not calculated

Table 6-8
Exposure Point Concentration Summary - Vapors from Off-Site Groundwater Used for Showering
Reasonable Maximum Exposure
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Air

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Input into Foster-Chrostowski Model				Inhalation Exposure Concentration (5)	
						Value	Units	Statistic (3)	Rationale	Value	Units
	Volatile Organic Compounds										
Vapors from Off-Site Groundwater Used for Showering	Bromodichloromethane	ug/L	7.2	NC	7.2	7.2	ug/L	Max	Footnote (4)	0.60	ug/m3
	Chloroform	ug/L	180	NC	180	180	ug/L	Max	Footnote (4)	18.3	ug/m3
	Dibromochloromethane	ug/L	0.68	NC	0.68 J//	0.68	ug/L	Max	Footnote (4)	0.043	ug/m3
	Tetrachloroethylene	ug/L	60.5	NC	99.8	99.8	ug/L	Max	Footnote (4)	9.13	ug/m3
	Trichloroethylene	ug/L	NC	NC	0.56 J//	0.56	ug/L	Max	Footnote (4)	0.057	ug/m3

Notes:

(1) Arithmetic mean of highly concentrated area of the plume, using one-half the laboratory detection limit for nondetected results. No definitive plume for trichloroethylene exists off-site.

(2) 95% Upper Confidence Limit (UCL) was not calculated due to low number of detected results.

(3) Statistic: Maximum Detected Value (Max); 95% UCL (95% UCL).

(4) The 95% UCL was not calculated and the maximum concentration was selected as input to the Foster-Chrostowski Model.

(5) Inhalation exposure (or dose) per showering event as calculated by the Foster-Chrostowski Model. See Table F-3.

NC - Not calculated

Table 6-9
Exposure Point Concentration Summary — Subsurface Soil
Reasonable Maximum Exposure
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Medium: Subsurface Soil
Exposure Medium: Subsurface Soil

Exposure Point	Chemical of Potential Concern	Units	Arithmetic (1) Mean	95% UCL (2) (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
Subsurface Soil	***Volatile Organic Compounds***								
	Tetrachloroethylene	mg/kg	10.68	121.8 99% KM (Chebyshev) UCL	85.4	85.4	mg/kg	Max	Footnote (4)
	Inorganics								
	Chromium, Hexavalent	mg/kg	1.95	3.15 95% KM (t) UCL	3.8	3.15	mg/kg	95% UCL	Footnote (2)

Notes

(1) Arithmetic mean calculated using results of primary and/or duplicate samples. One half the laboratory detection limit was used for non-detected values.

(2) 95% Upper Confidence Limit (UCL) was calculated using ProUCL version 5.0.00; the value shown represents the recommended UCL.
KM - Kaplan Meier

(3) Statistic: Maximum Detected Value (Max); 95% UCL (95% UCL).

(4) The 95% UCL exceeded the maximum value, and the maximum value was selected as the exposure point concentration.

Table 6-10
Exposure Point Concentration Summary - Vapors Migrating from Soil Gas into Indoor Air
Reasonable Maximum Exposure
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Current/Future
Medium: Soil / Groundwater
Exposure Medium: Soil Gas

Exposure Point	Chemical of (1) Potential Concern	Units	(2) Mean	95% UCL (Distribution)	Input into J&E Model		Exposure Point Concentration (3)		
					Value	Units	Industrial Worker	On-Site Resident	Units
Soil Gas in Indoor Air	***Volatile Organic Compounds***								
	1,2,4-Trimethylbenzene	ug/m^3	9.65	NA	9.65	ug/m^3	NA	0.00302	ug/m^3
	Tetrachloroethene	ug/m^3	333830	NA	333830	ug/m^3	8.97	105	ug/m^3
	Trichloroethene	ug/m^3	314.45	NA	314.45	ug/m^3	0.00845	0.0987	ug/m^3

Notes:

(1) Chemicals of potential concern include VOCs that exceed the Target Groundwater Concentration from the Vapor Intrusion Screening Level Calculator. 1,2,4-Trimethylbenzene is a chemical of potential concern only for the future residential scenario.

(2) Arithmetic mean calculated using results of primary and/or duplicate samples. One-half the laboratory detection limit was used for non-detects. If the arithmetic mean exceeded the maximum concentration due to high laboratory detection limits, the mean of the detected results was used.

(3) - Exposure Point Concentration in indoor air as calculated by the J&E Model.

J&E - Johnson and Ettinger

NA - Not Applicable

Table 6-11
Cancer Toxicity Data — Oral/Dermal
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Chemical of Potential Concern	Medium	Oral Cancer Slope Factor		Oral Absorption Efficiency for Dermal (2)	Absorbed Cancer Slope Factor for Dermal (3)		Weight of Evidence/ Cancer Guideline Description	Mutagen(4)	Oral Cancer Slope Factor	
		Value	Units		Value	Units			Source(s) (5)	Date(s) (6) (MM/DD/YYYY)
VOCs										
Bromodichloromethane	On-Site GW, Off-Site GW	6.20E-02	$(mg/kg\text{-}day)^{-1}$	1	6.20E-02	$(mg/kg\text{-}day)^{-1}$	B2	-	IRIS	11/13
Chloroform	On-Site GW, Off-Site GW	3.10E-02	$(mg/kg\text{-}day)^{-1}$	1	3.10E-02	$(mg/kg\text{-}day)^{-1}$	2B	-	Cal EPA	11/13
cis-1,2-Dichloroethene	On-Site GW	ND	ND	ND	ND	ND	Inadequate	-	IRIS	11/13
Dibromochloromethane	On-Site GW, Off-Site GW	8.40E-02	$(mg/kg\text{-}day)^{-1}$	1	8.40E-02	$(mg/kg\text{-}day)^{-1}$	C	-	IRIS	11/13
Methylene chloride	On-Site GW	2.00E-03	$(mg/kg\text{-}day)^{-1}$	1	2.00E-03	$(mg/kg\text{-}day)^{-1}$	Likely	M	IRIS	11/13
Tetrachloroethylene	Off-Site GW, On-Site GW, SSS	2.10E-03	$(mg/kg\text{-}day)^{-1}$	1	2.10E-03	$(mg/kg\text{-}day)^{-1}$	Likely	-	IRIS	11/13
Trichloroethylene	On-Site GW, Off-Site GW	4.60E-02	$(mg/kg\text{-}day)^{-1}$	1	4.60E-02	$(mg/kg\text{-}day)^{-1}$	Known	M	IRIS	11/13
SVOCs										
2-Methylnaphthalene	On-Site GW	ND	ND	ND	ND	ND	Inadequate	-	IRIS	11/13
Naphthalene	On-Site GW	ND	ND	ND	ND	ND	Inadequate	-	IRIS	11/13
Inorganics										
Arsenic	On-Site GW	1.50E+00	$(mg/kg\text{-}day)^{-1}$	1	1.50E+00	$(mg/kg\text{-}day)^{-1}$	A	-	IRIS	11/13
Chromium (1)	On-Site GW	5.00E-01	$(mg/kg\text{-}day)^{-1}$	1	5.00E-01	$(mg/kg\text{-}day)^{-1}$	D	-	New Jersey, IRIS	11/13
Chromium, Hexavalent	SSS	5.00E-01	$(mg/kg\text{-}day)^{-1}$	0.025	2.00E+01	$(mg/kg\text{-}day)^{-1}$	D	M	New Jersey, IRIS	11/13

Notes:

(1) Oral cancer slope factor and weight of evidence for hexavalent chromium were conservatively used for total chromium due to the lack of hexavalent chromium data for groundwater at this Site.
(2) Oral to dermal adjustment factors (gastrointestinal absorption factors) are from USEPA (July 2004).
(3) Absorbed Cancer Slope Factor for Dermal = (Oral SF) / (Oral Absorption Efficiency).
(4) Identified as having a mutagenic mode of action for carcinogenesis (USEPA, February 2013).
(5) For hexavalent chromium, source of Oral Cancer Slope Factor is New Jersey; source of Weight of Evidence is IRIS.
(6) Date of the most recent USEPA Regional Screening Level Table containing updated toxicity values.

Weight of Evidence Classification, as per Guidelines for Carcinogen Risk Assessment (USEPA, September 1986):

A - Human carcinogen
B2 - Probable human carcinogen
C - Possible human carcinogen
D - Not classifiable as a human carcinogen

Weight of Evidence Classification, as per Guidelines for Carcinogen Risk Assessment (USEPA, March 2005):

Inadequate - inadequate information to assess carcinogenic potential
Likely - likely to be carcinogenic to humans
Known - carcinogenic to humans

IARC

2B - The agent is possibly carcinogenic to humans

Definitions:

Cal EPA = California Environmental Protection Agency
IARC = International Agency for Research on Cancer
IRIS = Integrated Risk Information System
M = mutagen
ND = No data
SSS = Subsurface Soil
USEPA = United States Environmental Protection Agency

Table 6-12
Cancer Toxicity Data — Inhalation
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Chemical of Potential Concern	Medium	Unit Risk		Weight of Evidence/ Cancer Guideline Description	Mutagen (1)	Unit Risk	
		Value	Units			Source(s) (2)	Date(s) (3) (MM/DD/YYYY)
VOCs							
1,2,4-Trimethylbenzene	Soil Gas	ND	ND	ND	-	ND	11/13
2-Methylnaphthalene	On-Site GW	ND	ND	Inadequate	-	IRIS	11/13
Bromodichloromethane	On-Site GW, Off-Site GW	3.70E-05	$(mg/m3)^{-1}$	B2	-	Cal EPA, IRIS	11/13
Chloroform	On-Site GW, Off-Site GW	2.30E-05	$(mg/m3)^{-1}$	Likely	-	IRIS	11/13
cis-1,2-Dichloroethene	On-Site GW	ND	ND	Inadequate	-	IRIS	11/13
Dibromochloromethane	On-Site GW, Off-Site GW	2.70E-05	$(mg/m3)^{-1}$	C	-	Cal EPA, IRIS	11/13
Methylene chloride	On-Site GW	1.00E-08	$(mg/m3)^{-1}$	Likely	M	IRIS	11/13
Naphthalene	On-Site GW	3.40E-05	$(mg/m3)^{-1}$	2B	-	Cal EPA	11/13
Tetrachloroethene	On-Site GW, Off-Site GW, Soil Gas	2.60E-07	$(mg/m3)^{-1}$	Likely	-	IRIS	11/13
Trichloroethene	On-Site GW, Off-Site GW, Soil Gas	4.10E-06	$(mg/m3)^{-1}$	Known	M	IRIS	11/13

Notes:

(1) Identified as having a mutagenic mode of action for carcinogenesis (USEPA, February 2013).

(2) Source of Unit Risk : source of Weight of Evidence/Cancer Guideline Description.
Source of Unit Risk for bromodichloromethane and dibromochloromethane is Cal EPA.
Source of Weight of Evidence for bromodichloromethane and dibromochloromethane is IRIS.

(3) The date of the most recent USEPA Regional Screening Level Table containing updated toxicity values.

Weight of Evidence Classification, as per Guidelines for Carcinogen Risk Assessment (USEPA, September 1986):
B2 - Probable human carcinogen
C - Possible human carcinogen

Weight of Evidence Classification, as per Guidelines for Carcinogen Risk Assessment (USEPA, March 2005):
Inadequate - inadequate information to assess carcinogenic potential
Likely - likely to be carcinogenic to humans
Known - carcinogenic to humans

IARC
2B - The agent is possibly carcinogenic to humans

Definitions:
Cal EPA = California Environmental Protection Agency
IARC = International Agency for Research on Cancer
IRIS = Integrated Risk Information System
M = mutagen
ND = No data
USEPA = United States Environmental Protection Agenc

Table 6-13
Non-Cancer Toxicity Data — Oral/Dermal
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Chemical of Potential Concern	Site	Chronic/ Subchronic	Oral RfD		Oral Absorption (2)	Absorbed RfD for Dermal (3)		Primary Target Organ(s)	Combined Uncertainty/ Modifying Factors (4)	RfD: Target Organ(s)	
			Value	Units		Value	Units			Source(s)	Date(s) (5) (MM/DD/YYYY)
VOCs											
Bromodichloromethane	On-Site GW, Off-Site GW	Chronic	2.00E-02	mg/kg-day	1	2.00E-02	mg/kg-day	Kidney	1000	IRIS	11/13
Chloroform	On-Site GW, Off-Site GW	Chronic	1.00E-02	mg/kg-day	1	1.00E-02	mg/kg-day	Liver	1000	IRIS	11/13
cis-1,2-Dichloroethene	On-Site GW	Chronic	2.00E-03	mg/kg-day	1	2.00E-03	mg/kg-day	Kidney	3000	IRIS	11/13
Dibromochloromethane	On-Site GW, Off-Site GW	Chronic	2.00E-02	mg/kg-day	1	2.00E-02	mg/kg-day	Liver	1000	IRIS	11/13
Methylene chloride	On-Site GW	Chronic	6.00E-03	mg/kg-day	1	6.00E-03	mg/kg-day	Liver	30	IRIS	11/13
Tetrachloroethylene	Off-Site GW, On-Site GW, SSS	Chronic	6.00E-03	mg/kg-day	1	6.00E-03	mg/kg-day	CNS	1000	IRIS	11/13
Trichloroethylene	On-Site GW, Off-Site GW	Chronic	5.10E-04	mg/kg-day	1	5.10E-04	mg/kg-day	Fetus	10	IRIS	11/13
SVOCs											
2-Methylnaphthalene	On-Site GW	Chronic	4.00E-03	mg/kg-day	1	4.00E-03	mg/kg-day	Lung	1000	IRIS	11/13
Naphthalene	On-Site GW	Chronic	2.00E-02	mg/kg-day	1	2.00E-02	mg/kg-day	Body Weight	3000	IRIS	11/13
Inorganics											
Arsenic	On-Site GW	Chronic	3.00E-04	mg/kg-day	1	3.00E-04	mg/kg-day	Skin	3	IRIS	11/13
Chromium (1)	On-Site GW	Chronic	3.00E-03	mg/kg-day	1	3.00E-03	mg/kg-day	None Reported	900	IRIS	11/13
Chromium, Hexavalent	SSS	Chronic	3.00E-03	mg/kg-day	0.025	7.50E-05	mg/kg-day	None Reported	900	IRIS	11/13

Notes:

(1) Oral RfD, target organ, and uncertainty/modifying factor for hexavalent chromium were conservatively used for total chromium due to the lack of hexavalent chromium data for groundwater at this Site.

(2) Oral to dermal adjustment factors (GI absorption factors) are from USEPA, July 2004.

(3) Absorbed RfD for Dermal = (Oral RfD) x (Oral Absorption Efficiency).

(4) Represents Uncertainty Factor x Modifying Factor.

(5) The date of the most recent USEPA Regional Screening Level Table containing updated toxicity values.

Definitions:

CNS = Central nervous system

IRIS = Integrated Risk Information System

SSS = Subsurface Soil

USEPA = United States Environmental Protection Agency

Table 6-14
Non-Cancer Toxicity Data — Inhalation
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Chemical of Potential Concern	Medium	Chronic/ Subchronic	Inhalation RfC		Primary Target Organ(s)	Combined Uncertainty/ Modifying Factors (1)	RfC: Target Organ(s)	
			Value	Units			Source(s) (2)	Date(s) (3) (MM/DD/YYYY)
VOCs								
1,2,4-Trimethylbenzene	Soil Gas	Chronic	7.00E+00	ug/m3	Blood	3000	PPRTV	06/11/2007
2-Methylnaphthalene	On-Site GW	Chronic	ND	ND	ND	ND	ND	ND
Bromodichloromethane	On-Site GW, Off-Site GW	Chronic	ND	ND	ND	ND	ND	ND
Chloroform	On-Site GW, Off-Site GW	Chronic	9.80E+01	ug/m3	ND	ND	ATSDR	11/13
cis-1,2-Dichloroethylene	On-Site GW	Chronic	ND	ND	ND	ND	ND	ND
Dibromochloromethane	On-Site GW, Off-Site GW	Chronic	ND	ND	ND	ND	ND	ND
Methylene chloride	On-Site GW	Chronic	6.00E+02	ug/m3	Liver	30	IRIS	11/13
Naphthalene	On-Site GW	Chronic	3.00E+00	ug/m3	Nasal System	3000	IRIS	11/13
Tetrachloroethene	On-Site GW, Off-Site GW, Soil Gas	Chronic	4.00E+01	ug/m3	CNS	1000	IRIS	11/13
Trichloroethene	On-Site GW, Off-Site GW, Soil Gas	Chronic	2.10E+00	ug/m3	Fetus	10	IRIS	11/13

Notes:
(1) Represents Uncertainty Factor x Modifying Factor.
(2) ATSDR value obtained from USEPA RSL table.
(3) The date of the most recent USEPA Regional Screening Level Table containing updated toxicity values or the date of the PPRTV Report.

Definitions
ATSDR = Agency for Toxic Substances and Disease Registry
CNS = central nervous system
IRIS = Integrated Risk Information System
ND = No data
PPRTV = Provisional Peer-Reviewed Toxicity Value
RSL = Regional Screening Level
USEPA = United States Environmental Protection Agency

Table 6-15
Overall Summary of Potential Risks and Hazards for COPCs
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Receptor Exposure Medium	**Carcinogenic Risk**	**Noncarcinogenic Hazard Index**
Current/Future Industrial Worker		
Soil Gas Vapor Intrusion	2E-07	0.05
Future Construction Worker		
Subsurface Soil	7E-08	0.04
Future On-Site Resident Adult		
On-Site Groundwater	2E-03	211
Soil Gas Vapor Intrusion	1E-05	3
Total Groundwater	2E-03	214
Future On-Site Resident Child		
On-Site Groundwater	NA	234
Future Off-Site Resident Adult		
On-Site Groundwater	2E-04	2
Future Off-Site Resident Child		
On-Site Groundwater	NA	2

Notes
NA - Not Applicable
Risk values and hazard indices are taken from Tables F-24 through F-29.

APPENDIX A

PRE-WORK HAZARD CHECKLIST

Pre-Work Hazard Checklist
Remedial Investigation

United Technologies Corporation Delavan Spray Technologies Site
Bamberg, South Carolina

Prepared by:
AECOM Technical Services, Inc.

Delavan Spray Technologies Site
Pre-Work Environmental, Health, and Safety Checklist

Work Order/Project Name/Location: **Remedial Investigation**
Project Coordinator/Evaluator: **Bill Penn / Richard Kearse**
Contractor Name (list all this review applies to): **AECOM Technical Services, Inc.**
Date: **February 7, 2014**

_____**Reviewed by**

CONTROLS & REQUIREMENT	YES	NO	NA	COMMENTS
1. BARRICADES/ADMINISTRATIVE CONTROLS				
a. Will existing exit paths be affected, if yes contact Emergency Services and EH&S, cover existing signs that do not apply, mark alternate paths	X			Equipment may block paths but will evaluate during set up and work with Richard Kearse (EH&S) to provide alternate exit paths and signs.
b. Review work area to be secured. List how the area around the hazard zones and below all overhead work, including but not limited to, work above suspended ceilings, on ladders, scissors lifts, extensible booms, etc. will be barricaded and access controlled.	X			The work zone will be delineated using tall high visibility traffic cones and red "danger" tape, whenever it is applicable.
c. Are administrative control signs required (list by section)	X			Signs will be posted when required by the "Client-Specific Requirements" in Appendix A of the HASP.
d. Review of emergency procedures	X			Contact Richard Kearse at 803-245-6580. Do not dial 911 for on-site emergencies.
contacts posted	X			
evacuation alarms and emergency exit locations	X			
pull boxes, telephones, medical services locations	X			
how to contact emergency services with a cell phone, remote locations	X			Outside work – use cell phone and call Emergency Services (911).
radio contact required if working alone	X			Cell phones will be assigned to crew members.
2. APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT TO BE USED				
a. Eye/face protection, foot protection, glove/hand protection	X			Safety glasses, steel toed boots, nitrile gloves, hard hats and ear plugs.
b. Hard hats, hearing protection	X			
c. Fall protection, fall protection devices, proper use of lanyards			X	Field staff will not be working from heights.
d. Respiratory protection, are personnel properly trained and medically cleared			X	Air monitoring will be performed, and work will be stopped if action levels are exceeded. The work plan will be re-evaluated if it is determined that respiratory protection is required.
e. Other (list in comment)	X			Use of proper PPE outlined in the THAs (attached and in the HASP).
3. WALKING/WORKING SURFACES				
a. Reviewed appropriate guard rails, open sides protected, toe boards, floor holes covered, floor safe and properly supported/secure for occupants			X	
b. Reviewed floor loading, not exceeded			X	
c. Reviewed ladder use, appropriate for task (list min. height in comments if appropriate)			X	It is not anticipated field tasks will require the use of ladders.
d. Reviewed scaffold requirements			X	Tasks will not require scaffolding.
e. Reviewed fork lift, powered industrial truck, and material handling equipment use	X			Forklifts or Bobcat may be used to move drums; safety procedures will be reviewed and inspections maintained as required.
f. Reviewed scissors lift use , manlift vehicle use requirements			X	Tasks will not require scissors lift or manlift vehicles.
g. Reviewed overhead clearances, exposed electrical, exposed hot surfaces	X			Will routinely evaluate overhead hazards (e.g. ceilings, utilities, branches, and trees) at each sampling location and will maintain a minimum clearance distance of 10 feet.
h. Reviewed floors/catwalks/overhead equipment clean, dry, and free of clutter, nails, splinters, and loose boards	X			
4. UTILTIY REVIEW				
a. Review hazardous energy inventory and required lockout tagout	X			LO/TO procedures not anticipated for this scope of work. Utility drawings will be reviewed and locations will be surveyed by a geophysical surveyor prior to intrusive activities. Will hand auger first 2 feet to verify utilities.
110v, 220/240v, 480v electrical, high voltage electrical	X			See above comment 4a.
low voltage electrical, data, phone	X			See above comment 4a.
pressurized systems (list type in comments)	X			See above comment 4a.

Delavan Spray Technologies Site
Pre-Work Environmental, Health, and Safety Checklist

Work Order/Project Name/Location: **Remedial Investigation**
Project Coordinator/Evaluator: **Bill Penn / Richard Kearse**
Contractor Name (list all this review applies to): **AECOM Technical Services, Inc.**
Date: **February 7, 2014**

_____**Reviewed by**

CONTROLS & REQUIREMENT	YES	NO	NA	COMMENTS
mechanical systems (list type in comments)			X	
chemical systems (give copy of MSDs's to associate/contractor)			X	
b. Is multiple group lockout/tagout required (list all organizations/contractors affected in comments)			X	
c. Ventilation systems approved to be shut down to prevent transport of contaminants, sparks, vapors, fumes			X	Fumes from rigs will be vented to the outdoors; wet coring will be used and dust/vapors will monitored per the HASP.
d. Review/identify utility shut off locations in case of emergency	X			Contact Richard Kearse at 803-245-6580.
e. Review utility hook up appropriateness/locations for equipment to be used, GFCI required?	X			A GFCI will be used for portable electrical equipment.
f. Review for underground and/or embedded utility types and locations	X			
g. Review utility/piping/stack/drain labeling requirements			X	Outside utilities labeled by surveyors.
5. SPECIAL CONCERNS, PERMITS/APPROVALS REQUESTED AND OBTAINED (attach or list in comments where all approvals and permits available, follow WI210 as applicable)				
a. Review asbestos/lead inspection, abatement required/completed			X	It is not anticipated these materials will be encountered.
b. Review of asbestos locations that may be disturbed during activity not abated			X	Stop work and contact Richard Kearse at 803-245-6580 if suspect asbestos containing materials are identified during work.
c. Review/obtain hot work permit for welding, cutting, grinding	X			If necessary, permits will be obtained if welding, cutting, or grinding will be performed.
d. Review/obtain confined space entry permit, copy of evaluation available, required equipment available for confined space entry		X		No confined space will be entered.
e. Review drains, drain piping, vents or stacks involved, obtain approval for systems altered/removed/installed		X		No drains or stacks will be altered/removed/installed.
f. Review overhead work permit requirements, if crane pick verify FAA approval, obtain as necessary		X		Not needed.
g. Is excavation of soil or concrete demolition involved, obtain approval	X			Will coordinate with UTC facility EH&S contact.
if wet saw cutting are drains protected	X			All drains in the vicinity of the cutting will be protected.
review of depth, required slope, shoring, egress completed			X	
review storage requirements for excavated/removed material	X			Drilling materials will be placed in 55 gallon drums and stored as directed by facility personnel.
h. Review migrating vapors/fumes into work/excavation area, atmospheric monitoring. If using equipment that is powered by an Internal Combustion Engine, EHS review and permit is required.	X			Vapor monitoring will be performed during sampling work. The crews will stop work if action levels are met. Exhaust from internal combustion engine will be vented to the outside.
i. Review completed for chemicals to be used, obtain approval, MSDS's available	X			MSDSs are located in HASP, which will be in work zone. Copies of MSDS will be given to facility EH&S contact.
j. Review/obtain EH&S approval for all laser, x-ray generating, radioisotope containing equipment			X	No laser, x-ray generating, radioisotope containing equipment will be used.
k. Review hazardous and non-hazardous waste disposal, containers obtained from EH&S	X			
l. Review/ general waste disposal, roll off/dumpster requirements, and storage locations, covered and labeled	X			
m. Review spill prevention materials and requirements	X			
n. Review if decon/purge activities are required, contact EH&S	X			
o. Review/obtain Emergency Services approval for installation/modification/shutdown of any fire suppression equipment including temporary relocation of fire extinguishers			X	Fire suppression equipment will not be modified or shut down.
p. Review work requiring cutting or modifying piping/containers containing liquids			X	Piping/containers containing liquids will not be modified.
6. GENERAL REQUIREMENTS				
a. Review for potential buildup of gases, vapors, particulate, oxygen deficient atmosphere. Migrating vapors/fumes into the work zone or shop areas	X			Vapor monitoring will be performed during sampling work. The crews will stop work if action levels are met. Exhaust from internal combustion engine will be vented to the outside.

Delavan Spray Technologies Site
Pre-Work Environmental, Health, and Safety Checklist

Work Order/Project Name/Location: **Remedial Investigation**
Project Coordinator/Evaluator: **Bill Penn / Richard Kearse**
Contractor Name (list all this review applies to): **AECOM Technical Services, Inc.**
Date: **February 7, 2014**

_____Reviewed by

b. Review general housekeeping issues and storage locations for tools, equipment, vehicles, etc.	X			Equipment to be staged at location designated by facility EH&S personnel.
c. Are all objects, equipment, tools in vicinity of work area identifiable and not creating a hazard in themselves	X			If no is checked, find someone to assist.
d. Review ergonomic issues, static posture, improper lifting/force, temperature	X			
e. Are required training certifications, for all items 1-6 checked yes above, available as applicable	X			HAZWOPER 8-hr refresher training + UTC contractor training.
f. Are OSHA 510 certifications available	X			All field staff to be OSHA 40-Hour HAZWOPER trained.
g. Identify all housekeeping issues that need to be completed and determine if subsequent review of the listed issues is required at completion of the job. Identify how to verify no items are left in overhead areas.	X			Will review with EH&S contact the procedures for abandonment of indoor borings completed in tiled flooring areas.

h. Other items to be addressed

For more details and information please refer to "Health and Safety Plan" by AECOM, dated August 2013 and "Pre-Work Hazard Checklist" by AECOM (attached). Will review with facility EH&S personnel boring abandonment, completions in tiled areas.

Pre-Work Hazard Checklist Groundwater Investigation

United Technologies Corporation Aerospace Systems
Delavan Spray Site, Bamberg,
South Carolina

CONTROLS & REQUIREMENTS	YES	NO	NA	COMMENTS
1. Is there a site specific contact person for the work area?	X			Leslee Alexander, Project Coordinator, at 864-787-6916.
2. Has AECOM field staff and its subcontractors working on the project site been made aware of work area hazards?	X			
a. Has the Health and Safety Plan by AECOM, dated August 2013, as well as any applicable Job Safety Analysis been made readily available?	X			Task Hazard Analysis attached.
b. Has the UTC EH&S Manual been made readily available?	X			
c. Is daily safety meetings attendance required by field personnel?	X			
d. Is OSHA 40-Hr HAZWOPER training required by field personnel?	X			
e. Is UTC EH&S training required by field personnel?	X			
3. Has a walkthrough been conducted to determine work area hazards?	X			
a. Is dust monitoring required as specified in the HASP?		X		Dust generating activities are not anticipated in the scope of work.
b. Is vapor monitoring required as specified in the HASP?	X			Vapor monitoring will be performed using a 10.6 eV photoionization detector.
c. Is the general work area clear of loose debris?	X			
d. Does there appear to be a level work platform?	X			
e. Does there appear to be a traffic concern? Is so, how is this remedied?	X			Traffic controls will consist of high visibility traffic cones and yellow caution tape or red danger tape, as applicable.
f. Does there appear to be an elevated risk of animal, insects, and/or poison ivy encounters?	X			
g. Is an electrical hookup available in the vicinity of the work area?	X			
h. Are there open ignition sources? If so, how is this remedied?		X		
i. Is this in a hot-work control area?		X		
j. Is this in a Foreign Object Dust control area?		X		
k. Is this in a Electrostatic Discharge control area?		X		
l. Is this in a area sensitive to noise discharge?		X		
m. Is machine guarding required?		X		
n. Is lock out/tag out required?		X		
4. Have overhead and underground utilities been reviewed?	X			A public and private utility locator will be used to avoid buried obstructions and/or soft digging using hand tools will be used to 2 feet.
a. Has available electronic utility figures been reviewed?	X			
b. Has available hardcopy utility figures been reviewed?	X			
c. Is a private utility locator required? If so, has a mark out and/or sketch been provided?	X			Utilities will be marked on the ground and drilling locations will be cleared by public and private utility locators.
d. Is soft digging required?	X			Soft digging using hand tools will be used to 2 feet.
e. Has a knowledgeable person been interviewed about underground utilities/obstructions?	X			Richard Kearse (facility EH&S coordinator)
f. Has utility shut off locations been reviewed in case of an emergency?	X			Emergency Services will be contacted
1. Has waste disposal procedures been reviewed?	X			AECOM will coordinate with UTAS for disposal of waste
a. Are hazardous and/or non-hazardous waste disposal containers required? If so, has this been coordinated with UTC EH&S?	X			
b. Has waste disposal container covering and labeling been reviewed?	X			UTAS will provide guidance for appropriate labels for waste containers.
c. Are spill prevention materials readily available?	X			
d. Is disposal of decon materials required?	X			Facility will coordinate disposal of IDW.
e. Other items to be addressed?				

Attachment A

Figure of Work Location

DPT-15	2-3'
PCE	**0.00563**
TCE	<0.00175

DPT-23	0-1'
PCE	<0.00183
TCE	<0.00183

DPT-22	0-1'
PCE	<0.00195
TCE	<0.00195

DPT-2	1-3'
PCE	<0.00186
TCE	<0.00186

DPT-21	2-3'
PCE	<0.00174
TCE	<0.00174

DPT-1	1-3'
PCE	<0.00225
TCE	<0.00225

DPT-16	2-3'
PCE	<0.00194
TCE	<0.00194

DPT-3	1-2'
PCE	**4.82**
TCE	**0.00337**

DPT-7	4-5'
PCE	**5.69**
TCE	<0.00189

DPT-4	2-3'
PCE	**0.659**
TCE	<0.00184

DPT-5	3-4'
PCE	<0.00186
TCE	<0.00186

DPT-20	5-6'
PCE	<0.00198
TCE	<0.00198

DPT-6	5-6'
PCE	<0.00176
TCE	<0.00176

DPT-19	5-6'
PCE	<0.00219
TCE	<0.00219

OHP
GP-3
TMW-6
TW-12
TMW-5
DPT-22
DPT-23
DPT-15
DPT-2
DPT-21
DPT-16/ MWT-5
DPT-1
FORMER NORTHERN SECONDARY CONTAINMENT AREA
GP-2
SD
SS
DPT-28
COVERED
TMW-8
MAINTENANCE SHED
DPT-30
DPT-29
STORAGE WAREHOUSE
OIL STORAGE SHED
DPT-31
WASTEWATER PRE-TREATMENT PLANT
WASTEWATER EFFLUENT LINE
DPT-32
CONCRETE
DPT-35
DPT-3
DPT-36
DPT-38
DPT-33
DPT-37
ACID DIP
DPT-34
WASTEWATER INFLUENT LINE
SSV-1
TW-6
TW-7
TW-3
DPT-39
DPT-40
DPT-4
DPT-42
DPT-41
MW-1
TW-2
FORMER PCE DEGREASERS
SSV-3
DPT-43
DPT-44
DPT-7/MWT-4
DPT-20
DPT-45
DPT-19
TW-1
TW-5
FORMER EASTERN PCE SECONDARY CONTAINMENT AREA
DPT-5
DPT-6
SSV-4
MW-2
TW-8
FORMER PCE UST

LEGEND

- SUBJECT PROPERTY BOUNDARY
- PROPERTY BOUNDARY
- SANITARY SEWER LINE
- STORMWATER DRAIN LINE
- WATER LINE
- OVERHEAD POWER LINE
- FENCE LINE
- DRAINAGE DOTCH
- SUBGRADE DRAIN LINE
- SHALLOW MONITORING WELL
- DPT SAMPLING POINT
- SOIL BORING
- SOIL BORING AND TEMPORARY MONITORING WELL
- PRIOR TEMPORARY MONITORING WELL (DECEMBER 2002)
- PROPOSED SOIL BORING
- PROPOSED SUB-SLAB VAPOR SAMPLE
- HRC INJECTION POINT (MARCH 2005)

NOTES:

1. BASE MAP OBTAINED FROM SURVEY PREPARED BY EDISTO ENGINEERS & SURVEYORS, INC. DATED 6/3/2011.
2. AUGUST 2012 SAMPLING LOCATIONS WERE SURVEYED BY ESTO ENGINEERS AND SURVEYORS, INC. ON 8/28/2012.
3. SOIL SAMPLES COLLECTED BY H&H IN AUGUST 2012.
4. ONLY COMPOUNDS DETECTED ABOVE SOIL SCREENING LEVELS (SSLS) ARE DEPICTED.
5. BOLD CONCENTRATIONS EXCEED PROTECTION OF GROUNDWATER SSL.
6. LOCATIONS OF PROPOSED SOIL BORINGS ARE APPROXIMATE AND WILL BE ADJUSTED BASED ON FIELD OBSERVATIONS.

N

APPROXIMATE
0 40 80
SCALE IN FEET

SAMPLE ID / SAMPLE DEPTH

DPT-6	5-6'
TETRACHLOROETHENE (PCE)	<0.00176
TRICHLOROETHENE (TCE)	<0.00176

CONSTITUENT / CONCENTRATION (mg/kg)

TITLE
PROPOSED SOIL SAMPLE AND SOIL GAS SAMPLE LOCATIONS FORMER NORTHERN CONTAINMENT AREA, PCE DEGREASERS, AND PCE UST

PROJECT
DELAVAN SPRAY TECHNOLOGIES
BAMBERG, SOUTH CAROLINA

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS
2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)
License # C-1269 / #C-245 Geology

DATE: 7-23-13 | REVISION NO. 0
JOB NO: UTC-006 | FIGURE: 11

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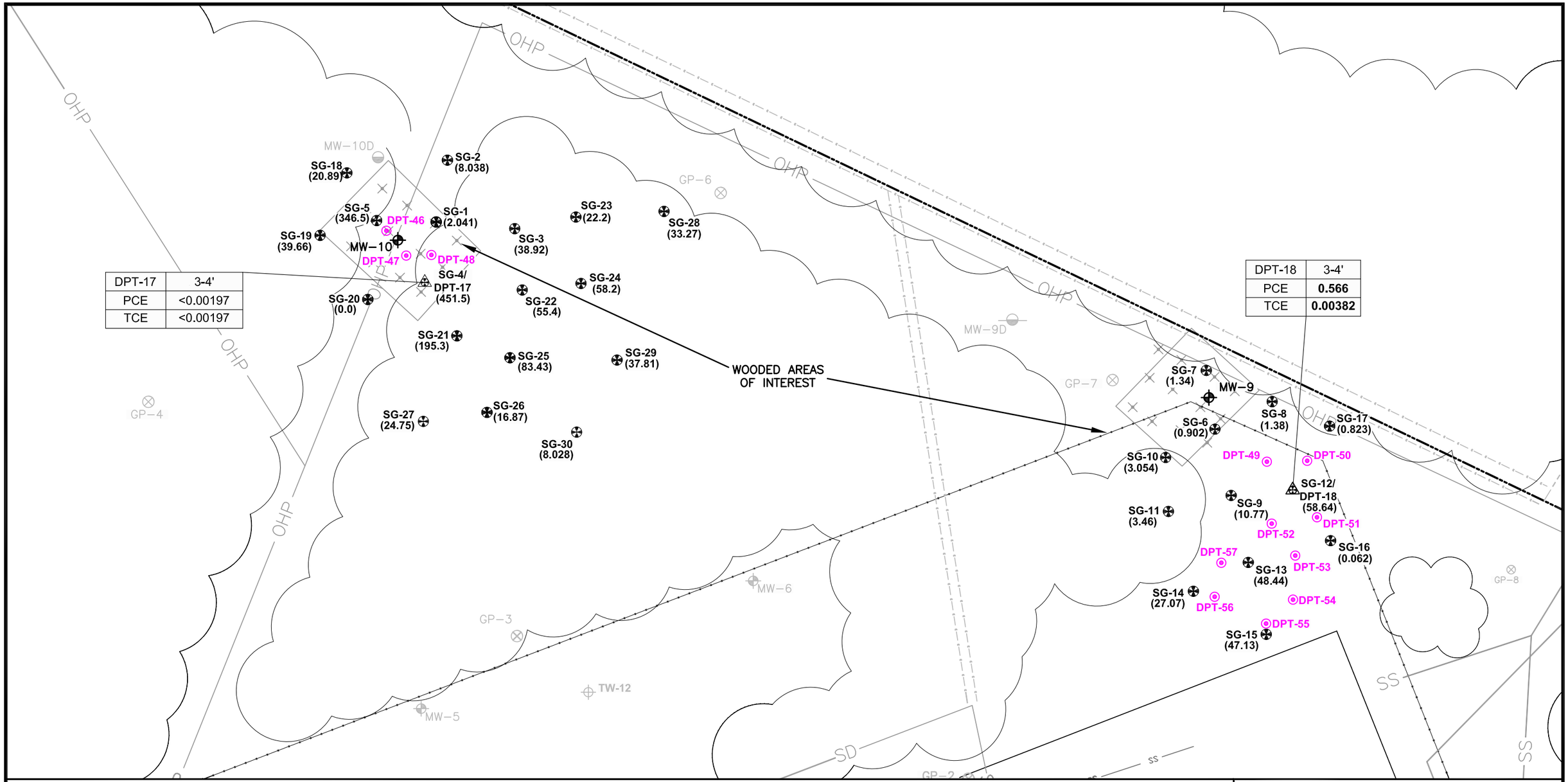

DPT-17	3-4'
PCE	<0.00197
TCE	<0.00197

DPT-18	3-4'
PCE	**0.566**
TCE	**0.00382**

LEGEND

- SUBJECT PROPERTY BOUNDARY
- SANITARY SEWER LINE
- STORMWATER DRAIN LINE
- OVERHEAD POWER LINE
- FENCE LINE
- DRAINAGE DOTCH
- SHALLOW MONITORING WELL
- DEEPER MONITORING WELL
- DPT SAMPLING POINT
- SOIL GAS LOCATION
- SOIL GAS AND SOIL BORING LOCATION
- (47.13) SOIL GAS READING (ppm)
- PRIOR TEMPORARY MONITORING WELL (DECEMBER 2002)
- PROPOSED SOIL BORING
- HRC INJECTION POINT (MARCH 2005)

SAMPLE ID — SAMPLE DEPTH

DPT-17	3-4'
TETRACHLOROETHENE (PCE)	<0.00197
TRICHLOROETHENE (TCE)	<0.00197

CONSTITUENT — CONCENTRATION (mg/kg)

NOTES:

1. BASE MAP OBTAINED FROM SURVEY PREPARED BY EDISTO ENGINEERS & SURVEYORS, INC. DATED 6/3/2011.
2. AUGUST 2012 SAMPLING LOCATIONS WERE SURVEYED BY ESTO ENGINEERS AND SURVEYORS, INC. ON 8/28/2012.
3. SOIL GAS AND SOIL SAMPLES COLLECTED BY H&H IN AUGUST 2012.
4. SOIL GAS SCREENING CONDUCTED USING A HANDHELD ppb PHOTOIONIZATION DETECTOR.
5. ALL SOIL GAS SAMPLES WERE SCREENED AT APPROXIMATELY 1.5 FT BELOW GROUND SURFACE.
6. ONLY COMPOUNDS DETECTED ABOVE SOIL SCREENING LEVELS (SSLs) ARE DEPICTED.
7. BOLD CONCENTRATIONS EXCEED PROTECTION OF GROUNDWATER SSL.

N

APPROXIMATE
0 40 80
SCALE IN FEET

TITLE

PROPOSED SOIL SAMPLE LOCATIONS WOODED AREAS OF INTEREST

PROJECT

DELAVAN SPRAY TECHNOLOGIES
BAMBERG, SOUTH CAROLINA

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS
2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)
License # C-1269 / #C-245 Geology

DATE: 6-25-13 | REVISION NO. 0

JOB NO: UTC-006 | FIGURE: 12

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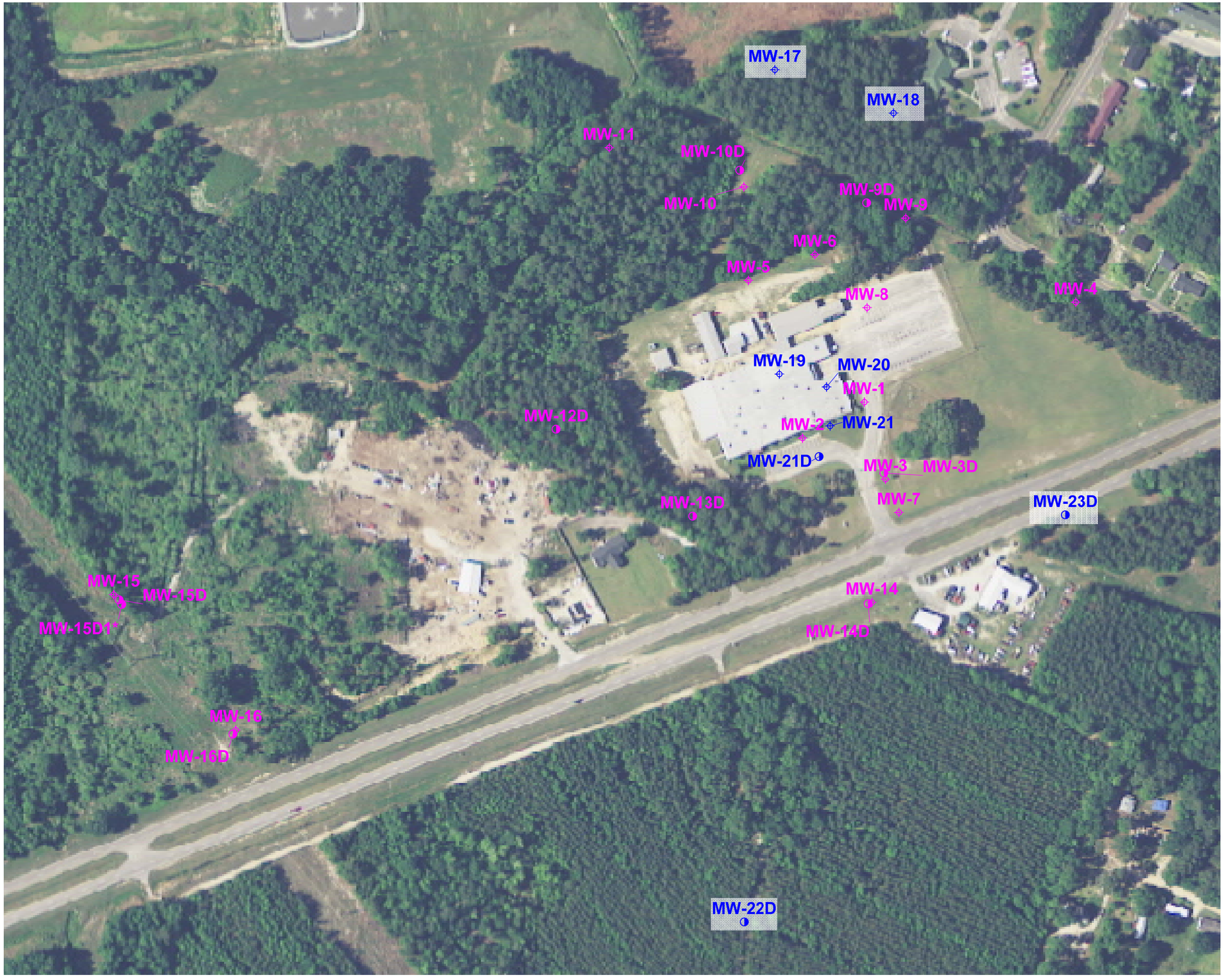


LEGEND

- Existing Shallow Monitoring Well
- Existing Deep Monitoring Well
- Proposed Shallow Monitoring Well
- Proposed Deep Monitoring Well

N

0 200 400

FEET

AECOM

FIGURE 1

MONITORING WELL LOCATION MAP

UTC DELAVAN SPRAY SITE
BAMBERG, SOUTH CAROLINA

60314964 JANUARY 2014

60314964/400/406 Surfer/proposed MW with aerial.srf

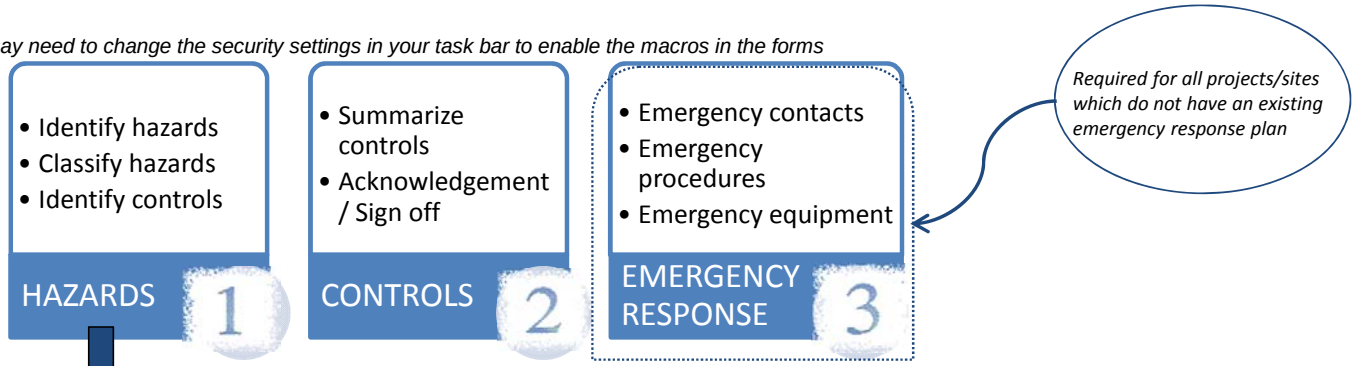
Attachment B

Task Hazard Analysis

S3NA-209-FM TASK HAZARD ANALYSIS

This THA (worksheets 1 & 2) must be completed for all field work.

***you may need to change the security settings in your task bar to enable the macros in the forms*



Hazard Identification

- **Natural (biological)** – bacteria, viruses, insects, plants, birds, and animals
- **Chemical** – exposure to chemical toxins, acute or chronic, by way of inhalation, injection, ingestion or absorption
- **Physical** – slipping/tripping, being struck by moving objects, repetitive movement, strains from lifting
- **Environmental** – extreme heat or cold, noise, vibrations, magnetic fields, pressure extremes and air quality
- **Psychosocial** – stress, violence

Hazard Classification

- Considers the potential severity of the outcome
- Considers the likelihood of the occurrence
- Used to prioritize and determine extent of required controls

Controls

- **Elimination (first)** – choose a different process; modify an existing process; substitute with less hazardous substance
- **Engineering Controls (second)** – physically alter the plant or equipment design in order to circumvent possible hazards; place guards on machinery
- **Administrative Controls (third)** – change the job procedure and/or process; limit the amount of time an individual is in a hazardous environment through job rotation
- **Personal Protective Equipment (last option)** – provide employees with direct physical protection while working in a hazardous environment

S3NA-209-FM TASK HAZARD ANALYSIS

AECOM	Project Name: Delavan Spray Technologies	Project Number: 60304322	Client: UTC
	Supervisor:	Project Manager: Walter Gerald	Location: Bamberg, SC
	THA Developed By: Robert Lewis		Date: 7-23-13
TASK HAZARD ANALYSIS	Task Name: Non-intrusive Site Visits and Surveying	Regularity of Task: One-time ☐ Routine ☑	

	Job Event Sequence (List the major steps of the individual task)	Hazards (List primary hazards)	Hazard Classification (before controls) Severity	Likelihood	Risk Level	Hazard Classification	Controls (List controls that AECOM will implement)
1	Inspect vehicle prior to departure to the project site	Slips/trips/falls	1	1	1	Low	Training
2	Inspect PPE; organize field supplies	None	3	2	6	Medium	Training
3	Load vehicle with applicable equipment	Slips/trips/falls; back strain	1	1	1	Low	Training; safe lifting practices
4	Drive to project site	Vehicular traffic	4	2	8	Medium	Training; defensive driving
5	Tailgate safety briefing/review THA	None	1	1	1	Low	Training
6	Inspect site location	Slips/trips/falls; biological hazards	4	1	4	Low	Training; Buddy system
7	Survey	Slips/trips/falls; biological hazards	2	1	2	Low	Training; Buddy system
8	Walk to Vehicle	Slips/trips/falls; biological hazards	2	1	2	Low	Training; Buddy system
9	Drive from project site	Vehicular traffic	4	2	8	Medium	Training; defensive driving
10	Unload vehicle	Slips/trips/falls; back strain	1	1	1	Low	Training; safe lifting practices

Hazard Classification Guidelines

Severity

1 Remote potential for injury, property damage/$ loss, or env damage

2 Potential for minor first aid injury, property damage/$ loss, or environmental damage

3 Potential for moderate personnel injuries, including medical treatment, property damage/$ loss, environmental damage, or negative public impact

4 Potential for a serious injury, major property damage/$ loss, serious impact to the environment, and public health

5 Catastrophic damage to people, property/equipment, environment, or public health

Likelihood of Occurrence

1 Very unlikely

2 Unlikely

3 Likely

4 Very likely

5 Certain

Hazard Classification Matrix

Likelihood \ Severity	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

Risk Level
Low
Medium
High

Risk Level = Likelihood x Severity

S3NA-209-FM TASK HAZARD ANALYSIS

AECOM	Project Name: Delavan Spray Technologies	Project Number: 60304322	Client: UTC
	Supervisor:	Project Manager: Walter Gerald	Location: Bamberg, SC
	THA Developed By: Robert Lewis		Date: 7-23-13
SUMMARY OF CONTROLS	Task Name: Non-intrusive Site Visits and Surveying		Regularity of Task: One-time ☐ Routine ☑

Personal Protective Equipment (*check all that apply*)	Air Monitoring (reference HASP monitoring plan)			
☑ CSA/ANSI Safety Glasses or Goggles	☑ No air monitoring required		☐ Air monitoring required (*see procedures below*)	
☑ Nitrile Gloves	Parameter	Location/Monitoring Interval	Response/Action Levels	Response Activity
☑ Sunscreen				
☑ DEET				
☑ Cell phone				
☑ Hard Hat				
☐				

Required Training (associated with this THA)	Key SOPs (associated with this THA)		Client & Other Requirements
1 Biological Hazards	S3NA-306-PR Highway and Road Work	S3NA-505-PR Cold Stress Prevention	
2 Defensive Driving	S3NA-308-PR Manual Lifting, Field	S3NA-510-PR Hearing Conservation Program	S3-NA 208-PR Personal Protective Equipment Program
3	S3NA-307-PR Housekeeping, Worksite	S3NA-511-PR Heat Stress Prevention	S3-NA 209-PR Project Hazard Assessment and Planning
4	S3NA-313-PR Wildlife, Plants & Insects	S3NA-315-PR Water, Working Around	
5	S3NA-314-PR Working Alone & Remote Travel	S3NA-315-PR Water, Working Around	
6			

Acknowledgement / Signatures

Project Manager / Supervisor (signature): Date:

Name	Signature	Company	Date	Name	Signature	Company	Date

S3NA-209-FM TASK HAZARD ANALYSIS

AECOM	Project Name: Delavan Spray Technologies	Project Number: 60304322	Client: UTC
	Supervisor:	Project Manager: Walter Gerald	Location: Bamberg, SC
	THA Developed By: Robert Lewis		Date: 7-23-13
EMERGENCY RESPONSE PLAN	Task Name: Non-intrusive Site Visits and Surveying	Regularity of Task: One-time ☐	Routine ☑

Check-in Procedures

Check-in Times	Check-in Person	Phone Number	Cell Phone Number
Alternate:			

Emergency Coordinators / Key Personnel

Name	Title	Phone Number	Cell Phone Number
Walter Gerald	Project Manager	(864) 234-8925	(864) 313-4722
TBD	On-site First Aid Attendant		
TBD	Site Supervisor		
Russ Reynolds	Regional Safety Manager	(864) 234-3042	(864) 906-7309
William Penn	UTC PM	(860) 728-6542	
Richard Kearse	Delavan Spray Technologies Site Senior EHS Advisor	(803) 245-6580	(803) 308-2016

Emergency Agencies / Public Utilities

Name	Type	Details	Phone Number
	Police		911
	Fire		911
	Ambulance		911
Bamberg County Memorial Hospital	Emergency medical treatment only		(803) 245-4321
	Poison Control Center		(800) 222-1222
	Pollution / Environmental		(800) 292-4706

Emergency Equipment & Supplies

- ☑ First Aid Kit - Type:
- ☐ Blankets / Survival:
- ☐ Fire Extinguishers Type: 2A:10B:C
- ☑ Communication Device
- ☑ Vehicle Safety Equipment
- ☐ Eye Wash
- ☐ Spill Kit
- ☐ Other:

Other Emergency Plan Details

All personnel are to follow the emergency procedures as detailed in the UTC EHS Guidelines for Contractors.

S3NA-209-FM TASK HAZARD ANALYSIS

AECOM	Project Name: Delavan Spray Technologies	Project Number: 60304322	Client: UTC
	Supervisor:	Project Manager: Walter Gerald	Location: Bamberg, SC
	THA Developed By: Robert Lewis		Date: 7-23-13
TASK HAZARD ANALYSIS	Task Name: Groundwater Sampling	Regularity of Task: One-time ☐ Routine ☑	

	Job Event Sequence (List the major steps of the individual task)	Hazards (List primary hazards)	Hazard Classification (before controls) Severity	Likelihood	Risk Level	Hazard Classification	Controls (List controls that AECOM will implement)
1	Inspect vehicle prior to departure to the project site	Slips/trips/falls	3	1	3	Low	Training
2	Inspect PPE; organize field supplies	None	3	2	6	Medium	Training
3	Load vehicle with applicable equipment	Slips/trips/falls; back strain	1	1	1	Low	Training; safe lifting practices
4	Drive to project site	Vehicular traffic	4	2	8	Medium	Training; defensive driving
5	Tailgate safety briefing/review THA	None	1	1	1	Low	Training
6	Measure water levels	Lifting, Slips/trips/falls; Vehicular traffic	4	1	2	Low	Training; Buddy system
7	Purge Wells (performed by AECOM)	Lifting	3	2	6	Medium	Training; Buddy system
8	Collect Groundwater Samples	Exposure to preservatives in sample bottle or chemicals in groundwater	4	2	8	Medium	Training; Buddy system; PPE
9	Organize samples, PPE, field supplies	None	3	2	6	Medium	Training
10	Decon equipment	Lifting	2	1	2	Low	Training; Buddy system
11	Walk to Vehicle	Slips/trips/falls; biological hazards	2	1	2	Low	Training; Buddy system
12	Drive from project site	Vehicular traffic	4	2	8	Medium	Training; defensive driving
13	Unload vehicle	Slips/trips/falls; back strain	1	1	1	Low	Training; safe lifting practices
14	IDW management	Slips/trips/falls; back strain	3	1	2	Low	Training; safe lifting practices

Hazard Classification Guidelines

Severity

1 Remote potential for injury, property damage/$ loss, or env damage

2 Potential for minor first aid injury, property damage/$ loss, or environmental damage

3 Potential for moderate personnel injuries, including medical treatment, property damage/$ loss, environmental damage, or negative public impact

4 Potential for a serious injury, major property damage/$ loss, serious impact to the environment, and public health

5 Catastrophic damage to people, property/equipment, environment, or public health

Likelihood of Occurrence

1 Very unlikely

2 Unlikely

3 Likely

4 Very likely

5 Certain

Hazard Classification Matrix

Likelihood \ Severity	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

Risk Level
Low
Medium
High

Risk Level = Likelihood x Severity

S3NA-209-FM TASK HAZARD ANALYSIS

AECOM	Project Name: Delavan Spray Technologies	Project Number: 60304322	Client: UTC
	Supervisor:	Project Manager: Walter Gerald	Location: Bamberg, SC
	THA Developed By: Robert Lewis		Date: 7-23-13

SUMMARY OF CONTROLS	Task Name: Groundwater Sampling	Regularity of Task: One-time ☐ Routine ☑

Personal Protective Equipment (*check all that apply*)

- ☑ CSA/ANSI Safety Glasses or Goggles
- ☑ Nitrile Gloves
- ☑ Sunscreen
- ☑ DEET
- ☑ Cell phone
- ☑ Hard Hat
- ☐

Air Monitoring (reference HASP monitoring plan)

☐ No air monitoring required ☑ Air monitoring required (*see procedures below*)

Parameter	Location/Monitoring Interval	Response/Action Levels	Response Activity
VOCs by PID	BZ, 30 min	Per response level Table section 6 in the HASP	

Required Training (associated with this THA)	Key SOPs (associated with this THA)		Client & Other Requirements
1 Biological Hazards	S3NA-306-PR Highway and Road Work	S3NA-505-PR Cold Stress Prevention	
2 Defensive Driving	S3NA-308-PR Manual Lifting, Field	S3NA-510-PR Hearing Conservation Program	S3-NA 208-PR Personal Protective Equipment Program
3	S3NA-307-PR Housekeeping, Worksite	S3NA-511-PR Heat Stress Prevention	S3-NA 521-PR Decontamination
4	S3NA-313-PR Wildlife, Plants & Insects	S3NA-520-PR Spill Response, Incidental	UTC EHS Guidelines for Contractors
5	S3NA-314-PR Working Alone & Remote Travel		
6			

Acknowledgement / Signatures

Project Manager / Supervisor (signature): Date:

Name	Signature	Company	Date	Name	Signature	Company	Date

S3NA-209-FM TASK HAZARD ANALYSIS

AECOM	Project Name: Delavan Spray Technologies	Project Number: 60304322	Client: UTC
	Supervisor:	Project Manager: Walter Gerald	Location: Bamberg, SC
	THA Developed By: Robert Lewis		Date: 7-23-13
EMERGENCY RESPONSE PLAN	Task Name: Groundwater Sampling	Regularity of Task: One-time ☐ Routine ☑	

Check-in Procedures

Check-in Times	Check-in Person	Phone Number	Cell Phone Number
Varies			
Alternate:			

Emergency Coordinators / Key Personnel

Name	Title	Phone Number	Cell Phone Number
Walter Gerald	Project Manager	(864)234-8925	(864) 313-4722
TBD	On-site First Aid Attendant		
TBD	Site Supervisor		
Russ Reynolds	Regional Safety Manager	(864) 234-3042	(864) 906-7309
William Penn	UTC PM	(860) 728-6542	
Richard Kearse	Delavan Spray Technologies Site Senior EHS Advisor	(803) 245-6580	(803) 308-2016

Emergency Agencies / Public Utilities

Name	Type	Details	Phone Number
	Police		911
	Fire		911
	Ambulance		911
Bamberg County Memorial Hospital	Emergency medical treatment only		(803) 245-4321
	Poison Control Center		(800) 222-1222
	Pollution / Environmental		(800) 292-4706

Emergency Equipment & Supplies

- ☑ First Aid Kit - Type:
- ☐ Blankets / Survival:
- ☑ Fire Extinguishers Type: 2A:10B:C
- ☑ Communication Device
- ☑ Vehicle Safety Equipment
- ☑ Eye Wash
- ☐ Spill Kit
- ☐ Other:

Other Emergency Plan Details

All personnel are to follow the emergency procedures as detailed in the UTC EHS Guidelines for Contractors.

S3NA-209-FM TASK HAZARD ANALYSIS

AECOM	Project Name: Delavan Spray Technologies	Project Number: 60304322	Client: UTC
	Supervisor:	Project Manager: Walter Gerald	Location: Bamberg, SC
	THA Developed By: Robert Lewis		Date: 7-23-13
TASK HAZARD ANALYSIS	Task Name: Drilling (Geoprobe, Auger, or Rotary), Soil Sampling, Well Installation, Concrete Coring; Mobilization and Demobilization	Regularity of Task: One-time ☐ Routine ☑	

	Job Event Sequence *(List the major steps of the individual task)*	Hazards *(List primary hazards)*	Hazard Classification *(before controls)* Severity	Likelihood	Risk Level	Hazard Classification	Controls *(List controls that AECOM will implement)*
1	Inspect vehicle prior to departure to the project site	Slips/trips/falls	1	1	1	Low	Training
2	Inspect PPE; organize field supplies	None	2	2	4	Low	Training
3	Load vehicle with applicable equipment	Slips/trips/falls; back strain	1	1	1	Low	Training; safe lifting practices
4	Drive to project site	Vehicular traffic	4	2	8	Medium	Training; defensive driving
5	Tailgate safety briefing/review THA	None	1	1	1	Low	Training
6	Inspect Drill Rig	Loose Parts or Frayed Cables	4	1	4	Low	Training; Buddy system
7	Concrete Coring	Lifting; back strain; entangelment; pinch points; underground utilities; dust	4	2	8	Medium	Training; Buddy system; PPE; safe lifting practices; electrical safety; utility survey; dust mitigation
8	Drill boring and collect soil samples as needed (drilling conducted indoors should account for proper ventilation and necessary work space clearance)	Heavy equipment, entangelment, pinch points, overhead obstructions, underground utilities; chemicals	4	2	8	Medium	Training; Buddy system; PPE; electrical safety; utility survey
9	Install Wells (monitoring and vapor)	Lifting	4	2	8	Medium	Training; safe lifting practices; PPE
10	Well Development (performed by drillers)	Lifting	3	2	6	Medium	Training; PPE; safe lifting practices
11	Organize samples, PPE, field supplies	Slips/trips/falls	2	2	4	Medium	Training
12	Decontamination of equipment	Lifting, Slips/trips/falls; back strain	2	2	3	Low	
13	Walk to Vehicle	Slips/trips/falls; biological hazards	2	1	2	Low	Training; Buddy system
14	Drive from project site	Vehicular traffic	4	2	8	Medium	Training; defensive driving
15	Unload vehicle	Slips/trips/falls; back strain	1	1	1	Low	Training; safe lifting practices

Hazard Classification Guidelines

Severity

1 Remote potential for injury, property damage/$ loss, or env damage

2 Potential for minor first aid injury, property damage/$ loss, or environmental damage

3 Potential for moderate personnel injuries, including medical treatment, property damage/$ loss, environmental damage, or negative public impact

4 Potential for a serious injury, major property damage/$ loss, serious impact to the environment, and public health

5 Catastrophic damage to people, property/equipment, environment, or public health

Likelihood of Occurrence

1 Very unlikely

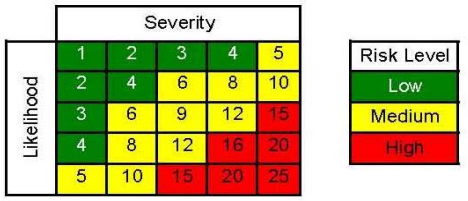
2 Unlikely

3 Likely

4 Very likely

5 Certain

Hazard Classification Matrix



S3NA-209-FM TASK HAZARD ANALYSIS

AECOM	Project Name: Delavan Spray Technologies	Project Number: 60304322	Client: UTC
	Supervisor:	Project Manager: Walter Gerald	Location: Bamberg, SC
	THA Developed By: Robert Lewis		Date: 7-23-13
SUMMARY OF CONTROLS	Task Name: Drilling (Geoprobe, Auger, or Rotary), Soil Sampling, Well Installation, Concrete Coring; Mobilization and Demobilization		Regularity of Task: One-time ☐ Routine ☑

Personal Protective Equipment (*check all that apply*)	
☑	CSA/ANSI Safety Glasses or Goggles
☑	Nitrile Gloves
☑	Sunscreen
☑	DEET
☑	Cell phone
☑	Hard Hat
☐	

Air Monitoring (reference HASP monitoring plan)

☑ No air monitoring required ☐ Air monitoring required (*see procedures below*)

Parameter	Location/Monitoring Interval	Response/Action Levels	Response Activity
VOCs by PID	BZ, 30 min	Per Response Level Table in section 6 of the HASP	

Required Training (associated with this THA)	Key SOPs (associated with this THA)		Client & Other Requirements
1 Biological Hazards	S3NA-306-PR Highway and Road Work	S3NA-505-PR Cold Stress Prevention	
2 Defensive Driving	S3NA-308-PR Manual Lifting, Field	S3NA-510-PR Hearing Conservation Program	S3-NA 208-PR Personal Protective Equipment Program
3	S3NA-307-PR Housekeeping, Worksite	S3NA-511-PR Heat Stress Prevention	S3-NA 521-Decontamination
4	S3NA-313-PR Wildlife, Plants & Insects	S3NA-405-PR Drilling and Boring	UTC EHS Guidelines for Contractors
5	S3NA-417-PR Utilities, Underground	S3NA-406-PR Electrical Lines, Overhead	
	S3NA-520-PR Spill Response, Incidental	S3NA-519-PR Respiratory Protection Program	
6	S3NA-305-PR Hand and Power Tools		

Acknowledgement / Signatures

Project Manager / Supervisor (signature): Date:

Name	Signature	Company	Date	Name	Signature	Company	Date

S3NA-209-FM TASK HAZARD ANALYSIS

AECOM	Project Name: Delavan Spray Technologies	Project Number: 60304322	Client: UTC
	Supervisor:	Project Manager: Walter Gerald	Location: Bamberg, SC
	THA Developed By: Robert Lewis		Date: 7-23-13
EMERGENCY RESPONSE PLAN	Task Name: Drilling (Geoprobe, Auger, or Rotary), Soil Sampling, Well Installation, Concrete Coring; Mobilization and Demobilization	Regularity of Task: One-time ☐ Routine ☑	

Check-in Procedures

Check-in Times	Check-in Person	Phone Number	Cell Phone Number
Alternate:			

Emergency Coordinators / Key Personnel

Name	Title	Phone Number	Cell Phone Number
Walter Gerald	Project Manager	(864) 234-8925	(864) 313-4722
TBD	On-site First Aid Attendant		
TBD	Site Supervisor		
Russ Reynolds	Regional Safety Manager	(864) 234-3042	(864) 906-7309
William Penn	UTC PM	(860) 728-6542	
Richard Kearse	Delavan Spray Technologies Site Senior EHS Advisor	(803) 245-6580	(803) 308-2016

Emergency Agencies / Public Utilities

Name	Type	Details	Phone Number
	Police		911
	Fire		911
	Ambulance		911
Bamberg County Memorial Hospital	Emergency medical treatment only		(803) 245-4321
	Poison Control Center		(800) 222-1222
	Pollution / Environmental		(800) 292-4706

Emergency Equipment & Supplies

- ☑ First Aid Kit - Type:
- ☐ Blankets / Survival:
- ☑ Fire Extinguishers Type: 2A:10B:C
- ☑ Communication Device
- ☑ Vehicle Safety Equipment
- ☑ Eye Wash
- ☐ Spill Kit
- ☐ Other:

Other Emergency Plan Details

All personnel are to follow the emergency procedures as detailed in the UTC EHS Guidelines for Contractors.

S3NA-209-FM TASK HAZARD ANALYSIS

AECOM	Project Name: Delavan Spray Technologies	Project Number: 60304322	Client: UTC
	Supervisor:	Project Manager: Walter Gerald	Location: Bamberg, SC
	THA Developed By: Robert Lewis		Date: 7-23-13
TASK HAZARD ANALYSIS	Task Name: Borehole and Well abandonment	Regularity of Task: One-time ☐ Routine ☑	

	Job Event Sequence (*List the major steps of the individual task*)	Hazards (*List primary hazards*)	Hazard Classification (*before controls*) Severity	Likelihood	Risk Level	Hazard Classification	Controls (*List controls that AECOM will implement*)
1	Inspect PPE; organize field supplies	slips/trips/falls	2	2	4	Low	Training
2	Tailgate safety briefing/review THA	None	1	1	1	Low	Training
3	Well abandonment (AECOM/driller)	Slips/trips/falls; back strain; pressurized lines; heavy equipment	3	1	3	Low	Training; safe lifting practices
4	Borehole abandonment (AECOM/driller)	Slips/trips/falls; back strain; pressurized lines; heavy equipment	3	1	3	Low	Training; safe lifting practices

Hazard Classification Guidelines

Severity

1 Remote potential for injury, property damage/$ loss, or env damage

2 Potential for minor first aid injury, property damage/$ loss, or environmental damage

3 Potential for moderate personnel injuries, including medical treatment, property damage/$ loss, environmental damage, or negative public impact

4 Potential for a serious injury, major property damage/$ loss, serious impact to the environment, and public health

5 Catastrophic damage to people, property/equipment, environment, or public health

Likelihood of Occurrence

1 Very unlikely

2 Unlikely

3 Likely

4 Very likely

5 Certain

Hazard Classification Matrix

Likelihood \ Severity	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

Risk Level
Low
Medium
High

Risk Level = Likelihood x Severity

S3NA-209-FM TASK HAZARD ANALYSIS

AECOM	Project Name: Delavan Spray Technologies	Project Number: 60304322	Client: UTC
	Supervisor:	Project Manager: Walter Gerald	Location: Bamberg, SC
	THA Developed By: Robert Lewis		Date: 7-23-13

SUMMARY OF CONTROLS	Task Name: Borehole and Well abandonment	Regularity of Task: One-time ☐ Routine ☑

Personal Protective Equipment (*check all that apply*)

- ☑ CSA/ANSI Safety Glasses or Goggles
- ☑ Nitrile Gloves
- ☑ Sunscreen
- ☑ DEET
- ☑ Cell phone
- ☑ Hard Hat
- ☐

Air Monitoring (reference HASP monitoring plan)

☑ No air monitoring required ☐ Air monitoring required (*see procedures below*)

Parameter	Location/Monitoring Interval	Response/Action Levels	Response Activity

Required Training (associated with this THA)	Key SOPs (associated with this THA)		Client & Other Requirements
1 Biological Hazards	S3NA-306-PR Highway and Road Work	S3NA-505-PR Cold Stress Prevention	
2 Defensive Driving	S3NA-308-PR Manual Lifting, Field	S3NA-510-PR Hearing Conservation Program	S3-NA 208-PR Personal Protective Equipment Program
3	S3NA-307-PR Housekeeping, Worksite	S3NA-511-PR Heat Stress Prevention	S3-NA 209-PR Project Hazard Assessment and Planning
4	S3NA-313-PR Wildlife, Plants & Insects	S3NA-405-PR Drilling and Boring	S3-NA 309-PR Mobile and Heavy Equipment
5			UTC EHS Guidelines for Contractors
7			

Acknowledgement / Signatures

Project Manager / Supervisor (signature): Date:

Name	Signature	Company	Date	Name	Signature	Company	Date

S3NA-209-FM TASK HAZARD ANALYSIS

AECOM	Project Name: Delavan Spray Technologies	Project Number: 60304322	Client: UTC
	Supervisor:	Project Manager: Walter Gerald	Location: Bamberg, SC
	THA Developed By: Robert Lewis		Date: 7-23-13
EMERGENCY RESPONSE PLAN	Task Name: Borehole and Well abandonment	Regularity of Task: One-time ☐	Routine ☑

Check-in Procedures

Check-in Times	Check-in Person	Phone Number	Cell Phone Number
Alternate:			

Emergency Coordinators / Key Personnel

Name	Title	Phone Number	Cell Phone Number
Walter Gerald	Project Manager	(864)234-8925	(864) 313-4722
TBD	On-site First Aid Attendant		
TBD	Site Supervisor		
Russ Reynolds	Regional Safety Manager	(864) 234-3042	(864) 906-7309
William Penn	UTC PM	(860) 728-6542	
Richard Kearse	Delavan Spray Technologies Site Senior EHS Advisor	(803) 245-6580	(803) 308-2016

Emergency Agencies / Public Utilities

Name	Type	Details	Phone Number
	Police		911
	Fire		911
	Ambulance		911
Bamberg County Memorial Hospital	Emergency medical treatment only		(803) 245-4321
	Poison Control Center		(800) 222-1222
	Pollution / Environmental		(800) 292-4706

Emergency Equipment & Supplies

- ☑ First Aid Kit - Type:
- ☐ Blankets / Survival:
- ☑ Fire Extinguishers Type: 2A:10B:C
- ☑ Communication Device
- ☑ Vehicle Safety Equipment
- ☑ Eye Wash
- ☐ Spill Kit
- ☐ Other:

Other Emergency Plan Details

All personnel are to follow the emergency procedures as detailed in the UTC EHS Guidelines for Contractors.

Client Requirements and other Controls

Client Requirements

UTC Contractor Guidelines. UTC Six Cardinal Principles.

Approval Log

Name	Outcome/Comments	Timestamp

Sign Off Log

Name	Outcome/Comments	Timestamp

Field Team Conducting this Task

(sign here on hardcopy if names are not included in log above)

Name	Signature	Company	Date

The THA is your field visit tool:

- All crew members need to review, understand, and sign the THA prior to work commencing.
- Keep the THA in a central location on site (e.g. the truck) to review daily during your tailgate meeting and update as required.

Emergency Response Plan

Refer to On-site Emergency Response Procedures

Do you need to add additional information or file attachments to this approved THA? Click the button below to view the Amendments page.

Open Amendments page

If you wish to use this THA for another task, you can make a copy by clicking below. The copy will appear in the "Saved but not Submitted" library.

Copy this THA

APPENDIX B

FIELD DOCUMENTATIONS

Drill Rig Inspection Forms
Health and Safety Plan Review and Acceptance Form
Daily Tailgate Safety Meeting Logs
Internal Combustion Engine Permit
Daily Breathing Zone Monitoring Logs
Equipment Calibration Logs
Daily Quality Control Reports
Test Boring Reports
Monitoring Well Construction Details
Water Well Records
Monitoring Well Development Logs
Chain of Custody Forms
Field Data Information Logs for Groundwater Sampling
IDW Management Forms

Drill Rig Inspection Forms

Drill Rig Inspection Form

Project Name: UTC Delavan **Project Number:** 60314924
Date: Feb 27 2014 **Subcontractor Inspected:** AE Drilling / Marcello Gonzalez
Site Manager: Leslie Alexander

General Safety		
Safety Officer Designated for Job:	☐ Yes	☐ No
Name:		
Safety Meeting Performed (Daily)	☐ Yes	☐ No
Personal Protective Equipment (PPE)		
Hard Hats	☑ Yes	☐ No
Safety Glasses	☑ Yes	☐ No
Steel Toed Boots	☑ Yes	☐ No
Hearing Protection	☑ Yes	☐ No
Work Gloves	☑ Yes	☐ No
Orange Work Vests	☑ Yes	☐ No
Traffic Cones and Signs	☑ Yes	☐ No
Other	☐ Yes	☐ No
Disposal of PPE in Proper Waste Containers (if applicable)	☑ Yes	☐ No
Comments:		
Daily Inspections of Drill Rig:		
Structural Damage, Loose Bolts	☐ Yes	☑ No
Proper Tension in Chain Drives	☐ Yes	☐ No N/A
Loose or Missing Guards, Fluid Leaks	☐ Yes	☑ No
Damaged Hoses and/or Damaged Pressure	☐ Yes	☑ No
Gages and Pressure Relief Valves	☑ Yes	☐ No
Comments:		

CHECK AND TEST ALL SAFETY DEVICES SUCH AS:			
Emergency shutdown switches, at least daily	☑ Yes	☐ No	
All gauges and warning lights, and ensure control levers are functioning properly	☑ Yes	☐ No	
First Aid and fire extinguishers on drill rig	☑ Yes	☐ No	
Back up alarm functioning properly	☐ Yes	☐ No	N/A
Comments:			

DRILL CREW TRAINING REQUIREMENTS:		
40-hour OSHA Training	☑ Yes	☐ No
8-hour Annual Refresher Training	☑ Yes	☐ No
Drill Rig Training/Safe Operating Practices	☑ Yes	☐ No
First Aid/CPR	☑ Yes	☐ No
Emergency Procedures	☑ Yes	☐ No
Emergency Phone Numbers Posted	☑ Yes	☐ No
Site Orientation	☑ Yes	☐ No
Health and Safety Plan Review	☑ Yes	☐ No
Comments:		

HOUSEKEEPING:		
Suitable storage for tools, materials, and supplies	☑ Yes	☐ No
Pipes, drill rods, casing, and augers stacked on racks to prevent rolling and sliding	☑ Yes	☐ No
Platforms and other work areas free of debris materials and obstructions	☑ Yes	☐ No
Comments:		

HAND TOOLS:			
Tools in good condition	☐ Yes	☐ No	N/A
Broken tools discarded and replaced	☐ Yes	☐ No	N/A
Right tool used for the right job	☐ Yes	☐ No	N/A
Comments:			

DRILLING OPERATIONS:			
Mast or derrick down when moving rig	☐ Yes	☐ No	N/A
Overhead obstructions identified before mast is raised	☐ Yes	☐ No	N/A
Drill rig stabilized using leveling jacks or solid cribbing	☐ Yes	☐ No	N/A
Secure and lock derrick	☐ Yes	☐ No	N/A
Comments:			

OVERHEAD AND BURIED UTILITIES:			
Buried utilities identified and marked	☑ Yes	☐ No	
Safe distance of drill rig from overhead power lines	☑ Yes	☐ No	
Comments:			

WIRE LINE HOISTS, WIRE ROPE AND HARDWARE:			
Inspection for broken wires where reduction in rope diameter, wire diameter, fatigue, corrosion, damage from gear jamming, crushing, bird caging, kinking	☐ Yes	☐ No	N/A
Inspect and lubricate parts daily	☑ Yes	☐ No	
Comments:			

Auger Operations - What to look for:

- A system of responsibility between the operator and the tool handler when connecting and disconnecting auger sections and inserting and removing auger fork.
- During connecting and disconnecting auger sections and inserting auger for the tool, handler should position himself away from the auger column while it is rotating.
- When securing the auger to the power coupling, pin should be inserted and tapped into place using a hammer or other similar device.
- Tool hoist should be used to lower second section of auger into place.
- Both operators should be clear of auger as it is being lifted into place.
- Long-handled shovel should be used to move dirt away from auger.

Overall Summary:

SUBSURFACE INVESTIGATIONS CHECKLIST

Name of Contractor: AE Drilling - geoprobe rig

Location: DPT-49 through DPT-57 Project #: 60314964

UTC Delavan Spray Technologies Site

Date: 2/27/14 Time: _____ Weather: _____

Person Conducting Inspection: RMorgan / LAlexander Title: _____

*Note: As you conduct your inspection you should be able to answer each question with a **YES**. If the answer to any question is **NO**, this deficiency should be corrected as soon as possible.*

	YES	NO	OK	N/A
	Deficiency Corrected?			
1. Do on-site personnel have required level PPE (steel toe boots, safety vests, hard hats, safety glasses, & gloves)?	☒	☐	☐	☐
2. Is there a copy of HASP and EAP available at each drill rig location?	☒	☐	☐	☐
3. Are there a PID, multi-gas meter, and a colorimetric pump available at each drill rig location?	☒	☐	☐	☐
4. **HAS THE FIELD SCREENING EQUIPMENT BEEN CALIBRATED IN THE MORNING?**	☒	☐	☐	☐
5. Are calibration gases available at the site?	☒	☐	☐	☐
6. Are drilling fluids contained in the mud tub?	☐	☐	☐	☒
6a. Does mud tub set-up provide adequate splash guards to protect public?	☐	☐	☐	☒
6b. Does set-up present five (5) feet of walk space for public?	☐	☐	☐	☒
6c. Will mud tub be emptied at end of day?	☐	☐	☐	☒
6d. Explain how the mud tub will be covered to prevent an accident				
6e. Are adequate containment practices being implemented to prevent mud tub liquids from being released to pedestrian walkways?	☐	☐	☐	☒
7. Is the drill rig properly grounded?	☐	☐	☐	☒
8. Is there a DOT permit available on-site at each drill rig location?	☐	☐	☐	☒
8a. Are operations in compliance with DOT permit?	☐	☐	☐	☒
9. Is there an orange snow fence with appropriate warning signage erected as a site barrier around the drill rig to keep-off the pedestrians from work area?	☒	☐	☐	☐
10. Are hydrant water hoses out of the pedestrian side walk?	☐	☐	☐	☒

	YES	NO	OK	N/A
11. Is there smoking and eating prohibited in the immediate work area?	☐	☒	☐	☐
12. Does each drill rig have a fire extinguisher, absorbent materials to cleanup a spill, and a first aid kit?	☒	☐	☐	☐
13. Is the waste from mud tub properly contained into 55-gallon drums?	☐	☐	☐	☒
13a. Are drums properly labeled?	☒	☐	☐	☐
14. Is there proper housekeeping to avoid slips, trips, and falls?	☒	☐	☐	☐
15. Are decontamination/hand washing capabilities available at the site?	☒	☐	☐	☐

COMMENTS:

Drill Rig Inspection Form

Project Name: UTC Delaware **Project Number:** 60314964
Date: 02/24/14 **Subcontractor Inspected:** AE Drilling
Site Manager: Chuck Sudderth

General Safety		
Safety Officer Designated for Job:	☑ Yes	☐ No
Name:		
Safety Meeting Performed (Daily)	☑ Yes	☐ No
Personal Protective Equipment (PPE)		
Hard Hats	☑ Yes	☐ No
Safety Glasses	☑ Yes	☐ No
Steel Toed Boots	☑ Yes	☐ No
Hearing Protection	☑ Yes	☐ No
Work Gloves	☑ Yes	☐ No
~~Orange~~ Work Vests (Green)	☑ Yes	☐ No
Traffic Cones and Signs	☑ Yes	☐ No
Other Danger Tape	☑ Yes	☐ No
Disposal of PPE in Proper Waste Containers (if applicable)	☑ Yes	☐ No
Comments:		
Daily Inspections of Drill Rig:		
Structural Damage, Loose Bolts	☐ Yes	☑ No
Proper Tension in Chain Drives	☑ Yes	☐ No
Loose or Missing Guards, Fluid Leaks	☐ Yes	☑ No
Damaged Hoses and/or Damaged Pressure	☐ Yes	☑ No
Gages and Pressure Relief Valves	☑ Yes	☐ No
Comments:		

CHECK AND TEST ALL SAFETY DEVICES SUCH AS:		
Emergency shutdown switches, at least daily	☑ Yes	☐ No
All gauges and warning lights, and ensure control levers are functioning properly	☑ Yes	☐ No
First Aid and fire extinguishers on drill rig	☑ Yes	☐ No
Back up alarm functioning properly	☑ Yes	☐ No
Comments:		

DRILL CREW TRAINING REQUIREMENTS:		
40-hour OSHA Training	☑ Yes	☐ No
8-hour Annual Refresher Training	☑ Yes	☐ No
Drill Rig Training/Safe Operating Practices	☑ Yes	☐ No
First Aid/CPR	☑ Yes	☐ No
Emergency Procedures	☑ Yes	☐ No
Emergency Phone Numbers Posted	☑ Yes	☐ No
Site Orientation	☑ Yes	☐ No
Health and Safety Plan Review	☑ Yes	☐ No
Comments:		

HOUSEKEEPING:		
Suitable storage for tools, materials, and supplies	☑ Yes	☐ No
Pipes, drill rods, casing, and augers stacked on racks to prevent rolling and sliding	☑ Yes	☐ No
Platforms and other work areas free of debris materials and obstructions	☑ Yes	☐ No
Comments:		

HAND TOOLS:		
Tools in good condition	☑ Yes	☐ No
Broken tools discarded and replaced	☑ Yes	☐ No
Right tool used for the right job	☑ Yes	☐ No
Comments:		

DRILLING OPERATIONS:		
Mast or derrick down when moving rig	☑ Yes	☐ No
Overhead obstructions identified before mast is raised	☑ Yes	☐ No
Drill rig stabilized using leveling jacks or solid cribbing	☑ Yes	☐ No
Secure and lock derrick	☑ Yes	☐ No
Comments:		

OVERHEAD AND BURIED UTILITIES:		
Buried utilities identified and marked	☑ Yes	☐ No
Safe distance of drill rig from overhead power lines	☑ Yes	☐ No
Comments:		

WIRE LINE HOISTS, WIRE ROPE AND HARDWARE:		
Inspection for broken wires where reduction in rope diameter, wire diameter, fatigue, corrosion, damage from gear jamming, crushing, bird caging, kinking	☑ Yes	☐ No
Inspect and lubricate parts ~~daily~~ monthly /weekly	☑ Yes	☐ No
Comments:		

Auger Operations - What to look for:

- A system of responsibility between the operator and the tool handler when connecting and disconnecting auger sections and inserting and removing auger fork.
- During connecting and disconnecting auger sections and inserting auger for the tool, handler should position himself away from the auger column while it is rotating.
- When securing the auger to the power coupling, pin should be inserted and tapped into place using a hammer or other similar device.
- Tool hoist should be used to lower second section of auger into place.
- Both operators should be clear of auger as it is being lifted into place.
- Long-handled shovel should be used to move dirt away from auger.

Overall Summary:

Drill Rig Inspection Form

Project Name: UTC Delavan **Project Number:** 60314964
Date: Feb 27 2014 **Subcontractor Inspected:** AE Drilling / Marcello Gonzalez
Site Manager: Leslie Alexander

General Safety		
Safety Officer Designated for Job:	☐ Yes	☐ No
Name:		
Safety Meeting Performed (Daily)	☐ Yes	☐ No
Personal Protective Equipment (PPE)		
Hard Hats	☑ Yes	☐ No
Safety Glasses	☑ Yes	☐ No
Steel Toed Boots	☑ Yes	☐ No
Hearing Protection	☑ Yes	☐ No
Work Gloves	☑ Yes	☐ No
Orange Work Vests	☑ Yes	☐ No
Traffic Cones and Signs	☑ Yes	☐ No
Other	☐ Yes	☐ No
Disposal of PPE in Proper Waste Containers (if applicable)	☑ Yes	☐ No
Comments:		
Daily Inspections of Drill Rig:		
Structural Damage, Loose Bolts	☐ Yes	☑ No
Proper Tension in Chain Drives	☐ Yes	☐ No N/A
Loose or Missing Guards, Fluid Leaks	☐ Yes	☑ No
Damaged Hoses and/or Damaged Pressure	☐ Yes	☑ No
Gages and Pressure Relief Valves	☑ Yes	☐ No
Comments:		

CHECK AND TEST ALL SAFETY DEVICES SUCH AS:			
Emergency shutdown switches, at least daily	☑ Yes	☐ No	
All gauges and warning lights, and ensure control levers are functioning properly	☑ Yes	☐ No	
First Aid and fire extinguishers on drill rig	☑ Yes	☐ No	
Back up alarm functioning properly	☐ Yes	☐ No	N/A
Comments:			

DRILL CREW TRAINING REQUIREMENTS:		
40-hour OSHA Training	☑ Yes	☐ No
8-hour Annual Refresher Training	☑ Yes	☐ No
Drill Rig Training/Safe Operating Practices	☑ Yes	☐ No
First Aid/CPR	☑ Yes	☐ No
Emergency Procedures	☑ Yes	☐ No
Emergency Phone Numbers Posted	☑ Yes	☐ No
Site Orientation	☑ Yes	☐ No
Health and Safety Plan Review	☑ Yes	☐ No
Comments:		

HOUSEKEEPING:		
Suitable storage for tools, materials, and supplies	☑ Yes	☐ No
Pipes, drill rods, casing, and augers stacked on racks to prevent rolling and sliding	☑ Yes	☐ No
Platforms and other work areas free of debris materials and obstructions	☑ Yes	☐ No
Comments:		

HAND TOOLS:			
Tools in good condition	☐ Yes	☐ No	N/A
Broken tools discarded and replaced	☐ Yes	☐ No	N/A
Right tool used for the right job	☐ Yes	☐ No	N/A
Comments:			

DRILLING OPERATIONS:			
Mast or derrick down when moving rig	☐ Yes	☐ No	N/A
Overhead obstructions identified before mast is raised	☐ Yes	☐ No	N/A
Drill rig stabilized using leveling jacks or solid cribbing	☐ Yes	☐ No	N/A
Secure and lock derrick	☐ Yes	☐ No	N/A
Comments:			

OVERHEAD AND BURIED UTILITIES:			
Buried utilities identified and marked	☑ Yes	☐ No	
Safe distance of drill rig from overhead power lines	☑ Yes	☐ No	
Comments:			

WIRE LINE HOISTS, WIRE ROPE AND HARDWARE:			
Inspection for broken wires where reduction in rope diameter, wire diameter, fatigue, corrosion, damage from gear jamming, crushing, bird caging, kinking	☐ Yes	☐ No	N/A
Inspect and lubricate parts daily	☑ Yes	☐ No	
Comments:			

Auger Operations - What to look for:

- A system of responsibility between the operator and the tool handler when connecting and disconnecting auger sections and inserting and removing auger fork.
- During connecting and disconnecting auger sections and inserting auger for the tool, handler should position himself away from the auger column while it is rotating.
- When securing the auger to the power coupling, pin should be inserted and tapped into place using a hammer or other similar device.
- Tool hoist should be used to lower second section of auger into place.
- Both operators should be clear of auger as it is being lifted into place.
- Long-handled shovel should be used to move dirt away from auger.

Overall Summary:

SUBSURFACE INVESTIGATIONS CHECKLIST

Name of Contractor: AE Drilling - geoprobe rig

Location: DPT-49 through DPT-57 Project #: 60314964

UTC Delavan Spray Technologies Site

Date: 2/27/14 Time: _____ Weather: _____

Person Conducting Inspection: R Morgan / L Alexander Title: _____

*Note: As you conduct your inspection you should be able to answer each question with a **YES**. If the answer to any question is **NO**, this deficiency should be corrected as soon as possible.*

	YES	NO	OK	N/A
			Deficiency Corrected?	
1. Do on-site personnel have required level PPE (steel toe boots, safety vests, hard hats, safety glasses, & gloves)?	☒	☐	☐	☐
2. Is there a copy of HASP and EAP available at each drill rig location?	☒	☐	☐	☐
3. Are there a PID, multi-gas meter, and a colorimetric pump available at each drill rig location?	☒	☐	☐	☐
4. HAS THE FIELD SCREENING EQUIPMENT BEEN CALIBRATED IN THE MORNING?	☒	☐	☐	☐
5. Are calibration gases available at the site?	☒	☐	☐	☐
6. Are drilling fluids contained in the mud tub?	☐	☐	☐	☒
6a. Does mud tub set-up provide adequate splash guards to protect public?	☐	☐	☐	☒
6b. Does set-up present five (5) feet of walk space for public?	☐	☐	☐	☒
6c. Will mud tub be emptied at end of day?	☐	☐	☐	☒
6d. Explain how the mud tub will be covered to prevent an accident				
6e. Are adequate containment practices being implemented to prevent mud tub liquids from being released to pedestrian walkways?	☐	☐	☐	☒
7. Is the drill rig properly grounded?	☐	☐	☐	☒
8. Is there a DOT permit available on-site at each drill rig location?	☐	☐	☐	☒
8a. Are operations in compliance with DOT permit?	☐	☐	☐	☒
9. Is there an orange snow fence with appropriate warning signage erected as a site barrier around the drill rig to keep-off the pedestrians from work area?	☒	☐	☐	☐
10. Are hydrant water hoses out of the pedestrian side walk?	☐	☐	☐	☒

	YES	NO	OK	N/A
11. Is there smoking and eating prohibited in the immediate work area?	☐	☒	☐	☐
12. Does each drill rig have a fire extinguisher, absorbent materials to cleanup a spill, and a first aid kit?	☒	☐	☐	☐
13. Is the waste from mud tub properly contained into 55-gallon drums?	☐	☐	☐	☒
13a. Are drums properly labeled?	☒	☐	☐	☐
14. Is there proper housekeeping to avoid slips, trips, and falls?	☒	☐	☐	☐
15. Are decontamination/hand washing capabilities available at the site?	☒	☐	☐	☐

COMMENTS:

Drill Rig Inspection Form

Project Name: UTC Delaware **Project Number:** 60314964
Date: 02/24/14 **Subcontractor Inspected:** AE Drilling
Site Manager: Chuck Sudderth

General Safety		
Safety Officer Designated for Job:	☑ Yes	☐ No
Name:		
Safety Meeting Performed (Daily)	☑ Yes	☐ No
Personal Protective Equipment (PPE)		
Hard Hats	☑ Yes	☐ No
Safety Glasses	☑ Yes	☐ No
Steel Toed Boots	☑ Yes	☐ No
Hearing Protection	☑ Yes	☐ No
Work Gloves	☑ Yes	☐ No
~~Orange~~ Work Vests (Green)	☑ Yes	☐ No
Traffic Cones and Signs	☑ Yes	☐ No
Other Danger Tape	☑ Yes	☐ No
Disposal of PPE in Proper Waste Containers (if applicable)	☑ Yes	☐ No
Comments:		
Daily Inspections of Drill Rig:		
Structural Damage, Loose Bolts	☐ Yes	☑ No
Proper Tension in Chain Drives	☑ Yes	☐ No
Loose or Missing Guards, Fluid Leaks	☐ Yes	☑ No
Damaged Hoses and/or Damaged Pressure	☐ Yes	☑ No
Gages and Pressure Relief Valves	☑ Yes	☐ No
Comments:		

CHECK AND TEST ALL SAFETY DEVICES SUCH AS:		
Emergency shutdown switches, at least daily	☑ Yes	☐ No
All gauges and warning lights, and ensure control levers are functioning properly	☑ Yes	☐ No
First Aid and fire extinguishers on drill rig	☑ Yes	☐ No
Back up alarm functioning properly	☑ Yes	☐ No
Comments:		

DRILL CREW TRAINING REQUIREMENTS:		
40-hour OSHA Training	☑ Yes	☐ No
8-hour Annual Refresher Training	☑ Yes	☐ No
Drill Rig Training/Safe Operating Practices	☑ Yes	☐ No
First Aid/CPR	☑ Yes	☐ No
Emergency Procedures	☑ Yes	☐ No
Emergency Phone Numbers Posted	☑ Yes	☐ No
Site Orientation	☑ Yes	☐ No
Health and Safety Plan Review	☑ Yes	☐ No
Comments:		

HOUSEKEEPING:		
Suitable storage for tools, materials, and supplies	☑ Yes	☐ No
Pipes, drill rods, casing, and augers stacked on racks to prevent rolling and sliding	☑ Yes	☐ No
Platforms and other work areas free of debris materials and obstructions	☑ Yes	☐ No
Comments:		

HAND TOOLS:		
Tools in good condition	☑ Yes	☐ No
Broken tools discarded and replaced	☑ Yes	☐ No
Right tool used for the right job	☑ Yes	☐ No
Comments:		

DRILLING OPERATIONS:		
Mast or derrick down when moving rig	☑ Yes	☐ No
Overhead obstructions identified before mast is raised	☑ Yes	☐ No
Drill rig stabilized using leveling jacks or solid cribbing	☑ Yes	☐ No
Secure and lock derrick	☑ Yes	☐ No
Comments:		

OVERHEAD AND BURIED UTILITIES:		
Buried utilities identified and marked	☑ Yes	☐ No
Safe distance of drill rig from overhead power lines	☑ Yes	☐ No
Comments:		

WIRE LINE HOISTS, WIRE ROPE AND HARDWARE:		
Inspection for broken wires where reduction in rope diameter, wire diameter, fatigue, corrosion, damage from gear jamming, crushing, bird caging, kinking	☑ Yes	☐ No
Inspect and lubricate parts ~~daily~~ monthly / weekly	☑ Yes	☐ No
Comments:		

Auger Operations - What to look for:

- A system of responsibility between the operator and the tool handler when connecting and disconnecting auger sections and inserting and removing auger fork.
- During connecting and disconnecting auger sections and inserting auger for the tool, handler should position himself away from the auger column while it is rotating.
- When securing the auger to the power coupling, pin should be inserted and tapped into place using a hammer or other similar device.
- Tool hoist should be used to lower second section of auger into place.
- Both operators should be clear of auger as it is being lifted into place.
- Long-handled shovel should be used to move dirt away from auger.

Overall Summary:

SUBSURFACE INVESTIGATIONS CHECKLIST

Name of Contractor: AE Drilling

Location: UTC Delavan

Project #: _____

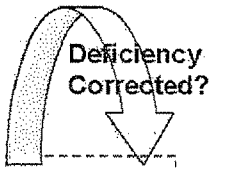
Date: 2/24/14 Time: 1300

Weather: Sunny, mild

Person Conducting Inspection: Chuck Suddeth

Title: Senior Hydrogeologist

*Note: As you conduct your inspection you should be able to answer each question with a **YES**. If the answer to any question is **NO**, this deficiency should be corrected as soon as possible.*



	YES	NO	OK	N/A
1. Do on-site personnel have required level PPE (steel toe boots, safety vests, hard hats, safety glasses, & gloves)?	☑	☐	☐	☐
2. Is there a copy of HASP and EAP available at each drill rig location?	☑	☐	☐	☐
3. Are there a PID, multi-gas meter, and a colorimetric pump available at each drill rig location?	☑	☐	☐	☐
4. HAS THE FIELD SCREENING EQUIPMENT BEEN CALIBRATED IN THE MORNING?	☑	☐	☐	☐
5. Are calibration gases available at the site?	☑	☐	☐	☐
6. Are drilling fluids contained in the mud tub?	☑	☐	☐	☐
6a. Does mud tub set-up provide adequate splash guards to protect public?	☑	☐	☐	☐
6b. Does set-up present five (5) feet of walk space for public?	☑	☐	☐	☐
6c. Will mud tub be emptied at end of day?	☑	☐	☐	☐
6d. Explain how the mud tub will be covered to prevent an accident: Will not be covered				
6e. Are adequate containment practices being implemented to prevent mud tub liquids from being released to pedestrian walkways?	☑	☐	☐	☐
7. Is the drill rig properly grounded?	☑	☐	☐	☐
8. Is there a DOT permit available on-site at each drill rig location?	☑	☐	☐	☐
8a. Are operations in compliance with DOT permit?	☑	☐	☐	☐
9. Is there an orange snow fence with appropriate warning signage erected as a site barrier around the drill rig to keep-off the pedestrians from work area? Red Tape	☑	☐	☐	☐
10. Are hydrant water hoses out of the pedestrian side walk?	☑	☐	☐	☐

	YES	NO	OK	N/A
11. Is there smoking and eating prohibited in the immediate work area?	☑	☐	☐	☐
12. Does each drill rig have a fire extinguisher, absorbent materials to cleanup a spill, and a first aid kit?	☑	☐	☐	☐
13. Is the waste from mud tub properly contained into 55-gallon drums?	☑	☐	☐	☐
13a. Are drums properly labeled?	☑	☐	☐	☐
14. Is there proper housekeeping to avoid slips, trips, and falls?	☑	☐	☐	☐
15. Are decontamination/hand washing capabilities available at the site?	☑	☐	☐	☐

COMMENTS:

Health and Safety Plan Review and Acceptance Form

HASP Review and Acceptance Form

By signing below, the undersigned acknowledges that he/she has read and reviewed the AECOM Health and Safety Plan for the Delavan Spray Technologies Site in Bamberg, SC. The undersigned also acknowledges that he/she has been instructed in the contents of this document and understands the information pertaining to the specified work, and will comply with the provisions contained therein.

PRINT NAME	SIGNATURE	ORGANIZATION	DATE
Chuck Suddeth	Charles K. Suddeth	AECOM	02/24/14
Brett Burnette		AECOM	02-24-14
Wade Hawthorne		AECOM	2-24-14
Randy Morgan		AECOM	2-24-14
Leslee Alexander		AECOM	2-24-14
Gary Winborn		AECOM	2-26-14
Marcella Gonzalez		AECOM	2-26-14
Glen Gibson		AECOM	2-26-14

Daily Tailgate Safety Meeting Logs

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	Signature
Leslee Alexander	Leslee Alexander
Date /Time 2/24/14 1230	Project Name & Location UTC Delavan Spray Technologies Site RI Bamberg, South Carolina
Weather Conditions Sunny, clear, ~65°F	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	Signature
Chuck Suddeth	Charles K. Suddeth
Date /Time	**Project Name & Location**
2/24/14	UTC Delavan Spray Technologies Site RI Bamberg, South Carolina
Weather Conditions	**Project Number**
Sunny, mild	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
Jamy Atkinson	Jamy Atkinson
Scott T. Smith	Scott T. Smith
Brett Bennette	Brett Bennette
Nate Hutchins	Nate Hutchins

*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	Signature
Chuck Suddeth	Charles K. Suddeth
Date /Time 2/25/14	Project Name & Location UTC Delavan Spray Technologies Site RI Bamberg, South Carolina
Weather Conditions clear, cool	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 AECOM
LeDell Alexander	LeDell Alexander
Brett Burnette	Brett Burnette AECOM
Nate Hawthorne	Nate Hawthorne AECOM

*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	Signature
Chuck Suddeth	Charles K. Suddeth
Date /Time	**Project Name & Location**
2/26/14	UTC Delavan Spray Technologies Site RI Bamberg, South Carolina
Weather Conditions	**Project Number**
rain, 50s	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
Brett Bumette	
Wade Hawthorne	
Randy Morgan	Randy Morgan AECOM
Leslie Alexander	

*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	Signature
Leslee Alexander	Leslee Alexander
Date /Time	**Project Name & Location**
2/26/14 / 1315	UTC Delavan Spray Technologies Site RI Bamberg, South Carolina
Weather Conditions	**Project Number**
rainy ~45-50°F	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
Marcello Gonzales	Marcello Gonzales
Gary Winbourn	Gary Winbourn

*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: Chuck Suddeth	Signature: Charles K. Suddeth
Date /Time: 2/27/14	Project Name & Location: UTC Delavan Spray Technologies Site RI Bamberg, South Carolina
Weather Conditions: clear, cold	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
Wesley Alexander	Wesley Alexander
Randy Morgan	Randy Morgan
Brett Burnette	Brett Burnette
Gary Wigboren	Gary Wigboren
Nat Hawthorne	Nat Hawthorne
Marcello Gonzales	Marcello Gonzales

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Meeting Leader	Signature
Leslie Alexander	
Date /Time 8/28/14 0745	Project Name & Location UTC Delavan Spray Technologies Site RI Bamberg, South Carolina
Weather Conditions Sunny, breezy 35-56°F	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 (X), GFCI (X), Elevated Work (X), Lockout/Tagout (X), and Machine Guarding (X). No loose/leather gloves near rotating equipment.

Tailgate Meeting Attendees

Printed Name	Signature
Nate Hartman	
Brett Burnette	
Gary Wimberly	
Marcello Gonzales	
Randy Morgan	
Chuck Suddeth	

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Tailgate Safety Meeting Log*

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Meeting Leader	Signature
Leslie Alexander	Leslie Alexander
Date /Time	**Project Name & Location**
2/24 3:1/14	UTC Delavan Spray Technologies Site RI Bamberg, South Carolina
Weather Conditions	**Project Number**
p. cloudy	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 (X), GFCI (X), Elevated Work (X), Lockout/Tagout (X), and Machine Guarding (X). No loose/leather gloves near rotating equipment.

Tailgate Meeting Attendees

Printed Name	Signature
Marcello Gonzales	Marcello Gonzales
Gary Dickerson	Gary Dickerson
Randy Morgan	Randy Morgan

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Tailgate Safety Meeting Log*

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Meeting Leader	Signature
Leslie Alexander	Leslie Alexander
Date /Time 3/2/14 0740	Project Name & Location UTC Delavan Spray Technologies Site RI Bamberg, South Carolina
Weather Conditions Sunny	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 (X), GFCI (X), Elevated Work (X), Lockout/Tagout (X), and Machine Guarding (X). No loose/leather gloves near rotating equipment.

Tailgate Meeting Attendees

Printed Name	Signature
Marcello Gonzales	Marcello Gonzales
Gary Windsor	Gary Windsor
Randy Morgan	Randy Morgan

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Tailgate Safety Meeting Log*

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Meeting Leader	Signature
Leslie Alexander	Leslie J Alexander
Date /Time 3/3/14	Project Name & Location UTC Delavan Spray Technologies Site RI Bamberg, South Carolina
Weather Conditions 40-69 °F	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 (X), GFCI (X), Elevated Work (X), Lockout/Tagout (X), and Machine Guarding (X). No loose/leather gloves near rotating equipment.	

Tailgate Meeting Attendees

Printed Name	Signature
Chuck Suddeth	Charles K. Suddeth
Gary Winborn	Gary Winborn
Marcello Gonzales	Marcello Gonzales
Randy Morgan	Randy Morgan

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Tailgate Safety Meeting Log*

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Meeting Leader: Chuck Suddeth	Signature: Charles K. Suddeth
Date /Time: 3/3/14	Project Name & Location: UTC Delavan Spray Technologies Site RI Bamberg, South Carolina
Weather Conditions: Cloudy, mild, 60s	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
Glen Gibson	
Brett Burnette	

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Tailgate Safety Meeting Log*

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Meeting Leader: Chuck Suddeth	Signature: Charles K. Suddeth
Date /Time: 3/4/14	Project Name & Location: UTC Delavan Spray Technologies Site RI Bamberg, South Carolina
Weather Conditions: cloudy, cold, 30s	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
GLEN GIBSON	
Gary Winborn	
Brett Burnette	
Marcello Gonzalez	
Cedric Reeves	

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Meeting Leader	Signature
Chuck Sudderth	Charles K. Sudderth
Date /Time 3/5/14	Project Name & Location UTC Delavan Spray Technologies Site RI Bamberg, South Carolina
Weather Conditions cold, rain 30s	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
Brett Burnette	
Glen Gibson	
Marcello Gonzales	
Gary Swinehart	
Cedric Alexander	
Randy Morgan	

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Meeting Leader	Signature
Chuck Suddeth	Charles K. Suddeth
Date /Time 3/6/14	**Project Name & Location** UTC Delavan Spray Technologies Site RI Bamberg, South Carolina
Weather Conditions cold, rain	**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
Glen Gibson	
Brett Burnette	
Lester Alexander	
Randy Morgan	

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Tailgate Safety Meeting Log*

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Meeting Leader: Chuck Sudderth	Signature: Charles K. Sudderth
Date /Time: 3/7/14	Project Name & Location: UTC Delavan Spray Technologies Site RI Bamberg, South Carolina
Weather Conditions: cold, rain	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
Glen Gibson	
Brett Burnette	
Randy Morgan	
Lesleah Sander	

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Tailgate Safety Meeting Log*

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Meeting Leader	Signature
Randy Morgan	Randy Morgan
Date /Time 3-11-14 1115	Project Name & Location UTC Delavan Spray Technologies Site RI Bamberg, South Carolina
Weather Conditions Clear/Sunny	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
Brett Burnette	
Gary Lunbourn	

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Internal Combustion Engine Permit

Appendix A: Approval to Use Internal Combustion Engine

SECTION I: PROJECT DESCRIPTION AND APPLICABILITY DETERMINATION

Hamilton Sundstrand Project Manager: **Name / Telephone and Pager #:**
RICHARD KEARSE 245-6580

Alternate Hamilton Sundstrand Contact: **Name / Telephone and Pager #:**
TOMMY BOOKHART 245-6555

Date(s) Permit is Valid (5 Days Max.): **Start:** 2-28-14 **End:** 3-4-14

Time(s) Permit is Valid: **Start:** 12:00 AM **End:** ~~12:00~~ 11:59 PM

Is Weekend/Off-Shift/Holiday Work Required? **Yes** ☒ **No** ☐

If Yes, HS contact who will monitor work during this time: TOMMY BOOKHART

Describe the intended use of the Internal Combustion Engine (ICE):
GROUND WATER REMEDIATION PROJECT
CONTRACTOR WILL BE CORE DRILLING AT DIFFERENT LOCATIONS IN SIDE THE FACILITY

Does the project require the use of an ICE indoors, in an exterior area with limited ventilation or near any building air intake?

☐ **No:** Sections II and IV are not applicable; obtain signatures in Section III prior to beginning the project.

☒ **Yes:** Explain below why the use of less hazardous equipment (e.g. battery, electric, pneumatic, etc.) is not feasible, and complete Sections II and III. Section IV must be completed immediately prior to the project.
CONTRACTOR HAS ONLY THE DIESEL POWERED DRILL RIG
AREA TO BE DRILLED WILL BE WELL ~~VENTILATED~~ VENTILATED

SECTION II: REQUIRED CONTROLS

Describe the specific methods to be used to ensure that the exhaust from the ICE will be directly ventilated to the exterior of any building, away from any source of building make-up air. (General area ventilation and catalytic converters can not be relied upon to protect the operators.)
AN EXTENSION HOSE WILL BE ATTACHED TO THE DRILL RIG AND RUN OUTDOORS AWAY FROM ANY AIR INTAKE

Describe additional personal protective equipment to be used by ICE operators, if any:
N/A

Describe additional monitoring methods to be used, if any: (Periodic visual checks, radios, cell phones)
CO MONITOR (ACQUIRED FROM LOCAL FIRE DEPT)

Briefly summarize the carbon monoxide awareness training to be provided to all operators who will work in the immediate vicinity of the internal combustion engine:

Person(s) Responsible for Training: Tommy Bookhart

Planned Training Dates: 2-28-14

Duration: 15 min.

Describe Topics to be Reviewed: Awareness

A CO monitor with visual and audible alarms, capable of measuring CO concentrations from 0 – 35 ppm, shall be continuously observed by an individual with no other responsibilities.

Indicate CO monitor Manufacturer Name: Scout

Indicate CO monitor Model Number: 0960-3185

Who will observe the CO monitor during the project? Leslee Alexander

Monitors must be calibrated per manufacturer's specifications immediately prior to the start of the job.

Who will calibrate the monitors? Bamberg County Fire Dept 2-06-2014

SECTION III: ADVANCE PROJECT APPROVAL (1 Through 4 Required)

1. HS Project Manager: Leslee Alexander **Date:** 2-28-14

2. Operations Manager: _____ **Date:** _____

3. EH&S Department: Richard Kean **Date:** 2-28-14

4. Emergency Services (If present on Site): _____ **Date:** _____

OTHER SIGNATURES AS NECESSARY

5. Area HS Supervisor/Foreman: _____ **Date:** _____

6. Other: _____ **Date:** _____

7. Other: _____ **Date:** _____

SECTION IV: APPROVAL TO PROCEED

	DATE: 2-28-14	2-29-14	2-30-14		
Verify that specified external exhaust ventilation is installed and operating:	☒	☒	☒	☐	☐
Verify that CO monitors are calibrated and project observer is present:	☒	☒	☒	☐	☐
Verify that individuals have received CO awareness training:	☒	☒	☒	☐	☐
HS Project Manager's Initials:	RAK				

If CO level reaches 35 ppm, immediately shut down the ICE, evacuate the work area, and contact the HS Project Manager and EH&S Department.

Appendix A
ON-THE-FLY RISK REVIEW

Task Description GROUND WATER DRILLING **Date:** 2-28-14 **Employee(s):** TOMMY BOOKHART

Assessment must be returned to the supervisor after completion of the project. Identify required controls in the "Comments" Section

Answer all of the questions below by placing your initials in the YES, NO, or NA column.	YES	NO	NA
1. Is this type of work within the normal scope of my job, and if not, has my supervisor approved it?			
2. BARRICADES/ADMINISTRATIVE CONTROLS			
a. Will means of egress or emergency evacuation routes be blocked or altered? (If yes contact EH&S)		WTB	
b. Will the work area need to be secured? (If yes, list how and specific equipment required? CAUTION TAPE	WTB		
c. Are emergency contact procedures required?		WTB	
3. APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT TO BE USED			
a. Are eye/face protection, foot protection, gloves/hand protection required? (list specific equipment required)	WTB		
b. Are hard hats or hearing protection required? (list specific equipment required)	WTB		
c. Is fall protection required? (list fall protection devices and review proper use of lanyards, etc)		WTB	
d. Is respiratory protection required? (If yes, are personnel properly trained and medically cleared)		WTB	
e. Other (list in comments)			
4. WALKING/WORKING SURFACES			
a. Will work be elevated (i.e. >6 feet)? (If yes, review appropriate fall protection requirements)		WTB	
b. Will ladders be required? (If yes, review ladder use)		WTB	
c. Is housekeeping an issue? (If yes, review walking surfaces to they are clean, dry, and free of clutter)		WTB	
d. Are there possible tripping hazards, slipping hazard or other walking/working surfaces issues? OILY FLOOR IN WICKHAM AREA	WTB		
5. LOTO/UTILTIY REVIEW			
a. Will Lockout be required? (If yes, review hazardous energy inventory and required lockout procedures)		WTB	
b. Will more that one person be working on the task? (If contractor and UTAS are involved a safety permit is required)	WTB		
c. Will a ventilation system have to be shut down? (If yes, contact EHS for approval to shut down ventilation)		WTB	
d. Will you require the use of electrical tools? (If yes, review tools, extensions cords for condition - GFCI required)	WTB		
e. Will excavation or cutting in floor/wall be required? (If yes, location of all underground/in-wall utilities must be determined)	WTB		
6. SPECIAL CONCERNS, PERMITS/APPROVALS REQUESTED AND OBTAINED			
a. Will employee be working around asbestos or lead paint? (If yes, contact EHS for appropriate procedure)		WTB	
c. Will welding, torch cutting or grinding be performed? (If yes, hot work permits are required)		WTB	
d. Will work be conducted in Permit Required Confined Space? (If yes, review/obtain confined space entry permit)		WTB	
e. Will you be altering/removing/adding drains, stacks, vents or piping? (If yes obtain EH&S approval)		WTB	
f. If work involves potential exposure to arc flash hazards – Is PPE defined? Are safe work procedures in place?		WTB	
g. Will work involve exposure to explosives or potential explosive atmospheres? Is there a risk of fire?		WTB	
7. ENVIRONMENTAL & INDUSTRIAL HYGIENE			
a. Will hazardous chemical/material be used or generated? (If yes, – receive EHS approval)		WTB	
b. Will laser, x-ray generating, radioisotope equipment be used? (If yes – receive EHS, RSO &/or LSO approval)		WTB	
c. Will hazardous/non-hazardous waste be generated? (If yes, review with EH&S)		WTB	
d. Will you require roll offs/dumpsters? (If yes, review requirements for storage locations, tarpaulin and labeling)		WTB	
e. Is there a possibility of chemical/material being spilled? (If yes, review spill prevention/cleanup process with EH&S)		WTB	
f. Will sprinklers systems need to be shut down? (If yes, notify EHS/Maintenance)		WTB	
g. Will dust, vapors, fumes, be created? (If yes, review hazard control processes)		WTB	
h. Is there a potential for an oxygen deficient atmosphere? (If yes, contact EHS for assistance)	WTB		
i. Will ventilation/exhaust be required? (If yes, contact EHS for assistance)	WTB		
j. Will the job create noise levels over 85dB? (If yes, review proper PPE with EHS)		WTB	
8. MATERIAL HANDLING			
a. Will cranes/hoist be used? (If yes, operator must be trained and slings must be inspected daily prior to use		WTB	
b. Will powered industrial trucks be used? (If yes, operator must be qualified and truck inspected before each shift)		WTB	
c. Has all material handling equipment been inspected? (If no, inspect before use and take appropriate action)	WTB		
d. Will manual material handling be required? (If yes, Follow UTAS SP0200-03 Requirements)		WTB	
9. GENERAL REQUIREMENTS			
a. Does work include modification, installation, or removal of equipment? (if yes, receive approval from EH&S)		WTB	
b. Will employees or general public be in the area of work? (If yes, notify affected people prior to starting work)	WTB		
c. Review Ergonomics Hit-list prior to start of work to identify and mitigate potential ergonomic concerns.	WTB		
d. Other items to be addressed:			
Have I/we thoroughly considered what can go wrong during this task? Did I/we Stop & Think?	WTB		
Are my/our "PERSONAL CHOICES", on this project, really SAFE choices?	WTB		
Are my customers and others around me safe? Is my partner safe? Am I safe?	WTB		
COMMENTS (List Controls Here for ALL Risks Identified as "YES"):			

Employee Signature Tommy Bookhart Supervisor Signature Richard Keane Date: 2-28-14

Daily Breathing Zone Monitoring Logs

AECOM

Daily Breathing Zone Monitoring
UTC Delavan Spray Technologies Site RI
Bamberg, South Carolina

Date: 2/24/14 – 2/26/14

Date	Time	Sample Location	PID (ppm)	Particulate (mg/m^3)
02/24/14	1525	MW-21D	0.0	
02/24/14	1535	MW-21D	0.0	
02/24/14	1540	MW-21D	0.0	
02/24/14	1545	MW-21D	0.0	
02/24/14	1550	MW-21D	0.0	
02/24/14	1600	MW-21D	0.0	
02/24/14	1615	MW-21D	0.0	
02/25/14	0840	MW-21D	0.2	
02/25/14	0856	MW-21D	0.6	
02/25/14	0920	MW-21D	0.2	
02/25/14	1010	MW-21D	0.2	
02/25/14	1030	MW-21D	0.2	
02/25/14	1042	MW-21D	0.2	
02/25/14	1100	MW-21D	0.3	
02/25/14	1125	MW-21D	0.2	
02/25/14	1215	MW-21D	0.3	
02/25/14	1225	MW-21D	0.2	
02/25/14	1240	MW-21D	0.2	
02/25/14	1300	MW-21D	0.2	
02/25/14	1315	MW-21D	0.2	
02/25/14	1500	MW-21	0.0	
02/25/14	1520	MW-21	0.1	
02/25/14	1535	MW-21	0.0	
02/25/14	1545	MW-21	0.0	
02/25/14	1600	MW-21	0.2	
02/25/14	1615	MW-21	0.1	
02/25/14	1630	MW-21	0.0	
02/25/14	1640	MW-21	0.0	
02/26/14	0830	MW-21	0.4	

AECOM

Daily Breathing Zone Monitoring

Date: 2/26/14 – 2/27/14

Date	Time	Sample Location	PID (ppm)	Particulate (mg/m^3)
2/26/14	0845	MW-21	0.4	
2/26/14	0900	MW-21	0.5	
2/26/14	0915	MW-21	0.4	
2/26/14	0930	MW-21	0.6	
2/26/14	0945	MW-21	0.5	
2/26/14	1445	MW-22D	0.0	
2/26/14	1500	MW-22D	0.2	
2/26/14	1510	MW-22D	* 16.0	
2/26/14	1550	MW-22D	** 0.1	
2/26/14	1600	MW-22D	** 0.0	
2/26/14	1610	MW-22D	** 0.0	
2/26/14	1620	MW-22D	** 0.4	
2/26/14	1630	MW-22D	** 0.1	
2/27/14	0835	MW-22D	0.1	
2/27/14	0840	MW-22D	0.1	
2/27/14	0850	MW-22D	0.1	
2/27/14	0900	MW-22D	0.1	
2/27/14	0910	MW-22D	0.1	
2/27/14	0920	MW-22D	0.0	
2/27/14	0930	MW-22D	0.0	
2/27/14	0945	MW-22D	0.0	
2/27/14	1000	MW-22D	0.0	
2/27/14	1030	MW-22D	0.0	
2/27/14	1100	MW-22D	0.0	
2/27/14	1130	MW-22D	0.0	
2/27/14	1200	MW-22D	0.0	
2/27/14	1520	MW-23D	0.1	
2/27/14	1530	MW-23D	0.1	
2/27/14	1540	MW-23D	0.0	

* Backed away from rig. Borrowed other PID on-site. Measured breathing zone
** Readings from the borrowed PID from other crew

AECOM

Daily Breathing Zone Monitoring

Date: 2/27/14 - 3/5/14

Date	Time	Sample Location	PID (ppm)	Particulate (mg/m^3)
2/27/14	1550	MW-23D	0.0	
2/27/14	1600	MW-23D	0.0	
2/27/14	1615	MW-23D	0.0	
2/27/14	1630	MW-23D	0.0	
2/28/14	0850	MW-23D	0.1	
2/28/14	0930	MW-23D	0.1	
2/28/14	1015	MW-23D	0.1	
2/28/14	1245	MW-23D	0.1	
2/28/14	1330	MW-23D	0.1	
2/28/14	1400	MW-23D	0.1	
2/28/14	1430	MW-23D	0.1	
3/3/14	1400	MW-18	0.3	
3/3/14	1420	MW-18	0.3	
3/3/14	1500	MW-18	0.3	
3/3/14	1535	MW-18	0.3	
3/3/14	1600	MW-18	0.3	
3/3/14	1630	MW-18	0.3	
3/4/14	0830	MW-17	0.1	
3/4/14	0900	MW-17	0.1	
3/4/14	0930	MW-17	0.1	
3/4/14	1000	MW-17	0.1	
3/4/14	1100	MW-17	0.1	
3/4/14	1200	MW-17	0.1	
3/4/14	1300	MW-17	0.1	
3/4/14	1615	MW-21D	0.2	
3/5/14	0845	MW-21D	0.0	
3/5/14	0930	MW-21D	0.0	
3/5/14	1000	MW-21D	0.1	
3/5/14	1045	MW-21D	0.0	

AECOM

Daily Breathing Zone Monitoring

Date: 3/5/14 - 3/7/14

Date	Time	Sample Location	PID (ppm)	Particulate (mg/m^3)
3/5/14	1530	MW-23D	0.1	
3/5/14	1600	MW-23D	0.1	
3/5/14	1620	MW-23D	0.1	
3/5/14	1705	MW-23D	0.1	
3/6/14	0830	MW-23D	0.0	
3/6/14	0930	MW-23D	0.0	
3/6/14	1030	MW-23D	0.1	
3/6/14	1130	MW-23D	0.1	
3/6/14	1400	MW-22D	0.0	
3/6/14	1500	MW-22D	0.0	
3/6/14	1600	MW-22D	0.0	
3/6/14	1700	MW-22D	0.0	
3/6/14	1745	MW-22D	0.0	
3/7/14	1100	MW-21D	0.0	
3/7/14	1200	MW-21D	0.0	
3/7/14	1300	MW-21D	0.0	
3/7/14	1400	MW-21D	0.0	

AECOM

Daily Breathing Zone Monitoring
UTC Delavan Spray Technologies Site RI
Bamberg, South Carolina

Date: Feb 24- 2014

Date	Time	Sample Location	PID (ppm)	Particulate (mg/m^3)
2/24/14	1510	MW-14	0.0 ppm	
2/25/14		MW-15D	0.0	
2/25/14		MW-15D1	0.0	
2/25/14		MW-15	0.0	
2/26/14	0850	MW-14	0.0	
2/26/14	0942	MW-14D	0.0	
2/25/14		MW-2	0.0	
2/26/14		MW-1	0.0	
2/26/14	1300	DPT-49-57	Background 0.2-1.1 due to Rain	
2/27/14	1000	DPT-28	0.0	
2-27/14	1030	DPT-30	0.0	
2-27-14	1055	DPT-31	0.0	
2-27-14	1330	DPT-32	0.0	
2-27-14	1345	DPT-33	0.0	
2-27-14		BG-5	0.0	
2-27-14		BG-4	0.0	
2-28-14	0830	BG-3	0.0	
2-28-14	0920	BG-2	0.0	
2-28-14		BG-1	0.0	
2-28-14		DPT-47	0.0	
2-28-14		DPT-46	0.0	
2-28-14		DPT-48	0.0	
2-28-14	1545	SSV-1		0.311 TWA
2-28-14	1615	DPT-34		0.133 CONC. 0.253 TWA
~~2-28-14~~		SSV-4		
2-28-14	1710	DPT 37		0.249 CONC 0.182 TWA
2-2814	1750	DPT35		0.098 CONC 0.176 TWA
2-28-14	1740	~~DPT~~-SSV-2		CONC 0.100 TWA 0.159
3-1-14		SSV-4		CONC 0.218 TWA 0.143

AECOM

Daily Breathing Zone Monitoring
UTC Delavan Spray Technologies Site RI
Bamberg, South Carolina

Date: 3/1/14
Page 3 of 3

Date	Time	Sample Location	PID (ppm)	Particulate (mg/m^3)	~~CO~~ CO (ppm)
3/1/14	0904	DPT-34	0	—	0-3
	0910	"	0.7	—	0
	0940	"	0.6		0
	1130	DPT-36	1.2 BZ		0 BZ
	1130	DPT-36	28 borehole		
	1135	DPT-36	1.9		0
	1142	DPT-36	1.8		0
	1450	DPT-35	1.6 BZ		0
	1450	DPT-35	71.9 borehole		
	1515	DPT-35	1.8		0
↓	1630	DPT-35	1.9		0
3/2/14	0930	DPT-37	1.0-4		P.I.D jumping around while equipment in the room is running
	0900	↓	↓		" " " "
	0930				
	1230	DPT-41	2.0-4.5		
↓	1250	DPT-41	2.0-4.5		" "
3/3/14	0920	DPT-42	2-4		PID jumping around while backhoe equipment is running
	0940	DPT-42	2-3.6		"
	1020	DPT-42	2-4.2		"
	1050	DPT-42	3-5		"
	1245	DPT-43	043-26		" see photo
	1420	DPT-43	5-30		"
↓	1510	DPT-43	5-44		"

AECOM

Daily Breathing Zone Monitoring
UTC Delavan Spray Technologies Site RI
Bamberg, South Carolina

Date: March 1, 2014

Date	Time	Sample Location	PID (ppm)	Particulate (mg/m^3)
March 1, 2014	1000	DPT-38		Conc 0.132 TWA 0.146
3-1-14	1030	DPT-36		Conc 0.106 TWA 0.143
3-1-14	1130	DPT-42		Conc 0.082 TWA 0.114
3-1-14	1205	DPT-39		Conc 0.114 TWA 0.112
3-1-14	1225	DPT-41		Conc 0.121 TWA 0.112
3-1-14	1415	SSV-3		Conc 0.157 TWA 0.103
3-1-14	1438	DPT-43		Conc 0.184 TWA 0.105
3-1-14	1505	DPT-44		Conc 0.165 TWA 0.114
3-1-14	1530	DPT-40		Conc 0.202 TWA 0.120
3-2-14	0900	DPT-38	Background 5.0	
3-2-14	1155	DPT-39	Background 4.6	
3-2-14	1300	DPT-41	1.0 - 5.0	
3-2-14	1500	DPT-41	1.0 - 5.0	
3-3-14	0900	DPT 42		
3-3-14	0915	DPT-40	4.0 - 6.0	
3-3-14	1000	DPT-40	4.0 - 6.0	
3-3-14	1115	DPT-40	4.0 - 6.0	

AECOM

Daily Breathing Zone Monitoring
UTC Delavan Spray Technologies Site RI
Bamberg, South Carolina

Date: 3-10-14
Page 1 of 1

Date	Time	Sample Location	PID (ppm)	Particulate (mg/m^3)
3-10-2014	1045	MW-17	0.0 ppm	
3-10-2014	1430	MW-18	0.0 ppm	
3-11-2014	0745	MW-8	0.0 ppm	
3-11-2014	1130	MW-12D	0.0 ppm	
3-11-2014	0938	MW-11	0.0 ppm	
~~3-11-2014~~	—	~~MW-13D~~	—	
3-11-2014	1500	MW-21	3.3 ppm well head	
3-12-2014	0745	MW-21D	0.0 ppm	
3-12-2014	0910	MW-6	2.1 ppm well head	
3-12-2014	1125	MW-13D	0.0 ppm	
3-12-2014	1250	MW-23D	4.1 ppm well head	
3-12-2014	1535	MW-22D	1.8 ppm well head	
3-12-2014	1650	MW-4	0.0 ppm	

Breathing Zone 0.0

Breathing Zone 0.0

Breathing Zone 0.0 ppm

Breathing Zone 0.0 ppm

Equipment Calibration Logs

YSI 556 MPS / Water Quality Calibration Certificate

AECOM

Cal Standard — Temp, LAB, C: 20.80 — Temp, FIELD, C:

	Lot #	Expiration	Post-Cal, LAB	Post-Cal, FIELD	Acceptable Range
Conductivity 1413 UMHO/CM @ 25C	7308325	9/14	1.278		(+/- .5%)
PH 4.00 @ 25C	7305561	6/15	4.00		(+/- 0.2 units)
PH 7.01 @ 25C	7305559	6/15	7.01		(+/- 0.2 units)
PH 10.01 @ 25C	7305560	6/15	10.02		(+/- 0.2 units)
ORP ZOBELLS 231.0 MV @ 25C	7401080	4/14	237.5		(+/- 20 MV)

Dissolved Oxygen (Saturated Air)	Temp, C	% Saturation	mg/L	Acceptable Range
Post-Cal, LAB	20.02	96.6	8.79	(+/- 2%) / (+/- 2%)
Post-Cal, FIELD				

New DO Membrane: (X) Yes ( ) No

Do Cap Color: ( ) Black (•) Blue ( ) Yellow

Model 556 — **S/N** 09A130728 — **Cable** 12H39

Calibration referenced to the temperature of the calibration standards.

Turbidity	Lot #	Expiration	Post-Cal, LAB	Post-Cal, FIELD	Acceptable Range
.02 NTU	20905	SEP-14	0.02		(.0196 to .0204)
10 NTU	40147	JAN-16	10.04		(9.8 to 10.2)
1000 NTU	20933	SEP-14	999.1		(970 to 1031)

Model Micro TPW — **S/N** 20081222 3

Calibrated By: Eric Olson — Date of Calibration: 2-21-14

Project Name: UTC — Project number: 60314964.2

Signed: Eric Olson

REV-5, 1/12/2012 EKO

AECOM

DAILY REPORT

PROJECT NUMBER: 60314964 DATE: Feb 24, 2014 REPORT NUMBER:

PROJECT & LOCATION: UTC Delavan Spray Technologies Site, Bamberg, SC

CLIENT: UTC AECOM FIELD REPRESENTATIVE: Randy Morgan

SUBCONTRACTOR:

SUBCONTRACTOR PERSONNEL ON SITE:

BRIEF SUMMARY OF WORK PERFORMED: calibration of equipment

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
1245		turn on YSI 556 water Quality meter to warm up
		100% saturated air @17.88°C 9.48 @ 99.9%
		Conductivity 1.278 @ 17.80 1.278
		Ph 7.02 @ 17.66 7.02
		Ph 4.00 @ 17.60 4.00
		Ph 10.05 10.02
		ORP 237.5 237.5
		Turbidity meter accepts all standards 100, 10.0 0.02 NTU's
1315		calibrate MiniRae 3000 PID 10.6 bulb Rental Field Envir.
		zero air - fresh air 0.0 ppm SN 592-908102
		100.0 ppm isobutylene gas Lot # 1505825 Exp 6-2016
		results 100.1 ppm

FIELD REPRESENTATIVES SIGNATURE: Randy Morgan DATE: Feb 24, 2014

AECOM

DAILY REPORT

PROJECT NUMBER: 60314964 DATE: Feb 25, 2014 REPORT NUMBER:

PROJECT & LOCATION: UTC Delavan Spray Technologies Site, Bamberg, SC

CLIENT: UTC AECOM FIELD REPRESENTATIVE: Randy Mergo

SUBCONTRACTOR:

SUBCONTRACTOR PERSONNEL ON SITE:

BRIEF SUMMARY OF WORK PERFORMED: Calibration of equipment

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0630		leave for site - turn on YSI 556 meters
0700		purchase ice
0708		on site, Sign in
		start calibrating YSI 556 Water Quality meters
		S/N 09A1309728
		DO% saturated air @ 23.46° 8.51 @ 99.8%
		Conductivity 1.278 @ 18.86 1.278
		Ph 7.021 @ 18.99 7.02
		Ph 4.00 @ 18.41 4.00
		Ph 10.05 @ 18.45 10.02
		ORP 237.5 @ 17.90 237.5
		Turbidity meter accepts all standards 1000, 10.0, 0.02 NTU's
0735		calibrate YSI 556 Water Quality meter S/N 08L101000
		DO% saturated air @ 14.14° 10.29 @ 100.1%
		Conductivity 1.278 @ 17.58 1.278
		Ph 7.02 @ 17.63 7.02
		Ph 4.00 @ 17.55 4.00
		Ph 10.05 @ 17.53 10.02
		ORP 237.5 @ 17.50 237.5
		Turbidity meter accepts all standards 1000, 10.0, 0.02 NTU's
		calibrate MiniRae 3000 - rental - Field Envir. S/N 469340X
		zero fresh air = 0.0 ppm
		100 ppm Isobutylene = 100.0 ppm

FIELD REPRESENTATIVES SIGNATURE: Randy Mergo DATE: Feb 25, 2014

AECOM

DAILY REPORT

PROJECT NUMBER: 60314964 DATE: Feb 26/2014 REPORT NUMBER:

PROJECT & LOCATION: UTC Delavan Spray Technologies Site, Bamberg, SC

CLIENT: UTC AECOM FIELD REPRESENTATIVE: Randy Morgo

SUBCONTRACTOR:

SUBCONTRACTOR PERSONNEL ON SITE:

BRIEF SUMMARY OF WORK PERFORMED: calibration of equipment

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0630		Turn on Meters to warm up
0700		arrive on site - Cover steppies w/ Plastic due to rain
0708		Start calibrating Water Quality Meters YSI 556
		YSI 556 S/N 09A130728
		DO% saturated air @ 15.74° 9.86 @ 99.2%
		Conductivity 1.278 @ 19.23° 1.278
		Ph 7.02 @ 19.06° 7.02
		Ph 4.00 @ 19.10° 4.00
		Ph 10.05 @ 19.09° 10.03
		ORP 237.5 @ 18.80° 237.5
		Turbidity Meter accepts all standards 1000, 10.0, 0.02 NTU's
		YSI 556 S/N 08L101000
		DO% saturated air @ 16.20° 9.77 @ 97.8%
		Conductivity @ 18.28 1.278
		Ph 7.02 @ 18.25 7.02
		Ph 4.00 @ 18.27 4.00
		Ph 10.05 @ 18.35 10.03
		ORP 237.5 @ 18.05 237.5
		Turbidity meter accepts all standards 1000, 10.0, 0.02 NTU's
0735		Calibrate Mini Rae 3000 S/N 469340X
		Fresh air zero 0.0 ppm
		100 ppm Isobutylene 100.1 ppm

FIELD REPRESENTATIVES SIGNATURE: Randy Morgo DATE: Feb 26, 2014

AECOM

DAILY REPORT

PROJECT NUMBER: 60314964 DATE: Feb 27, 2014 REPORT NUMBER:

PROJECT & LOCATION: UTC Delavan Spray Technologies Site, Bamberg, SC

CLIENT: UTC AECOM FIELD REPRESENTATIVE: Randy Monyo

SUBCONTRACTOR:

SUBCONTRACTOR PERSONNEL ON SITE:

BRIEF SUMMARY OF WORK PERFORMED: calibration of Mini Rae 3000

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0730		Calibrate Mini Rae 300 s/n 469340x
		Fresh air zero = 0.0 ppm
		100 ppm Isobuythene = 100.0 ppm

FIELD REPRESENTATIVES SIGNATURE: Randy Monyo DATE: Feb 27, 2014

AECOM

DAILY REPORT

PROJECT NUMBER: 60314964 DATE: Feb 28, 2014 REPORT NUMBER:

PROJECT & LOCATION: UTC Delavan Spray Technologies Site, Bamberg, SC

CLIENT: UTC AECOM FIELD REPRESENTATIVE: Randy Morgan

SUBCONTRACTOR:

SUBCONTRACTOR PERSONNEL ON SITE:

BRIEF SUMMARY OF WORK PERFORMED: Calibrate Mini Rae 3000

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0715		calibrate Mini Rae 3000 S/N 592-908102
		fresh air zero = 0.0 ppm
		100 ppm Isobutylene = 100.0 ppm

FIELD REPRESENTATIVES SIGNATURE: Randy Morgan DATE: Feb 28, 2014

UTC Delaware

AECOM

Randy Morgan

DAILY REPORT

PROJECT NUMBER: _____ DATE: 3-1-14 REPORT NUMBER: _____

Calibrate Mini Rae 3000 Page #: _____

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0730		Calibrate Mini Rae 3000 S/N 592-908102
		Fresh air zero = 0.0 ppm
		100 ppm Isobutylene = 100.1 ppm

UTC Delavan

PAGE ___ OF ___

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE March 2, 2014 REPORT NUMBER ___

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

ADDITIONAL REMARKS Calibrate instruments

0715 Calibrate Mini Rae 3000 S/N 592-908102
Fresh air zero = 0.0 ppm
100 ppm Isobutylene = 100.0 ppm
Calibrate dust meter - zero fresh air OK

Calibrate Mini Rae 2000
Fresh air zero = 0.0
100 ppm Isobutylene = 100.1 ppm

AECOM

SIGNATURE: Randy Morgan

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

UTC Delavan

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: March 3, 2014 REPORT NUMBER: _____

Calibrate instruments Page #: _____

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
0713		Calibrate Mini Rae 2000
		fresh air Zero = 0.0
		100ppm Isobutylene = 100.0 ppm
		Calibrate Mini Rae 3000
		fresh air ~~0.0~~ Zero = 0.0
		100 ppm Isobutylene = 100.0 ppm

Randy Mory

UTC Delaware

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: March 5, 2017 REPORT NUMBER: _____

Page #: _____

Calibrate YSI 556 Water Quality Meters

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
		S/N 08L101 000 YSI 556
		DO% saturated air @ 16.97 9.64 @ 99.7%
		Conductivity 1.278 @ 17.23 1.278
		Ph 7.02 out of range
		Ph 4.00 @ 17.16 4.00
		Ph 10.05 out of range
		ORP 237.5 @ 19.99 237.5
		Turbidity Meters accepts all standards 1000, 10.0, 002 NTUS
		S/N 09A130728
		DO% saturated air @ 17.57 9.52 @ 99.8%
		Conductivity 1.278 @ 17.43 1.278
		Ph 7.02 @ 17.10 7.02
		Ph 4.00 @ 17.52 4.00
		Ph 10.05 @ 17.67 10.03
		ORP 237.5 @ 17.52 237.5
		Turbidity meter accepts all standards 1000, 10.0, 0.02, NTUS
		Calibrated at motel before leaving for site due to cold conditions

FIELD REPRESENTATIVES SIGNATURE: Kendy Monge DATE: 3-5-2017

UTC Delaven

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: 3-6-2014 REPORT NUMBER: _____

Calibration of Water Quality Meters Page #: _____

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
		S/N 08L101000 YSI 556
		DO% saturated air @ 17.72 9.52 @ 99.9%
		Conductivity 1.278 @ 17.10 1.278
		Ph 7.02 out of range
		Ph 4.00 @ 17.35 4.00
		Ph 10.05 out of range
		ORP 237.5 17.40 237.5
		Turbidity meter accepts all standards 1000, 10.0, 0.02 NTUs
		S/N 09A130728 YSI 556
		DO% saturated air @ 18.62 9.33 @ 99.8%
		Conductivity 1.278 @ 17.60 1.278
		Ph 7.02 @ 17.37 7.02
		Ph 4.00 @ 17.59 4.00
		Ph 10.05 @ 17.63 10.01
		ORP 237.5 @ 17.69 237.5
		Turbidity meter accepts all standards 1000, 10.0, 0.02 NTUs
		Calibrated at Mitel due to weather conditions cold/rain

FIELD REPRESENTATIVES SIGNATURE: Randy Mongo DATE: March 6, 2014

UTC Delavan Bamberg SC

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: 3-10-14 REPORT NUMBER: _____

Instrument calibration Page #: _____

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
		turn on meter in Orangeburg on the way to site to
		warm up S/N 09A130728
		on site Calibrate YSI 556 water quality meter
		DO% saturated air @ 16.02 9.86
		Conductivity 1.278 @ 17.47 1.278
		Ph 7.02 @ 17.39 7.02
		Ph 4.00 @ 17.69 4.00
		Ph 10.03 @ 17.45 10.03
		ORP 237.5 @ 17.51 237.5
		Turbidity meter accepts all standards 1000, 10.0, 0.02 NTU
		Calibrate PID Mini Rae 2000 S/N 110-015043
		Fresh air zero = 0.0 ppm
		100.0 Isobutylene gas = 101.0 ppm

UTC Delavan Bamberg SC

AECOM

DAILY REPORT

PROJECT NUMBER: _____ DATE: 3-11-14 REPORT NUMBER: _____

instrument Calibration Page #: _____

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
		at motel before leaving calibrate YSI 556
		Water Quality Meter
0600		turn on to warm up
0630		Calibrate meter S/N 09A130728
		100% saturated air @ 21.84 8.66
		Conductivity 1.278 @ 20.86 1.278
		Ph 7.02 @ 21.08 7.02
		ph 4.00 @ 20.57 4.00
		ph 10.05 @ 21.06 10.02
		ORP 237.5 @ 21.17 237.5
		Turbidity meter accepts all standards 1000, 10.0, 0.02 NTU's
0735		Calibrate PID Mini Rae 2000 S/N 110-015043
		Fresh Air zero = 0.0 ppm
		100.0 ppm Isobutylene gas = 101.0 ppm

AECOM

DAILY REPORT

PROJECT NUMBER: 60314964 DATE: 3-12-14 REPORT NUMBER:

PROJECT & LOCATION: UTC Delavan Spray Technologies Site, Bamberg, SC

CLIENT: UTC AECOM FIELD REPRESENTATIVE: Randy Monyo

SUBCONTRACTOR:

SUBCONTRACTOR PERSONNEL ON SITE:

BRIEF SUMMARY OF WORK PERFORMED: calibration of instruments

START TIME	STOP TIME	DESCRIPTION OF ACTIVTIES: REMARKS
		turn on YSI 556 water Quality Meter to warm up S/M
		Calibrate YSI 556 meter in motel room before leaving for site
		DO% saturated air @ 21.87° 8.61
		Conductivity 1.278 @ 21.86 1.278
		Ph 7.02 @ 21.90 7.02
		Ph 4.00 @ 21.93 4.00
		Ph 10.05 @ 22.00 10.02
		ORP 237.5 @ 22.04 237.5
		Turbidity meter accepts all Standards 1000, 10.0, 0.02 NTUs
0735		on site calibrate Mini Rae 2000
		fresh air 0.0 ppm
		100 Isobutylene = 101.0 ppm

FIELD REPRESENTATIVES SIGNATURE: Randy Monyo DATE: March 12 2014

Daily Quality Control Reports

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 2-24-14 REPORT NUMBER 1

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

WEATHER Sunny TEMPERATURE RANGE 50-70°F WIND 0-5mph

PERSONNEL ON SITE L Alexander, R Morgan, C Sudderth (AECOM) TIME ON SITE 0800
B. Burnett & (AE Drilling) Scott & Jamy (GSL)

SUMMARY OF SITE ACTIVITIES Geophysical clearance of new locations by GSL drillers & AECOM mob to site & stage equipment; GW sampling at MW-14. Drill MW-21D to 30.5 ft bgs w/ 4.25" augers & split spoon

LEVEL OF HEALTH & SAFETY PROTECTION Level D - hard hats & nitrile gloves as needed, steel toed boots, safety glasses, vests, ear plugs as needed

INSTRUMENTATION USED YSI 556 water quality meter, miniRAE 3000 PID, Waterra pump meter, Peristaltic pump, turbidity meter

CALIBRATION(S) PERFORMED YSI DO% saturated air conductivity std 1.278, pH 7.02, 4.0 & 10.05 solutions, ORP 237.5 std'n; turbidity meter to 0.02, 10.0, & 1000 NTU std (cont'd below)

INSTRUMENT PROBLEMS/REMEDIES None

SAMPLES COLLECTED* MW-14 & FB14 for VOCs (groundwater)

SAMPLE COLLECTION METHOD(S) Purging w/peristaltic pump & then reverse (soda straw) method for VOCs

QUALITY CONTROL SAMPLES* Trip blank MW-14-c (VOCs); MW-14-a field duplicate for VOCs.

ADDITIONAL REMARKS Cal confirmed: miniRAE PID in zero air & 100.0 ppm Isobutylene

AECOM SIGNATURE: [signature]

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 2-25-14 REPORT NUMBER 2

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

WEATHER Sunny TEMPERATURE RANGE 40-75°F WIND 0-10 mph

PERSONNEL ON SITE L Alexander, R Morgan & L Sidders (AECOM) TIME ON SITE 0700
B. Burnett & (AGDrilling)

SUMMARY OF SITE ACTIVITIES Drill MW-21D with 8.25" augers & grout 6" surface casing to 31.5', Drill MW-21 w/ 4.25" augers to 35 ft & split spoon; collect soil samples at DPT-45 (co-located w/ MW-21); GW sampling at MW-2, MW-15, MW-15D & MW-15DI. R Morgan to Columbia, SC (already) for VOC vials (unpreserved).

LEVEL OF HEALTH & SAFETY PROTECTION Level D: Safety vests, steel toed boots, safety glasses. As needed: hard hats, nitrile gloves, & ear plugs

INSTRUMENTATION USED YSI 556 water quality meter, mini Rae 3000 PID, water level meter, peristaltic pump, turbidity meter

CALIBRATION(S) PERFORMED YSI 556 meters S/N 09A130928 & s/n 08J101000 to DO% in sat'd air, 1.278 conductivity std, pH 7.00, 4.00 & 10.05 su stds (see below)

INSTRUMENT PROBLEMS/REMEDIES None

SAMPLES COLLECTED* Groundwater: MW-2 for VOCs, MW-15 for VOCs, MW-15D for VOCs & MW-15DI for VOCs; soil: ~~MW-21~~ DPT-45 (2-4) for VOCs & moisture

SAMPLE COLLECTION METHOD(S) Soil samples collected via hand augers & using terra core & stainless steel spoon; GW samples collected via peristaltic pump using reverse (soda straw) method for VOCs

QUALITY CONTROL SAMPLES* Groundwater field duplicate MW-2-a for VOCs; MW-15D -ms/msd for VOCs; soil field duplicate DPT-45 (2-4)-a for VOCs /soil moisture

ADDITIONAL REMARKS NOTE - Sample MW-14 & MW-14-a & MW-14-C from yesterday thrown out (disposed of) purge water) b/c lab sent preserved bottles instead of unpreserved. will re-sample.
Calibration(cont): ORP 237.5 mg/L std; turbidity meter to 100, 10.0 & 0.02 NTU std

AECOM SIGNATURE: Leslie Alexander

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 2-25-14 REPORT NUMBER 2

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

ADDITIONAL REMARKS Calibration: mini Rae 3000 meters S/N K093410X & to fresh air & 100 ppm isobutylene std

AECOM SIGNATURE: Leslie Delavan

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 2-26-14 REPORT NUMBER 3

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

WEATHER rainy, chilly TEMPERATURE RANGE 45-50 WIND light to none

PERSONNEL ON SITE R Morgan, L Alexander, & C Siddeth (AECOM) TIME ON SITE 0700
B Burnell, N Hawthorne, M Gonzales & C Winborn (AE Drilling)

SUMMARY OF SITE ACTIVITIES Low flow ground water sampling at MW-1, MW-14S MW-14D; DPT soil sampling at DPT-49 through DPT-57 - all borings completed to 10ft bgs; Drilled MW-21 to 32.5', installed well MW-21 to 34 ft (screened 19.34 ft bgs); Drill MW-22D to 35ft bgs w/ 4.25" augers

LEVEL OF HEALTH & SAFETY PROTECTION Level D, hard hats as needed, steel toed boots, safety glasses, nitrile gloves, safety vests & earplugs as needed

INSTRUMENTATION USED MiniRae 2000 & 3000 PID; YSI 556 water quality meter, turbidity meter, water level probe

CALIBRATION(S) PERFORMED miniRaes calibrated to fresh air & 100 ppb isobutylene, YSI 556 water quality meters calibrated to DO saturated air, 1.278 conductivity std (continued below)

INSTRUMENT PROBLEMS/REMEDIES ~~NA~~ Some intermittent problems w/ the miniRae 2000 PID reading high → likely due to humidity / moisture

SAMPLES COLLECTED* Groundwater sample MW1 for VOCs, SVOCs, metals & MNA parameters; Groundwater sample MW-14 for VOCs MW-14D for VOCs & MNA parameters; Soil samples DPT-49(6-8), DPT-50(4-6), DPT-51(7-9), DPT-52(8-10), DPT-53 (8-10), DPT-54(8-10), DPT-55(3-5), DPT-56(2-4) & DPT-57(6-8) for VOCs, SVOCs, metals & hex chrome

SAMPLE COLLECTION METHOD(S) GW samples collected via low flow purging w/ peristaltic pump (pipette method used for VOCs collection); soil samples collected using DPT rig w/ acetate sleeves → VOCs portion collected directly from sleeves & remaining portion homogenized in stainless steel bowl w/ stainless steel spoon

QUALITY CONTROL SAMPLES* groundwater field duplicate MW-1-a for VOCs SVOCs, metals & MNA parameters; Soil sample DPT-52(8-10)-a (field duplicate) for VOCs SVOCs metals & hex chrome; soil sample ms/msd DPT-54(8-10)-ms/msd for VOCs, SVOCs metals & hex chrome; sleeve & DPT shoe rinsate DPT-57(6-8)-d for VOCs, SVOCs, metals & hex chrome

ADDITIONAL REMARKS Calibration continued: pH 4.00, 7.02 & 10.05 su standards; turbidity meters calibrated to 10, 100 & 1000 NTU stds.

AECOM SIGNATURE: Leslie Alexander

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 2-27-14 REPORT NUMBER 4

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

WEATHER mostly sunny TEMPERATURE RANGE 40-60°F WIND light

PERSONNEL ON SITE LAlexander, RMorgan, CSkidelsky (AECOM), BBarnett, N. Hawthorne, M Gonzales & Greenhorn (AED Drilling) TIME ON SITE 0710

SUMMARY OF SITE ACTIVITIES Drill MW-22D to 37 ft w/8.25" augers; install 6" PVC casing to 36' bgs at MW-22D; Drill MW-23D to 35.5' w/ 4.25" augers; Clear path to wells w/ chain saw at MW-17; DPT soil sampling at DPT-28 through DPT-33 (all borings to 10' bgs) and background locations BG-4 & BG-5 (completed to 20 ft bgs).

LEVEL OF HEALTH & SAFETY PROTECTION Level D; safety glasses, safety vests, steel toed boots, nitrile gloves; hard hats & earplugs as needed

INSTRUMENTATION USED miniRae 2000 & 3000 PIDs

CALIBRATION(S) PERFORMED miniRae PIDs calibrated to fresh air (zero gas) & 100 ppm isobutylene std

INSTRUMENT PROBLEMS/REMEDIES NA

SAMPLES COLLECTED* Soil samples for VOCs, SVOCs, metals, hex chrome & pH: DPT-28 (3-5), DPT-29 (2-4), DPT-30 (7-9), DPT-31 (5-7), DPT-32 (8-10), & DPT-33 (6-8); Soil samples for metals & hex chrome: BG-4 (1-3), BG-4 (5-7), BG-4 (9-11), BG-4 (14-16), BG-4 (17-19), BG-5 (1-3), BG-5 (3-5), BG-5 (6-7.5), BG-5 (8-9), BG-5 (12-13) & BG-5 (16-17)

SAMPLE COLLECTION METHOD(S) Soil samples collected from DPT (lined w/ acetate sleeves); VOC portion was collected directly from the acetate sleeves & remaining portion was homogenized in stainless steel bowl w/ stainless steel spoon.

QUALITY CONTROL SAMPLES* trip blank, DPT-28 (3-5)-c for VOCs; MS/MSD sample (soil) BG-5 (16-17) - MS/MSD for metals & hex chrome; rinsate - acetate sleeve w/ DPT driver shoe → DPT-29 (2-4) - d for VOCs, SVOCs, metals & hex chrome

ADDITIONAL REMARKS

AECOM SIGNATURE:

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 2/29/14 REPORT NUMBER 5

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

WEATHER Sunny TEMPERATURE RANGE 35-60°F WIND Light to none

PERSONNEL ON SITE LAlexander & R Morgan (AECOM), G Winborn & M. Gonzales (AEDrilling TIME ON SITE 0710

SUMMARY OF SITE ACTIVITIES Completed BG-2 & BG-3 w/geoprobe to 20ft bgs; Geoprobe DPT-46 through -48 to 10ft bgs; Soil sampling, decon; abandonment of soil borings; concrete coring inside building - DPT-34, SSV-2, DPT-37 & DPT-35. Install surface casing at MW-23D. Build pad at MW-21.

LEVEL OF HEALTH & SAFETY PROTECTION Level D: hardhats behind rig; steeltoed boots, safety glasses & safety vests; nitrile gloves & earplugs as needed

INSTRUMENTATION USED MiniRae 2000 & 3000 PID; geoprobe rig; coring equipment; decon supplies (liquinox & potable w/DI rinse), soil sampling equipment, Drill Rig

CALIBRATION(S) PERFORMED MiniRae 2000 & 3000 to zero & 100ppm iso butylene

INSTRUMENT PROBLEMS/REMEDIES N/A

SAMPLES COLLECTED* Soil samples BG-3 (0.5-1.5), BG-3 (2-3), BG-3 (9-11), BG-3 (14-16), BG-3 (18-20) BG-2 (1.5-2.5), BG-2 (4-5), BG-2 (7-8), BG-2 (12-14) BG-2 (16-17), BG-1 (1-2) & BG-1 (16-17) for hex chrome & metals; DPT-47 (5-7) for VOCs, SVOCs, metals & hex chrome; DPT-48 (7.5-9.5) & DPT-46 (1.5-3.5) for (continued)

Quality Control Samples
~~SAMPLE COLLECTION METHOD(S)~~* Soil Field duplicate BG-2 (12-14)-a for metals & hex chrome
Field duplicate DPT-46 (1.5-3.5)-a for VOCs, SVOCs, metals & hex chrome

~~Sample Collection Methods:~~
~~QUALITY CONTROL SAMPLES~~* b: Screen soils (where VOCs analysis to be performed) with PID to determine sample intervals; for background soils - take samples based on soil types; VOCs collected directly from acetate sleeves; remaining interval composited in stainless steel bowls w/ stainless steel spoons before filling sample jars

ADDITIONAL REMARKS Crew held up a bit waiting for Rigears to be onsite in order to mob inside building for coring. Stayed busy logging & decoming & abandoning plants.

AECOM SIGNATURE: LAlexander

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 2/28/14 REPORT NUMBER 5

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

ADDITIONAL REMARKS Samples collected for SVOCs, VOCs, metals & hexchrome

AECOM

SIGNATURE: Leslie Alexander

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 3/1/14 REPORT NUMBER 6

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

WEATHER Sunny TEMPERATURE RANGE 40-~~60~~ 55°F WIND N/A

PERSONNEL ON SITE R Morgan & L Alexander (AECOM), M Gonzales & G Winburn (AED Drilling) TIME ON SITE 0715

SUMMARY OF SITE ACTIVITIES Concrete coring at SSV-38-4; DPT-36, DPT-38, and DPT-39 through -44; Geoprobe DPT-34 to 10ft bgs; Geoprobe DPT-36 to 15ft bgs Geoprobe DPT-35 to 15ft bgs w/2" rods & overbore w/ 3" rods to 20ft bgs and install MW-19 - screened ~5-20' bgs. Collect soil samples as below.

LEVEL OF HEALTH & SAFETY PROTECTION Level D: hardhats behind rig, ear plugs as needed, Steel toed boots, safety glasses & vests; nitrile gloves as needed

INSTRUMENTATION USED Decon supplies (Liquinox & potable water, DI rinse) MiniRae 2000 & 3000 PID, concrete coring equipment, geoprobe rig; CO monitor provided by facility per KE permit when rig running

CALIBRATION(S) PERFORMED MiniRae 2000 & 3000 calibrated to zero & 100 ppm Isobutylene; CO monitor calibrated prior to use. DE4

INSTRUMENT PROBLEMS/REMEDIES NONE

SAMPLES COLLECTED* Soil Samples: DPT-34 (8-10) for VOCs, SVOCs, metals & hex chrome; DPT-36(5-7), DPT 36(12-14), DPT-35(3-5) and DPT-35(10.5-12.5) for VOCs & SVOCs.

SAMPLE COLLECTION METHOD(S) Screen soils w/ PID to determine sample intervals. VOCs collected directly from acetate sleeves. Remaining composited in Stainless steel bowls w/ stainless steel spoons before filling sample jars

QUALITY CONTROL SAMPLES* Soil Field duplicate DPT-34(8-10)-a for VOCs, SVOCs, metals & hex chrome. Field duplicate DPT-34(5-7)-a for VOCs & SVOCs. MS/MSD DPT-35(3-5)-ms/msd for VOCs & SVOCs.

ADDITIONAL REMARKS Logistics a bit more time consuming than planned w/ people working (were originally supposed to be shut down). Have to buy additional cones to ensure employee (Delavan) safety while we are working; have to leave cores in & marked w/ cones to prevent hazard to employees, & these can be difficult to get back out (continued pg 2)

AECOM SIGNATURE: Leslie Alexander

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 3/1/14 REPORT NUMBER 6

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

ADDITIONAL REMARKS Have to locate Tommy in areas where electrical wasn't marked yesterday by Chris so crews know which circuits to use for coring; have to find Tommy to move cores at DPT-36 that didn't get moved as planned the night before. Have to work through lunch in order to core at DPT-39 b/c personnel working at equipment there.
Soils very tight at DPT-35 - when overdrilling w/ 3" rods, had trouble getting down & then trouble getting back out of hole. Sheared threads on one of the geoprobe rods
Couldn't use geoprobe at DPT-39 bc planned no way to position rig for overhead light fixtures etc & crew doesn't have 2ft rod - will have to hand auger

AECOM

SIGNATURE: Leslie Allemandou

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 3/2/14 REPORT NUMBER 7

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

WEATHER Sunny TEMPERATURE RANGE 40-77°F WIND NA

PERSONNEL ON SITE LAlexander & R Morgan (AECOM), M. Gonzales & G. Winborn (AECOM drilling) TIME ON SITE 0710

SUMMARY OF SITE ACTIVITIES Hand augering: DPT-37 to 12.3' bgs (water ~12ft), DPT-38 to 12.2 ft bgs, DPT-39 to 12.4ft bgs; DPT-41 to 15ft bgs & set pre-pack monitoring well MW-20 at Washer for DPT-41, screened ~5-15 ft bgs. abandonment of borings from yesterday & today.

LEVEL OF HEALTH & SAFETY PROTECTION level D: steel toed boots, safety glasses, vests, earplugs as needed, nitrile gloves as needed

INSTRUMENTATION USED MiniRae 2000 & 3000 PID; hand augers & SS soil sampling equipment, decon materials (liquinox & potable water, DI rinse)

CALIBRATION(S) PERFORMED MiniRae 2000 & 3000 PID to zero & 100 ppm isobutylene (100ppm) gas.

INSTRUMENT PROBLEMS/REMEDIES miniRae 2000 reading high in battery, RMorgan recalibrated and that seemed to fix issue

SAMPLES COLLECTED* DPT soil samples: DPT-37(6-8), DPT-38(8-10), DPT-39(8-10) and DPT-41(6-8) for VOCs & SVOCs.

SAMPLE COLLECTION METHOD(S) Soil samples removed w/ hand auger & placed in plastic bags for head space screening; VOC sample portion collected first & then remaining sample intervals composited in stainless steel bowl w/ stainless steel spoon.

QUALITY CONTROL SAMPLES* auger rinsate equipment blank DPT-39(8-10)-d for VOCs & SVOCs. Trip blank DPT-39(8-10)-c for VOCs

ADDITIONAL REMARKS Some issues working around personnel as yesterday, had to find Tommy to move personnel near MW-39. PIDs reading high in BZ before work even commenced due to facility operations. Had to be off-site by 3pm because facility closed for day after-effect on productivity/schedule

AECOM SIGNATURE: LAlexander

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 3/3/14 REPORT NUMBER 8

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

WEATHER 40-65°F p cloudy, chance of rain TEMPERATURE RANGE 40-65°F WIND Light

PERSONNEL ON SITE R Morgan, L Alexander, C Sudderth (AECOM) TIME ON SITE 0700
M Gonzales, G Winbourn, B Burnett, G Gibson (AE Drilling)

SUMMARY OF SITE ACTIVITIES Arrived & Installed MW-18 through bentonite seal; hand auger soil sampling at DPT-40, -42, -43 and -44; DPT-42 to 12.3 Ft, DPT-40 to 12Ft, DPT-43 to 12.3Ft & DPT-44 to 12.2Ft; Install SSV-1 through SSV-4 from ~0.5-1 Ft below bottom of concrete surface

LEVEL OF HEALTH & SAFETY PROTECTION Level D: steel toed boots, safety vests, safety glasses; hard hats & earplugs & nitrile gloves as needed

INSTRUMENTATION USED PID → mini Rae 2000 & 3000

CALIBRATION(S) PERFORMED Calibrated PIDs to zero gas (ambient air) & 100ppm Isobutylene std

INSTRUMENT PROBLEMS/REMEDIES NA

SAMPLES COLLECTED* Soil sample DPT-42(8-10) & DPT-40(9-11) for VOCs & SVOCs; DPT-44(7-9), DPT-43(5-7) & DPT-43(11-12) for VOCs

SAMPLE COLLECTION METHOD(S) Soil samples removed from hand auger & placed in plastic bag for head space screening; VOC sample portion collected first & then remaining sample material composited in Stainless Steel bowls w/ Stainless steel spoons

QUALITY CONTROL SAMPLES* NA

ADDITIONAL REMARKS NA

AECOM SIGNATURE: Leslie Alexander

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 3-4-14 REPORT NUMBER 9

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

WEATHER Cool - Cloudy / light rain TEMPERATURE RANGE ~~30-45~~ 20-38 °F WIND Light

PERSONNEL ON SITE L Alexander & C Sudderth (AECOM); BBurnett G Gibson, M Gonzales & G Washburn CAE Drilling TIME ON SITE 0730

SUMMARY OF SITE ACTIVITIES Catch up on logging archived geoprobe / hand auger soils; well development of MW-21; Drill & install MW-17 through bentonite seal; set up for mud rotary drilling & begin drilling MW21D to 35ft (losing circulation); Grout MW-17 & MW-19.

LEVEL OF HEALTH & SAFETY PROTECTION Level D: steel toed boots, safety vests, hard hats safety glasses & earplugs & nitrile gloves as needed

INSTRUMENTATION USED YSI 556 water quality meter; Min. Rae 3000 PID

CALIBRATION(S) PERFORMED PID calibrated to zero gas & 100 ppm isobutylene; YSI 556 Calibrated to Dunstall air, conductivity std, ORP std & pH 4.00, 7.01 & 10.06 stds

INSTRUMENT PROBLEMS/REMEDIES difficulty calibrating YSI 556 to conductivity std.

SAMPLES COLLECTED* NA

SAMPLE COLLECTION METHOD(S) NA

QUALITY CONTROL SAMPLES* NA

ADDITIONAL REMARKS problems w/ lost circulation ~~deth~~ due to high permeability in limestone at MW-21D. AE Drilling looking into alternatives for mud

AECOM SIGNATURE: Leslee Alexander

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 3/5/14 REPORT NUMBER 10

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

WEATHER cold, rainy TEMPERATURE RANGE 33-45°F WIND light

PERSONNEL ON SITE L Alexander & R Morgan (C Sydeth (AECOM) M Gonzales, G. Winborn, B Burnette, G. Gibson (AE Drilling) TIME ON SITE 0920

SUMMARY OF SITE ACTIVITIES Ground water Sampling at MW-5, MW-7, MW-10, MW-10D, MW-3, MW-3D & MW-3D1; Began drilling deeper portion of MW-21D (D) mud rotary. Drill from 31.5 (casing depth) to 40' - lost circulation - no fluids returning. Bit clogged and pressured-caused hose to burst at top of (cont)

LEVEL OF HEALTH & SAFETY PROTECTION Level D: hard hat when needed, safety glasses, safety vests, steel toed boots, earplugs as needed

INSTRUMENTATION USED PID - mini Rae 2000 & 3000, YSI 556 water quality meters, turbidity meter, water level meter, peristaltic pumps

CALIBRATION(S) PERFORMED YSI 556 calibrated: DO% in saturated air, conductivity, pH & ORP to provided standards; Turbidity meter checked against 1000, 10 & 0.02 NTU (cont)

INSTRUMENT PROBLEMS/REMEDIES YSI 532 S/N 08E101000 out of range on pH 7.02 SU & 10.05 SU but ok on 4.00 SU

SAMPLES COLLECTED* GW samples: MW-3, & MW-10 for VOCs, SVOCs, metals & MNA; MW-5 for VOCs, SVOCs & metals; MW-3D for VOCs & MNA; MW-3D1, MW-7 and MW-10D for VOCs.

SAMPLE COLLECTION METHOD(S) GW samples collected by low flow sampling w/ a peristaltic pump. Pipette method used to collect VOCs

QUALITY CONTROL SAMPLES* trip blank MW-3-C, ms/msd MW-3-ms/msd for VOCs, SVOCs, metals & MNA

ADDITIONAL REMARKS materials delivered by Randy from AE Drilling. Remove crew (M. Gonzales & G. Winborn) left to mid afternoon - will return when deep wells ready for pads/development

AECOM SIGNATURE: Leslie J Alexander

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 3-5-14 REPORT NUMBER 10

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

ADDITIONAL REMARKS Calibration continued: standards, PIDs calibrated to zero gas & 100 ppm isobutylene

Summary Continued: drillhead. Move rig to MW-23D while repair hose & polymers delivered from AE Drilling in Greenville. Repaired hose and drilled to 49.5 ft at MW-23D.

AECOM

SIGNATURE:

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 3/6/14 REPORT NUMBER 11

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

WEATHER cold, cloudy & rainy TEMPERATURE RANGE 30-~~45~~ 45 °F WIND light-mod

PERSONNEL ON SITE BMorgan, LAlexander & CSuddeth (AECOM) TIME ON SITE 0710
GGibson, & BBurnett (AE Drilling)

SUMMARY OF SITE ACTIVITIES Finish drilling & install MW-23D through bentonite seal; mud rotary drilling at MW-22D & install MW-22D through bentonite seal; ground water sampling at MW-9, MW-9D, MW-16, MW-16D, MW-19, & MW-20 well development at MW-19 & MW-20

LEVEL OF HEALTH & SAFETY PROTECTION Level D: steel toed boots, safety vests, safety glasses; hard hats, earplugs & nitrile gloves as needed

INSTRUMENTATION USED YSI 556 water quality meter; MiniRae 2000 & 3000 PID, turbidity meter

CALIBRATION(S) PERFORMED PIDs calibrated to zero gas & 100ppm isobutylene std; YSI 556 Calibrated to conductivity, ORP, pH & DO stds; turbidity meter calibrated to ground

INSTRUMENT PROBLEMS/REMEDIES ~~N/A~~ sporadic problems w/ miniRae 2000 stds due to moisture

SAMPLES COLLECTED* ground water: MW-16 & MW-16D for VOCs & MNA parameters; MW-9 for VOCs, ~~metals~~ SVOCs & MNA parameters; MW-9D for VOCs; MW-19 & MW-20 for VOCs, SVOCs & metals

SAMPLE COLLECTION METHOD(S) low flow purging using a peristaltic pump; pipette method used for VOC sample collection

QUALITY CONTROL SAMPLES* water: trip blank MW-16-C for VOCs

ADDITIONAL REMARKS N/A

AECOM SIGNATURE: Leslie Alexander

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 3/7/14 REPORT NUMBER 12

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

WEATHER cold, rainy TEMPERATURE RANGE 38-45 WIND light-mod

PERSONNEL ON SITE LAlexander, RMorgan & CSuddeth (AECOM), GGibson, BBurnette, PGonzales & GWilbourn (AEDrilling) TIME ON SITE 0720

SUMMARY OF SITE ACTIVITIES Sub slab vapor sampling at SSV-1 through SSV-4; well development at MW-23D; grouting of MW-17, -18, 21D, 22D & 23D; finish mud rotary drilling at MW-21D & install MW-21D; demob crews & equipment for weekend

LEVEL OF HEALTH & SAFETY PROTECTION Level D: safety glasses, steel toed boots, vests, hard hats, earplugs & nitrile gloves as needed

INSTRUMENTATION USED mini Rae 3000 PID; helium detector, Summa canisters w/ regulators

CALIBRATION(S) PERFORMED mini Rae 3000 PID to zero gas & 100ppm isobutylene

INSTRUMENT PROBLEMS/REMEDIES N/A

SAMPLES COLLECTED* Sub slab vapor sample SSV-1, SSV-2, SSV-3, & SSV-4

SAMPLE COLLECTION METHOD(S) Subslab vapor samples collected using lab-supplied Summa canisters w/ 2-hr regulator

QUALITY CONTROL SAMPLES* Sub slab vapor duplicate SSV-4-a

ADDITIONAL REMARKS N/A

AECOM SIGNATURE:

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 3/10/14 REPORT NUMBER 13

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

WEATHER Sunny TEMPERATURE RANGE _____ WIND _____

PERSONNEL ON SITE R Morgan (AECOM) TIME ON SITE 0600 - Guille office
0945 - onsite at Bamberg

SUMMARY OF SITE ACTIVITIES well development at MW-17 & MW-18; groundwater sampling at MW-17 & MW-18

LEVEL OF HEALTH & SAFETY PROTECTION Level D: steel toed boots, safety glasses safety vests, nitrile gloves, hard hat & ear plugs as needed

INSTRUMENTATION USED YSI 556 water quality meter & MiniRae 2000 PID turbidity meter

CALIBRATION(S) PERFORMED MiniRae 2000 to zero gas & 100 ppm isobutylene std; YSI 556 to ORP, DO, conductivity & pH stds turbidity meter to turbidity stds

INSTRUMENT PROBLEMS/REMEDIES NA

SAMPLES COLLECTED* groundwater samples MW-17 & MW-18 for VOCs

SAMPLE COLLECTION METHOD(S) low flow purging w/ a peristaltic pump; pip it method for VOCs

QUALITY CONTROL SAMPLES* trip blank MW-17-C for VOCs

ADDITIONAL REMARKS _____

AECOM SIGNATURE Leslie Alexander

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 3/11/14 REPORT NUMBER 14

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

WEATHER _____ TEMPERATURE RANGE _____ WIND _____

PERSONNEL ON SITE R Morgan (AECOM) AEDrilling - B Burnette TIME ON SITE 0730

SUMMARY OF SITE ACTIVITIES Ground water sampling at MW-8, MW-11 & MW-12D, MW-21. well development of MW-21D & MW-22D; well pad / completions on MW-17, MW-18, MW-21D & MW-22D.

LEVEL OF HEALTH & SAFETY PROTECTION Level D: Steel toed boots, safety glasses, safety vests, nitrile gloves

INSTRUMENTATION USED MiniRae 2000 PID, YSI 556 water quality meter, turbidity meter

CALIBRATION(S) PERFORMED MiniRae 2000 PID calibrated to zero gas & 100ppm Isobutylene Std; YSI 556 calibrated to DO, cond, pH & ORP stds; turbidity meter cal to turbidity stds.

INSTRUMENT PROBLEMS/REMEDIES NA

SAMPLES COLLECTED* ground water sample MW-8 for VOCs, SVOCs & metals, MW-11 for VOCs & MW-12D for VOCs & MNA parameters

SAMPLE COLLECTION METHOD(S) low flow w/a peristaltic pump; Aperta method for VOCs

QUALITY CONTROL SAMPLES* ~~NA~~ trip blank MW-21-C for VOCs

ADDITIONAL REMARKS _____

AECOM

SIGNATURE: Robin Alexander

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 3/12/14 REPORT NUMBER 15

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

WEATHER _____ TEMPERATURE RANGE _____ WIND _____

PERSONNEL ON SITE R Morgan (AECOM) TIME ON SITE 0730

SUMMARY OF SITE ACTIVITIES ground water sampling at MW-4, MW-6, MW-13D, MW-22D, & MW-23D; IDW sample → IDW-4, -5, -6, -7, & -8

LEVEL OF HEALTH & SAFETY PROTECTION Level D: steel toed boots, safety glasses, safety vests & nitrile gloves as needed

INSTRUMENTATION USED mini Rae 2000 PID, YSI 556 water quality meter, turbidity meter

CALIBRATION(S) PERFORMED miniRae 2000 PID to zero gas & isobutylene std; YSI 556 to DO, conductivity, ORP & pH stds; turbidity meter to turbidity stds

INSTRUMENT PROBLEMS/REMEDIES N/A

SAMPLES COLLECTED* ground water sample MW-6 & MW-22D for VOCs, SVOCs & metals; MW-13D for VOCs & MNA parameters; MW-22D, MW-23D & MW-4 for VOCs; IDW samples IDW-4 through IDW-8 from soil drums for TCLP VOCs, SVOCs & metals

SAMPLE COLLECTION METHOD(S) groundwater - low flow w/ peristaltic pump, A probe for VOCs; IDW w/ hand auger / sample sleeve & composited in stainless steel bowls w/ stainless steel spoons

QUALITY CONTROL SAMPLES* trip blank MW-23D-C

ADDITIONAL REMARKS _____

AECOM SIGNATURE: [signature]

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

DAILY QUALITY CONTROL REPORT

JOB NUMBER 60314964 DATE 3-13-14 REPORT NUMBER 16

PROJECT & LOCATION UTC Delavan Spray Technologies Site RI, Bamberg SC

WEATHER _____ TEMPERATURE RANGE _____ WIND _____

PERSONNEL ON SITE R. Morgan (AECOM) TIME ON SITE 0745

SUMMARY OF SITE ACTIVITIES IDW sampling of IDW-1, -2, -3, -4 & -9.; Final sewer & staging of drums & cones; Demobilize of personnel & AECOM equipment

LEVEL OF HEALTH & SAFETY PROTECTION Level D: Steel toed boots, safety glasses, safety vests, nitrile gloves as needed

INSTRUMENTATION USED NA

CALIBRATION(S) PERFORMED NA

INSTRUMENT PROBLEMS/REMEDIES NA

SAMPLES COLLECTED* Soil/water mix: IDW-9; aqueous: IDW-1, IDW-2, IDW-3 & IDW-4.

SAMPLE COLLECTION METHOD(S) Bailer to collect water from drums for aqueous samples; hand auger / Stainless Steel bowls/spoons used for IDW from mix

QUALITY CONTROL SAMPLES* NA

ADDITIONAL REMARKS NA

AECOM SIGNATURE: Leslie Alexander

* INDICATE SAMPLE MEDIA: GROUND WATER, SOIL OR QA/QC.

Test Boring Reports

AECOM

Test Boring Report

BORING NO. MW-17
PAGE 1 OF 2

PROJECT: UTC Delavan Spray Technologies Site RI
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: CME 750

PROJECT NO: 60314694
LOCATION: Bamberg, SC
ELEVATION:
NORTHING:
EASTING:
DATE START: 3/4/14
DATE FINISH: 3/4/14
DRILLER: B. Burnette
OVERSIGHT: C. Sudderth

GROUNDWATER			DRILLING INFORMATION							
DATE	HRS AFTER COMP	WATER	DRILL METHOD			CASING INSTALL		TEMP / PERM		
			HOLE DIA.			CASING DIA.		CASING TYPE		
			TOTAL DEPTH			CASING DEPTH		GROUT TYPE		
			SAMPLING			HAMMER WT		HAMMER FALL		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS SOIL CLASSIFICATION: USCS
5.0	31.6	4 4 6 6			CLAYEY SAND (SC), brown 5YR 5/4, fine grained, well graded, medium dense, no chemical odor, moist.
10.0	1.8	3 4 6 6			CLAYEY SAND (SC), light gray 10YR 7/1, fine grained, well graded, medium dense, no chemical odor, moist
15.0	2.4	2 4 6 5			SAND (SW), reddish yellow 7.5YR 6/8, fine to medium grained, well graded, loose, no chemical odor, saturated.
20.0	5.7	2 3 3			SAND (SW), pale yellow 2.5Y 8/2, fine to medium grained, trace clay, well graded, no chemical odor, saturated

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-~~EB~~17

PAGE 2 OF 2

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0		3			
		WH			SAND (SW), pale yellow 2.5Y 8/2, fine to medium grained, well graded, loose, no chemical odor, saturated.
	2.7	2			
25.0		2			
		WH			CLAYEY SILT (MH) yellow 10YR 7/8, very soft, slightly plastic, no chemical odor, wet
	1.7	↓			
30.0		↓			
		WH			CLAYEY SILT (MH), as above.
	0.7	3			
		2			
35.0		1			SAND (SW), brownish yellow 10YR 6/6, fine to medium grained, few silt,
		2			CLAYEY SILT (MH), yellow 10YR 7/8, soft, plastic, no chemical odor, wet
	2.1	2			
		1			
40.0	0.4	2			SILTY SAND (SM), yellowish brown 10YR 5/6, fine to medium grained, well graded, no chemical odor, saturated
		WH			CLAYEY SILT (MH) yellow 10YR 7/6, very soft, plastic, wet
	0.4	WH			SILTY SAND (SM), yellowish brown 10YR 5/6, fine grained, no chemical odor, wet
		3			
45.0	0.3	8			SAND (SW) pale yellow 2.5Y 8/2, fine to medium, calcareous, saturated

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-18
PAGE 1 OF 2

PROJECT: UTC Delavan Spray Technologies Site RI
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: CME 750

PROJECT NO: 60314694
LOCATION: Bamberg, SC
ELEVATION:
NORTHING:
EASTING:
DATE START: 03/03/14
DATE FINISH: 03/03/14
DRILLER: B. Burnette
OVERSIGHT: C. Suddeth

GROUNDWATER			DRILLING INFORMATION						
DATE	HRS AFTER COMP	WATER	DRILL METHOD			CASING INSTALL		TEMP / PERM	
			HOLE DIA.			CASING DIA.		CASING TYPE	
			TOTAL DEPTH			CASING DEPTH		GROUT TYPE	
			SAMPLING			HAMMER WT		HAMMER FALL	

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS (SOIL CLASSIFICATION: USCS)
		5			SAND (SW), yellowish brown 10YR 5/8, fine to medium grained, well graded, no chemical odor, damp.
5.0		9			
15.0	109	12			CLAYEY SAND (SC), strong brown 7.5YR 5/8, fine to medium grained, little clay, well graded, medium dense, no chemical odor, damp
	15.0	12			
		5			SAND (SW), brownish yellow 10YR 6/8, fine to coarse grained, few clay, well graded, no chemical odor, moist.
10.0		6			
5.3	40	8			
	5.3	8			wet at bottom of sample
		3			SAND (SW), yellowish brown 10YR 5/6, fine to medium grained, well graded, no chemical odor, saturate
		3			
15.0					SAND (SW), pale yellow 2.5Y 8/4, fine to medium grained, well graded
13.5	100	2			no chemical odor, saturated
	13.5	1			CLAYEY SILT ( ), GLEY 1 light greenish gray 8/1 to pale red 10R 7/3
					layered coloring, soft, plastic, no chemical odor, wet
		1			CLAYEY SILT (MH), pink 7.5YR 7/3 to red 10R 5/6, layered coloring, soft,
		2			plastic, no chemical odor, wet
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-18

PAGE 2 OF 2

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0					
3.7	~~97.9~~ 3.7	2 3			CLAYEY SILT (MH) as above
					SAND (SW), white 5Y 8/1, fine to medium grained, few silt, well graded, no chemical odor, saturated
5.8	5.8 ~~44.8~~	2 2			CLAYEY SILT (MH), pale red 2.5YR 7/2, soft, plastic, no chemical odor, wet
25.0					
2.9	2.9 ~~28.2~~	2 2			SILTY SAND (SM), yellowish brown 10YR 5/8, fine grained, trace clay well graded, no chemical odor, saturated. Harder drilling at 27 ft
		5			LIMESTONE (SW), pale yellow 2.5Y 8/2, fine grained to very coarse shell material, no chemical odor, saturated.
		14			
30.0					
3.2	~~36.2~~ 3.2	18 11			
					Boring terminated at 31 ft.
35.0					
40.0					
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-21/DPT-45
PAGE 1 OF 2

PROJECT: UTC Delavan Spray Technologies Site RI
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: CME 750

PROJECT NO: 60314694
LOCATION: Bamberg, SC
ELEVATION:
NORTHING:
EASTING:
DATE START: 02/25/14
DATE FINISH: 02/25/14
DRILLER: B. Burnette
OVERSIGHT: C. Sudduth

GROUNDWATER			DRILLING INFORMATION						
DATE	HRS AFTER COMP	WATER	DRILL METHOD			CASING INSTALL		TEMP / PERM	
			HOLE DIA.			CASING DIA.		CASING TYPE	
			TOTAL DEPTH			CASING DEPTH		GROUT TYPE	
			SAMPLING			HAMMER WT		HAMMER FALL	

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS (SOIL CLASSIFICATION: USCS)
	16.5				SAND (SP), brown, fine grained, poorly graded, no chemical odor, damp
	15.2				
	1.3		DPT-45 (2-4) VOCs @ 1600 with DUP		
	0.4				CLAYEY SAND (SC), tan to brown, fine grained, well graded, no chemical odor, damp to moist.
	0.7	2 1 1 2			CLAYEY SAND (SC), as above, some clay
5.0					
	0.6	2 1 3 8			CLAYEY SAND (SC), brownish yellow 10YR 6/6, fine grained, well graded, no chemical odor, moist.
10.0					
	21.3	2 4 5 8			CLAYEY SAND (SC), light gray 2.5Y 7/2 to reddish yellow 7.5YR 6/6, fine to medium grained, well graded, slightly plastic, no chemical odor, moist.
15.0					
	17.3	2 2			CLAYEY SAND (SC), as above with less clay
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-21/DPT-45

PAGE 2 OF 2

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0		2 3			CLAY (CH), gray, medium stiff, plastic, wet
					SAND (SW), gray, fine to coarse grained, well graded, no chemical odor, saturated
		2			SILT (ML), gray to red layers, medium stiff, little clay, slightly plastic, no chemical odor, wet.
25.0	69.2	1 1 1			
		2			CLAYEY SAND (SC), red & tan, fine to medium grained, well graded, saturated.
30.0	23.2	1 1 1			
	109	1 2 1 1			~~SC~~ SILTY SAND (SM), ~~reddish~~ brown, fine grained, well graded, no chemical odor, saturated.
	118	2 4			
	64.2	6 9			LIMESTONE (SW), tan to gray, medium sand to coarse shells, well graded, no chemical odor, saturated.
35.0					Boring terminated at 35 ft
40.0					
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-21D
PAGE 1 OF 3

PROJECT: UTC Delavan Spray Technologies Site RI
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: CME-750

PROJECT NO: 60314964
LOCATION: Bamberg, SC
ELEVATION:
NORTHING:
EASTING:
DATE START: 02/24/14
DATE FINISH: 03/07/14
DRILLER: B. Burnette
OVERSIGHT: C. Suddeth

GROUNDWATER			DRILLING INFORMATION							
DATE	HRS AFTER COMP	WATER	DRILL METHOD			CASING INSTALL		TEMP / PERM		
			HOLE DIA.			CASING DIA.		CASING TYPE		
			TOTAL DEPTH			CASING DEPTH		GROUT TYPE		
			SAMPLING			HAMMER WT		HAMMER FALL		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS (SOIL CLASSIFICATION: USCS)
		8			(light gray 2.5Y 7/1 to red 2.5YR 4/6) SANDY CLAY (CL), gray to red, stiff, slightly plastic, little fine sand, no chemical odor, damp.
	0.0	3			
5.0		7			
		9			
		5			CLAYEY SAND (SC), gray to red, fine ~~grain~~ to medium grained, well graded, occasional gray clay leases, no chemical odor, damp.
	0.0	5			
10.0		9			
		14			
		3			CLAYEY SILT (MH), tan to gray, soft, little clay, no chemical odor, wet.
	0.6	2			
15.0		2			
		2			
		2			SILT (ML), pale red 10R 6/2, soft, little clay, slightly plastic, no chemical odor, wet
	2.2	1			
20.0		1			
		1			

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-21D

PAGE 2 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0					
		1			SAND (SW), yellowish brown 10YR 5/6, fine to medium grained, well graded, no chemical odor, saturated, becoming fine grained at 25 ft.
	22.2	WH			
25.0		↓			
					SAND (SW), as above
	6.8	WH			
		WH			
		2			LIMESTONE (SW), pale yellow 2.5 Y 8/3, medium grained sand to coarse shell fragments, soft, well graded, no chemical odor, saturated. Note harder drilling at 29.5 ft
30.0	1.7	6			
35.0		4			LIMESTONE (SW), yellow 2.5 Y 8/6, medium grained to gravel size shell fragments, no chemical odor.
		4			
		13			
		22			
		16			LIMESTONE (SW), as above, becoming lighter color in split spoon shoe
40.0		19			
		20			
		17			Harder drilling at 41.5
		9			
45.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-21D

PAGE 3 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0		9			LIMESTONE (SW), white 5Y 8/1, medium grained shells to cobble size cemented zones with shell fossils
		12			
		12			
50.0		18			LIMESTONE (SW), as above
		20			
		30			
		23			
					Boring terminated at 54 feet
55.0					
60.0					
65.0					
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-22D
PAGE 1 OF 3

PROJECT: UTC Delavan Spray Technologies Site RI
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: CME 750

PROJECT NO: 60314964
LOCATION: Bamberg, SC
ELEVATION:
NORTHING:
EASTING:
DATE START: 2/26/14
DATE FINISH: 3/6/14
DRILLER: B. Burnette
OVERSIGHT: C. Sudderth

GROUNDWATER			DRILLING INFORMATION						
DATE	HRS AFTER COMP	WATER	DRILL METHOD			CASING INSTALL		TEMP / PERM	
			HOLE DIA.			CASING DIA.		CASING TYPE	
			TOTAL DEPTH			CASING DEPTH		GROUT TYPE	
			SAMPLING			HAMMER WT		HAMMER FALL	

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS (SOIL CLASSIFICATION: USCS)
6.3	0.0	2 3 3 1			SAND (SP), pale yellow 2.5Y 7/4, fine grained, poorly graded, no chemical odor, dry
5.0					
2.7	0.0	4 4 8 15			CLAYEY SAND (SC), red 10R 4/8 to light gray 5Y 7/1, fine to medium grained, well graded, no chemical odor, damp.
10.0					
0.5	0.0	1 1 2 2			SILT (ML), red 10R 4/6 to pale yellow 5Y 8/2, layered coloring, soft, few clay, no chemical odor, moist.
15.0					
0.8	250	1 1 1 2			SILTY CLAY (CH), brownish yellow 10YR 6/8, soft, medium plasticity, no chemical odor, wet.
20.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-22D

PAGE 2 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0					
0.8	233	1 2 1 2			SILTY CLAY (CH), brownish yellow 10 YR 6/8, soft, medium plasticity, no chemical odor, wet.
25.0					SAND (SW), brownish yellow 10 YR 6/6, fine to medium grained, well graded, few clay, no chemical odor, wet
0.8	242	2 2 2 3			SAND (SW), strong brown 7.5 YR 5/6, fine grained, few silt, few clay, well graded, no chemical odor, wet to saturated.
30.0					
1.0	188				SAND (SW), as above
35.0					LIMESTONE (SW), pale yellow 2.5 Y 8/3, medium grained to gravel size shell fragments, trace cemented zones, no chemical odor, saturated.
40.0		14 20 22 22			LIMESTONE (SW), pale yellow 2.5 Y 8/3, medium grained to gravel size shell fragments, trace cemented zones, no chemical odor, saturated.
45.0		13			

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-22D

PAGE 3 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0		10 16 20			LIMESTONE (), pale yellow 2.5Y 8/4, medium grained to gravel size shells, no chemical odor, saturated.
					Harder drilling at 48', chatter.
					LIMESTONE (), ~~tan to gray, fossiliferous~~ white 5Y 8/1,
50.0		24 16 16 15			medium grained to gravel size cemented zones and shell fragments, small shell fossils.
					Boring terminated at 51.5 ft.
55.0					
60.0					
65.0					
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-23D
PAGE 1 OF 3

PROJECT: UTC Delavan Spray Technologies Site RI
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: CME 750

PROJECT NO: 60314964
LOCATION: Bamberg, SC
ELEVATION:
NORTHING:
EASTING:
DATE START: 02/27/14
DATE FINISH: 03/06/14
DRILLER: B. Burnette
OVERSIGHT: C. Sudduth

GROUNDWATER			DRILLING INFORMATION						
DATE	HRS AFTER COMP	WATER	DRILL METHOD			CASING INSTALL		TEMP / PERM	
			HOLE DIA.			CASING DIA.		CASING TYPE	
			TOTAL DEPTH			CASING DEPTH		GROUT TYPE	
			SAMPLING			HAMMER WT		HAMMER FALL	

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS (SOIL CLASSIFICATION: USCS)
		2			CLAYEY SAND (SC), pale brown 10YR 6/3, fine to medium grained, medium dense, well graded, no chemical odor, damp.
	0.7	3			
5.0		5			
		6			
		3			CLAYEY SAND (SC), gray 2.5Y 6/1, fine to medium grained, well graded, medium dense, no chemical odor, damp.
	0.5	5			
10.0		8			
		8			
		2			SAND (SW) red 2.5YR 5/6 to pale yellow 2.5Y 8/2, fine to coarse grained, little clay, loose, well graded, no chemical odor, wet
	0.7	4			
15.0		4			
		3			
		2			SILT (ML) very pale brown 10YR 8/3 to red 10R 4/8, soft, few clay, slightly plastic, no chemical odor, wet.
	1.2	1			
20.0		1			

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-23D
PAGE 2 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0		3			
		2			SILT (MH), very pale brown 10YR 8/3 to red 10R 4/8, soft, little clay, plastic, no chemical odor, wet.
	1.4	3			
		4			
25.0		3			
		2			SILT (MH), dark red 10R 4/8, soft, little clay, plastic, no chemical odor, wet.
	1.3	2			
		2			
30.0		2			
					Harder drilling at 31 ft.
		9			LIMESTONE (SW), yellow 10YR 8/6, medium grained to coarse shell fragments, well graded, dense to loose, no chemical odor, saturated.
	1.2	21			
35.0		15			
		17			
		7			LIMESTONE (SW), pale yellow 2.5Y 8/2, medium grained to gravel size shell material, few cemented pieces, no chemical odor, saturated.
40.0	0.0	4			
		19			
		20			
					LIMESTONE (SW), pale yellow 5Y 8/2, medium grained to gravel size shell material, little cemented zones, few clay, well graded
45.0		16			
		21			

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. MW-23D

PAGE 3 OF 3

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0	0.0	21			
		15			
		15			
					LIMESTONE (SW), pale yellow 2.5Y 8/4, medium grained to gravel size shell fragments, little cemented zones,
50.0	0.0	10			
		42			
		38			LIMESTONE (SW), white 5Y 8/1, medium grained to gravel size cemented zones and shell fragments, small shell fossils,
		35			
					Boring terminated at 51.5 ft.
55.0					
60.0					
65.0					
70.0					

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. DPT28
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe ~~GA 3004~~ 6610

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/27/14
DATE FINISH: 2/27/14
DRILLER: M. Gonzales
PREPARED BY: L Alexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE			
					SIZE ID			
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0.3'	ASPHALT - 4"
	0	4.5' 5' recovery		SANDY CLAY (CL), moist, strong brown (7.5YR 5/6) mostly clay, little fine sand - fine to medium sand.
	0			- Lenses of POORLY GRADED SAND (SP), at 0.5', 0.9', 1.2' ~2' - yellowish brown (10YR 5/4), mostly fine sand, trace - few silt.
2.5 ~~5.0~~				
	0		3'	- increasing clay content
		DPT-28(3-5) D: 3-5' T: 1000 A: VOCs, SVOCs, metals, hex chrome PH		
	0		4'	- grading to CLAY and SANDY CLAY (CL), moist, light gray (7.5Y 7/1) and strong brown (7.5YR 5/6) mottled, mostly clay, few - little f-m sand
5.0 ~~10.0~~	0	triplicate DPT-28(3-5)-C		
				Same as above but mostly CL, fewer SANDY CLAY intervals.
	0			
	0			
7.5 ~~15.0~~				
	0			
	0			
			9'	CLAYEY SAND (SC), moist, light brownish gray (10YR 6/2) and yellowish red (5YR 4/6), mostly fine-coarse sand, little - some clay
10 ~~20.0~~	0			borings terminated at 10'

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. DPT-29
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe ~~GA300~~ 6610

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/27/14
DATE FINISH: 2/27/14
DRILLER: M. Gonzales
PREPARED BY: LAlexander

GROUND WATER		DEPTH TO:			CASING		SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE			
					SIZE ID			
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
		4.5'/5' Recovery	0.0	Concrete ~ 3" thick
	0			POORLY GRADED SAND (SP), dry, Strong brown (7.5YR 5/8), mostly fine & med sand, few silt.
			4.5	~~POORLY GRADED~~ SAND (SP), dry, strong brown (7.5YR 5/6), mostly fine sand, few-little silt
	0			
25		DPT-29(2-4) D: 2-4 T: 1200 A: VOCs, SVOCs, metals, chrom & plt w/ equipment blank	~22.2	grading to SANDY CLAY (CL) moist, yellowish red (5YR 4/6), mostly clay, little fine-med sand.
-5.0	0		3	increasing sand content
			3.5	~~WELL GRADED~~ SAND w/ CLAY (SW), moist, very pale brown (10YR 7/3) mottled w/ yellowish red (5YR 5/8), mostly fine-coarse sand, ~~few~~ little clay.
	0	DPT-29(2-4)-d T: 1140 (on acetate sleeve & shoe)	4.2	decreasing clay and color change to strong brown (7.5YR 5/8) mottled w/ very pale brown (10YR 7/3) and yellowish red (5YR 5/8).
5 -10.0	0		5	grading to POORLY GRADED SAND w/ CLAY (SP), as above but fine-med sand, interbedded w/ SILTY SAND (SM), moist, yellowish red (5YR 5/8) mostly fine sand, few-little silt, and POORLY GRADED SAND (SP), moist, very pale brown (10YR 7/3), mostly fine sand
	0			
	0			
7.5 -15.0				
	0			
			8.5	CLAY (CL), moist, ~~very pale brown~~ light gray (10YR 7/2) mostly clay, few-little sand
	0		9	CLAYEY SAND (SC), moist, very pale brown (10YR 7/3) mottled w/ yellowish red (5YR 5/8), mostly fine-coarse sand, little clay
10 -20.0	0			Boring terminated at 10' bgs

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLER ID.		DESCRIPTIONS		NOTES	
0-4	VERY LOOSE	0-2	VERY SOFT	SS	SPLIT SPOON	MOSTLY	50-100%	WD	WHILE DRILLING
5-10	LOOSE	3-4	SOFT	ST	SHELBY TUBE	SOME	30-45%	NE	NOT ENCOUNTERED
11-30	MEDIUM DENSE	5-8	MEDIUM STIFF	G	GRAB SAMPLE	LITTLE	15-25%	UR	NOT READ
31-50	DENSE	9-15	STIFF	MC	MACRO-CORE	FEW	5-10%	NR	NO RECOVERY
50+	VERY DENSE	16-30	VERY STIFF			TRACE	<5%		
		31+	HARD						

AECOM

Test Boring Report

BORING NO. DPT-30
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe ~~GA 300~~ 6610

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/27/14
DATE FINISH: 2/27/14
DRILLER: M Barnales
PREPARED BY: L Alexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE			
					SIZE ID		1.375" sleeves	
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
	0			POORLY GRADED SAND (SP), dry, light olive brown (2.5Y 5/4), mostly fine-med sand.
			0.5	SILTY SAND (SM), dry, dark brown (10YR 3/3), mostly fine sand, few-little silt.
	0			
			1.5	grading to yellowish brown (10YR 5/4).
2.5	0			increasing clay content
5.0				
	0			
			3.5	grading to CLAYEY SAND (SC) moist, yellowish brown (10YR 5/8), mostly fine sand, little medium sand, little-some clay
	0			
5				
10.0			5'	same as above
	0			
			5.5'	grading to CLAYEY SAND (SC) as above mottled w/ SILTY SAND (SM), dry-moist, red (2.5YR 4/8), mostly fine sand, few-little silt; and a few lenses of CLAY (CL), moist, light gray (10YR 7/1), mostly clay
	0			
7.5	0	DPT-30 (7-9)		
15.0		D: 7-9'		
		T: 1035		
	0.4	M: VOCs, SVOCs metals, hex chrom, pH		
	0			
10				
20.0				Boring terminated at 10' bgs

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. DPT-31
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe ~~GA 300~~ 6610

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/27/14
DATE FINISH: 2/27/14
DRILLER: M Gonzales
PREPARED BY: L Alexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE			
					SIZE ID			
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
	0	3.5'/5' Moist		SILTY SANDS(SM), dry-moist, dark brown (10YR 3/3), mostly fine sand, little silt
			1.0	POORLY GRADED SAND (SP), dry, yellowish brown (10YR 5/6), mostly fine sand, trace-few silt.
	0			
2.5	0			
5.0		DPT-31(5-7)	~2.5	silt/clay content increasing
		D15-7'	~3	grading to yellowish brown (10YR 5/8), few-little silt/clay.
	0	T: 1055		
		PID: VOCs, SVOCs, metals shown Chrom, plt	~4	POORLY GRADED SAND (SP), same 1.0' above but brownish yellow (10YR 6/6).
	0			
5			~5.7	grading to CLAYEY SANDS(SC), moist, yellowish brown (10YR 5/8) mostly fine-medium sand, little-some clay.
10.0				
	0			
	0		6.5	grading to CLAYEY SANDS(SC) as above but yellowish brown (10YR 5/8) ~~and~~ ~~interbedded with~~ / mottled with SILTY SANDS (SM), dry-moist, red (2.5YR 4/8), mostly fine sand, few-little silt, and mottled w/ few lenses of CLAY (CL), moist, light gray (10YR 7/1), mostly clay.
7.5				
15.0				
10				
20.0				Boring terminated at 10' bgs

- pictures

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. DPT-32
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe ~~GA 300~~ 6610

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/27/14
DATE FINISH: 2/27/14
DRILLER: M. Gonzales
PREPARED BY: LAlexander

GROUND WATER		DEPTH TO:			CASING		SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE			
					SIZE ID			
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
	0	hand auger 1st foot to clear nearby utilities	0.5 –	POORLY GRADED SAND (SP), dry-moist, yellowish brown (10YR 5/4), mostly fine sand, trace-few silt.
				grades to light yellowish brown (10YR 6/4)
	0		1.0 –	SILTY SAND (SM), moist, yellowish brown (10YR 5/6) mostly fine sand, little silt.
			2 –	increasing clay & silt
2.5 ~~5.0~~	0			
			3 –	grading to SANDY CLAY (CL), moist, yellowish brown (10YR 5/8), mostly clay, little-some fine sand
	0			
			4 –	Sand size increasing – fine – coarse sand
	0			
5 ~~10.0~~				
			5.5 –	CLAYEY SAND (SC), moist, very pale brown (10YR 7/3) mostly fine-coarse sand, little clay; mottled with few layers of SILTY SAND (SM), moist, yellowish red (5YR 5/8), mostly fine sand, little silt, & few leaves (thin – 0.1-0.25") of CLAY (CL), moist, light gray (10YR 7/2) mostly clay, few-little sand.
7.5 ~~15.0~~				
		DPT-32(8-10) PID: 1330 D: 8-10' A: rocks, sticks, metals, hex chunk, pit		
10 ~~20.0~~				boring terminated at 10' bgs

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLER ID.		DESCRIPTIONS		NOTES	
0-4	VERY LOOSE	0-2	VERY SOFT	SS	SPLIT SPOON	MOSTLY	50-100%	WD	WHILE DRILLING
5-10	LOOSE	3-4	SOFT	ST	SHELBY TUBE	SOME	30-45%	NE	NOT ENCOUNTERED
11-30	MEDIUM DENSE	5-8	MEDIUM STIFF	G	GRAB SAMPLE	LITTLE	15-25%	UR	NOT READ
31-50	DENSE	9-15	STIFF	MC	MACRO-CORE	FEW	5-10%	NR	NO RECOVERY
50+	VERY DENSE	16-30	VERY STIFF			TRACE	<5%		
		31+	HARD						

AECOM

Test Boring Report

BORING NO. DPT-33
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe 6610

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/27/14
DATE FINISH: 2/27/14
DRILLER: M Gonzales
PREPARED BY: LAlexander

GROUND WATER		DEPTH TO:			CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE			
					TYPE		
					SIZE ID		
					HAMMER WT		
					HAMMER FALL		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
	0	4.5' / 5' recovered	0.9 –	SILTY SAND (SM), dry, dark yellowish brown (10YR 4/3), mostly fine sand, few fine silt
	0			grading to POORLY GRADED SAND (SP) dry, light yellowish brown (10YR 6/4), mostly fine sand, trace-few silt.
2.5 / 5.0	0		~2 –	grading to yellowish brown, increasing silt/clay,
	6		~3 –	grading to POORLY GRADED SAND (SP) same as above
	0		~4 –	grading to SANDY CLAY (CL), dry-moist, yellowish brown (10YR 5/8), mostly clay, little-some fine sand.
5 / 10.0		5-9' 5'3" recovered DPT-33 (688) D: 6-8' T: 1440 VOCs, SVOCs, metals, hex Chrom plt	~5.5	interbedded CLAYEY SAND (SC) and SANDY CLAY (CL), dry to moist, light yellowish brown (10YR 6/4), yellowish red (5YR 4/6) and strong brown (7.5YR 5/8), some-mostly fine-coarse sand, some-mostly clay.
7.5 / 15.0			8 –	NO recovery
				1st boring – no recovery from 5-10' – lever jammed rods, stop @ ~1.5 ft NG, 2nd rod time jammed, stop off another ~1.5 ft NG, 3rd hole 2nd rod 5' recovery over 3'; run 3rd rod to get 8-10 & jammed.
10 / 20.0				boring terminated at 10' bgs

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. DPT-34
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling ~~GA 300~~
EQUIPMENT: Geoprobe 6610 Track-Mounted DPT Rig

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 3/1/14
DATE FINISH: 3/1/14
DRILLER: G.Winbourn/M.Gonzales
PREPARED BY: LAlexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE		Acetate Liners	Core barrel
					SIZE ID		1.75"	2.25"
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
	2.7		0-5'	0 CONCRETE - 4" thick 0.3 SILTY SAND (SM), dry, brown (10YR 4/3), mostly fine sand, little silt.
				0.5 grading to POORLY GRADED SAND (SP), dry, very pale brown, (10YR 7/4), mostly fine sand, few-little silt.
	0.8		4'/5'	
	1.1			
2.5				
	1.3			3 - as above but thin layers of SILTY SAND (SM), moist, dark yellowish brown (10YR 4/6), mostly fine sand, little - some silt, layers at 3-3.1', 3.25-3.3', & 3.35-3.5' bgs
	0.9			4.2 - SILTY SAND (SM), moist, yellowish brown (10YR 5/8), mostly fine sand, little - some clay.
	1.2		5'-10'	5' - grading to CLAYEY SAND (SC), moist, yellowish brown (10YR 5/8), mostly fine sand, few-little med. sand, some clay
5.0				
			5'/5'6.5	grading to light gray (2.5Y 7/2), mottled w/ yellowish brown (10YR 5/8) and red (2.5YR 4/8).
7.5				
	3	DPT-34 (B-10) D: B-10' T: 0955 A: VOCs, SVOCs, Metals, hex chrome		
	35.5			
	39.6	Dup: DPT-34 (B-10)	-a	
10.0				Boring Terminated at 10' bgs

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. DPT-35
PAGE 1 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe 6610 Track-Mounted DPT Rig

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 3-1-14
DATE FINISH: 3-1-14
DRILLER: G.Winbourn/M.Gonzales
PREPARED BY: L. Alexander

GROUND WATER		DEPTH TO:			CASING		SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE		Acetate Liners	Core barrel
					SIZE ID		1.75"	2.25"
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0-5'	Concrete 4" thick
			0.3'	SILTY SAND (SM), dry, dark yellowish brown (10YR 3/4), mostly fine sand, little-some silt/clay
	50.9		1.0'	grading to SILTY SAND (SM), dry, yellowish brown (10YR 5/4), mostly V. fine-fine sand, some silt.
	94.4		5'	
			5' 2'	color change to very pale brown (10YR 7/4), odor-oil?
2.5	309			
	206	DPT-35(3-5) w/ms/msd	3'	CLAYEY SAND (SC), interbedded w/ SANDY CLAY (CL), moist, strong brown (7.5YR 5/8) and gray (10YR 6/1), some-mostly fine-med sand, some-mostly clay, strong odor oil & sweet-Kerosene? or similar
	196.5	D: 3-5'		
	345	T: 1520		
	334	A: VOCs SVOCs		
5.0				
			5-10'	Same as above but few-little coarse sand in the SC, strong brown (7.5YR 5/8) mottled w/ gray (10YR 6/1) and red (2.5YR 4/8), not much odor
	9.0		4'/5'	
	~~20.6~~			
	20.6			
	11.8			
7.5				
	26.9			
	24.6			
	33.8			
	40.4			
10.0				

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. DPT-35
PAGE 2 OF 2

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
10.0			10-15'	10- CLAYEY SAND (SC), same as above but fine-coarse sand w/ occasional thin (<0.25") thick lenses of CLAY (CL), moist, white (7.5YR 8/1),
	29.5	DPT-35(10.5-12.5)	5'/5'	
	8.6	D: 10.5-12.5'		
	26.8	T: 1620		
	16.2	A: VOCs, SVOCs		
12.5	25.4			
			13.5'	grading to wet
	32.1			
	66.1		14.2'	grading to POORLY GRADED SAND (SP), wet, reddish yellow (7.5YR 6/8), mostly fine sand, trace-few silt.
	26.1			
15.0			15'	Finished w/ probe rods/sampling to 15' bgs
				Overdrilled w/ 3" rods to 20' to set well MW-19
			over drilled	
			NR	
				MW-19 installed to ~20' bgs
17.5				Screened ~5-20' bgs
20.0				Boring terminated at 20' bgs
22.5				

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. DPT-36
PAGE 1 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe ~~6A300~~ 6610

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 3/1/14
DATE FINISH: 3/1/14
DRILLER: M Gonzalez
PREPARED BY: L Alexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE			
					SIZE ID			
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			4.4' / 5'	4" concrete at surface
	11.5			0.3 POORLY GRADED SAND W/SILT & CLAY (SP-SM, SP-SC), dry-moist, brown (10YR 4/3), mostly fine sand, few-little silt/clay
	16.9		0-5'	
	17.6			
2.5 / ~~5.0~~	7.6			2' POORLY GRADED SAND (SP), dry, olive yellow (2.5Y 6/6) mostly fine sand, trace-few silt
	8.0			
	5.2			
	5.2			
				3.7' CLAYEY SAND (SC), moist, yellowish brown (10YR 5/8), mostly fine sand, little-some clay.
	3.1			
5 / ~~10.0~~	2.9			4.5' POORLY GRADED SAND W/SILT (SP-SM), dry, brown/yellow (10YR 6/8), mostly fine sand, few-little silt
	10.9	DPT-36(5-7) D: 5-7' T: 1200 A: VOAs, SVOAs w/DUP DPT-38(5-7) @	5' / 5'	
	6.9			5.5' grading to CLAYEY SAND (SC), moist, very pale brown (10YR 6/3) mottled w/ strong brown (7.5YR 5/8) and red (2.5YR 4/8)
	8.3			
	3.1		5/10'	
7.5 / ~~10~~ / ~~15.0~~	4.3			
	4.7			
	3.8			
	4.4			8.5' grading to POORLY GRADED SAND W/ CLAY (SP-SC) moist, strong brown (7.5YR 5/8), mostly fine-med sand, few-little clay/silt
	11.7			
10 / ~~20.0~~	8.8			

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. DPT-36
PAGE 2 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe 6610

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 3/1/14
DATE FINISH: 3/1/14
DRILLER: M Gonzales
PREPARED BY: LMcAlexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE			
					SIZE ID			
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			10-15'	Same as above but interbedded with a few thin (0.1-0.25 inch thick) lenses of clay throughout, clay is moist, pale yellow (2.5Y 8/2)
	5.4		4.8/5'	
	5.2			
	7.9			
12.5 5.0	6.7			
	10.8	DPT-36(12-14) D:12-14' A:VOCs SVOCs T:1215		
	6.4			
	6.8			
	7.9			
15 10.0	7.3			
				Boring terminated at 15ft bgs
15.0				
20.0				

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. DPT-37
PAGE 1 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AECOM
EQUIPMENT: Hand Auger

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 3/21/14
DATE FINISH: 3/21/14
DRILLER: NA M. Gonzales
PREPARED BY: L. Alexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	NA	Hand Auger	NA
					SIZE ID	NA	3.25" ID	NA
					HAMMER WT	NA	NA	NA
					HAMMER FALL	NA	NA	NA

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0	4" CONCRETE
			0.3	SILTY SAND (SM), dry, yellowish brown (10YR 5/6), mostly fine-
	13.6		0.9	sand, little-some silt
1.0				layer of above w/ gravel (SM-GM), concrete debris
			1.1	
	7.4		1.3	same as 0.3 ft above
2.0				decrease in silt
			1.8	POORLY GRADED SAND (SP), dry very pale brown (10YR 7/3),
	7.0			mostly fine sand, trace silt.
3.0			3'	POORLY GRADED SAND w/ CLAY (SP-SC), dry to moist, yellowish
				brown (10YR 5/8), mostly fine sand, little clay
	7.2			
4.0			4'	same as above
	11.5			
5.0			5'	as above but increasing clay content to CLAYEY SANDS
				(SC), moist, as above but some clay
	21.6			
6.0		DPT-37(6-8)	6'	CLAYEY SANDS (SC), moist, strong brown (7.5YR 5/8),
		D: 6-8		mostly fine-coarse sand, little-some clay with a few
	11	T: 0950		lenses of CLAY (CL), moist, pale yellow (2.5Y 8/3),
7.0		A: VOCs,	7'	mostly clay; throughout, 0.1-0.3 inches thick
		SVOCs		same as above but interbedded w/ POORLY GRADED
	10			SAND W/ CLAY (SP-SC), moist, yellowish red (5YR 4/6)
8.0			8	mostly fine-medium sand, little clay & clay lenses;
				light gray (10YR 7/1)
	9.4			same as above CLAYEY SANDS (SC), POORLY GRADED
9.0			9	SANDS W/ CLAY (SP-SC) and few CLAY LENSES
				primarily CLAYEY SANDS (SC) like 6' above but strong
	15.6			brown (7.5YR 5/8) & CLAY LENSES → SILTY SANDY.
10.0				

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLER ID.		DESCRIPTIONS		NOTES	
0-4	VERY LOOSE	0-2	VERY SOFT	SS	SPLIT SPOON	MOSTLY	50-100%	WD	WHILE DRILLING
5-10	LOOSE	3-4	SOFT	ST	SHELBY TUBE	SOME	30-45%	NE	NOT ENCOUNTERED
11-30	MEDIUM DENSE	5-8	MEDIUM STIFF	G	GRAB SAMPLE	LITTLE	15-25%	UR	NOT READ
31-50	DENSE	9-15	STIFF	MC	MACRO-CORE	FEW	5-10%	NR	NO RECOVERY
50+	VERY DENSE	16-30	VERY STIFF			TRACE	<5%		
		31+	HARD						

AECOM

Test Boring Report

BORING NO. DPT-37

PAGE 2 OF 2

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
10.0			10'	Same as above at 9'
	8.3		11'	Same as above
	12.9		12'	grading to wet
	+			Boring terminated at 12.3' bgs at water table
12.5				
15.0				
17.5				
20.0				
22.5				

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. DPT-38
PAGE 1 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AECOM
EQUIPMENT: Hand Auger

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 3/2/14
DATE FINISH: 3/2/14
DRILLER: ~~NAR~~ Morgan/G Winburn
PREPARED BY: L. Alexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	NA	Hand Auger	NA
					SIZE ID	NA	3.25" ID	NA
					HAMMER WT	NA	NA	NA
					HAMMER FALL	NA	NA	NA

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
		min. Rae 2000 began giving high readings (in parentheses) checked bags w/ other PID → lower readings, no odor in samples. Recalibrated continued w/ min. Rae 2000 below 4' - working ok after read	0	~4" CONCRETE at surface
	3 (14)		0.3'	SILTY SAND (SM), dry, light olive brown (2.5Y 5/4),
1.0			0.6'	mostly fine sand, little - some silt.
			1'	grading to olive yellow (2.5Y 6/6)
	1.4 (14)			POORLY GRADED SAND (SP), dry, light yellowish brown (2.5Y 6/2), mostly fine sand, few silt.
2.0			2'	grading to POORLY GRADED SAND w/ SILT & CLAY (SP-SC/SP-SM), dry-moist, brownish yellow (10YR 6/6), mostly fine sand, few-little silt/clay.
	9.2 (159)		3'	grading to CLAYEY SAND (SC), moist, yellowish brown (10YR 5/8), mostly fine-med sand, little - some clay.
3.0				
	3.7 (56)		4'	CLAYEY SAND (SC) and SANDY CLAY (CL), moist, strong brown (7.5YR 5/8), motted w/ light gray (7.5YR 7/1), and red (2.5YR 4/8), some - mostly fine - coarse sand,
4.0				some - mostly clay
			5'	Same as above
5.0	20.9			
			6'	POORLY GRADED SAND w/ CLAY (SP-SC), moist, strong brown (7.5YR 5/8), mostly fine-med sand, few little clay
6.0	29.8			
				interbedded w/ CLAYEY SAND (SC), ~~mostly fine-med sand, little clay~~ moist, strong brown (7.5YR 5/8), and
7.0	12.3	DPT-38(8-10) D: 8-10' T: 1010 A: VOCs, SVOCs	7'	light gray (7.5YR 7/1), mostly fine-med sand, little - some clay.
			8'	CLAYEY SAND (SC), like on 6-7' interval
8.0	13			
				Same as 7' above
9.0	16.7		9'	Same as above
10.0	16.1			

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLER ID.		DESCRIPTIONS		NOTES	
0-4	VERY LOOSE	0-2	VERY SOFT	SS	SPLIT SPOON	MOSTLY	50-100%	WD	WHILE DRILLING
5-10	LOOSE	3-4	SOFT	ST	SHELBY TUBE	SOME	30-45%	NE	NOT ENCOUNTERED
11-30	MEDIUM DENSE	5-8	MEDIUM STIFF	G	GRAB SAMPLE	LITTLE	15-25%	UR	NOT READ
31-50	DENSE	9-15	STIFF	MC	MACRO-CORE	FEW	5-10%	NR	NO RECOVERY
50+	VERY DENSE	16-30	VERY STIFF			TRACE	<5%		
		31+	HARD						

AECOM

Test Boring Report

BORING NO. DPT-38

PAGE 2 OF 2

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
10.0				CLAYEY SAND (SC), moist, Strong brown (7.5YR 5/8), mostly fine-coarse sand, little-some clay, few CLAY lenses throughout, 0.1-0.5" thick, mostly light gray (2.5Y 7/2), mostly clay, little sand
	2.7			
	4.3			
			12'	grading to wet
12.5				Boring terminated at 12.2' bgs
15.0				
17.5				
20.0				
22.5				

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

	SAMPLER ID.
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. DPT-39
PAGE 1 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AECOM
EQUIPMENT: Hand Auger

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 3/2/14
DATE FINISH: 3/2/14
DRILLER: NA RMorgan
PREPARED BY: L. Alexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	NA	Hand Auger	NA
					SIZE ID	NA	3.25" ID	NA
					HAMMER WT	NA	NA	NA
					HAMMER FALL	NA	NA	NA

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
				5" Thick concrete
1.0	5.2			0.5 POORLY GRADED SAND (SP), dry, very pale brown (10YR 7/4), mostly fine sand
				0.8 grading to POORLY GRADED SAND w/SILT (SP-SM), dry, dark yellowish brown (10YR 4/4), mostly fine sand, few silt.
2.0	4.9			1' same as above
				2' same as above to SILTY SAND (SM), dry, dark yellowish brown (10YR 4/4), mostly fine sand, little silt
3.0	4.6			3 grading to POORLY GRADED w/ CLAY (SP-SC), dry-moist, dark yellowish brown (10YR 5/8), mostly fine sand, few-little clay
				3.5 grading to CLAYEY SAND (SC), moist, as above but little clay.
4.0	4.4			4' CLAYEY SAND (SC), as above but yellowish brown (10YR 5/6).
5.0	5.0			5' Same as above
6 / 6.0	4.9			6' as above but increasing clay content, interbedded w/ CLAY (CL), moist, yellowish red (5YR 4/6), and strong brown (7.5YR 5/8)
7 / 8.0	5.0			7' same as 6' above but increase in sand & clay layers
9 / 9.0	5.2	DPT-39 (8-10) D: 8-10 T: 1305 A: VOCs, SVOCs M) equipment blank (water rinsate) DPT-39 (8-10)-d		8' grading to CLAY (CL), and SANDY CLAY (CL), dry-moist, strong brown (7.5YR 5/8) mottled w/ light gray (2.5Y 7/2) and darkened (2.5YR 3/6), mostly clay, little-some fine-coarse sand.
9 / 10.0	5.5			9' as above but mostly light gray (2.5Y 7/2) with few strong brown (7.5YR 5/8) and dark red (2.5YR 3/6) mottles, decrease in sand content & mostly CLAY (CL), few SANDY CLAY (CL) layers
10 / 11.0	5.2			

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLER ID.		DESCRIPTIONS		NOTES	
0-4	VERY LOOSE	0-2	VERY SOFT	SS	SPLIT SPOON	MOSTLY	50-100%	WD	WHILE DRILLING
5-10	LOOSE	3-4	SOFT	ST	SHELBY TUBE	SOME	30-45%	NE	NOT ENCOUNTERED
11-30	MEDIUM DENSE	5-8	MEDIUM STIFF	G	GRAB SAMPLE	LITTLE	15-25%	UR	NOT READ
31-50	DENSE	9-15	STIFF	MC	MACRO-CORE	FEW	5-10%	NR	NO RECOVERY
50+	VERY DENSE	16-30	VERY STIFF			TRACE	<5%		
		31+	HARD						

AECOM Test Boring Report

BORING NO. DPT-39
PAGE 2 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AECOM
EQUIPMENT: Hand Auger

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 3/2/14
DATE FINISH: 3/2/14
DRILLER: NA RMorgan
PREPARED BY: L. Alexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	NA	Hand Auger	NA
					SIZE ID	NA	3.25" ID	NA
					HAMMER WT	NA	NA	NA
					HAMMER FALL	NA	NA	NA

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
11 / 1.0	5.0			10 grading to POORLY GRADED SAND w/clay (SW-SC) interbedded w/ 30 percent SAND (SC), moist, light gray (2.5Y 7/2) and strong brown (7.5YR 5/8) mostly f-coarse sand, few-some gravel, dry.
12 / 2.0	5.8			11 Same as above 12' grading to wet
13 / 3.0				Boring terminated at 12' 4" bgs
4.0				
5.0				
7.0				
8.0				
9.0				
10.0				
11.0				

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. DPT-90
PAGE 1 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AECOM
EQUIPMENT: Hand Auger

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 03/03/14
DATE FINISH: 03/03/14
DRILLER: ~~NA~~ RMorgan
PREPARED BY: ~~L. Alexander~~ C. Sybleth

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	NA	Hand Auger	NA
					SIZE ID	NA	3.25" ID	NA
					HAMMER WT	NA	NA	NA
					HAMMER FALL	NA	NA	NA

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
				CONCRETE 0-5 inches
1.0	28.0			SAND (SP), brown 10YR 5/3, fine grained, trace silt, poorly graded, no chemical odor, damp.
				~~SAND (SP)~~, brown, as above.
2.0	25.7			SAND (SP), light yellowish brown 10YR 6/4, fine grained, trace silt, no chemical odor, damp.
3.0	29.6			SAND (SP), yellowish brown 10YR 5/8, fine grained, few clay, no chemical odor, damp.
4.0	49.4			CLAYEY SAND (SC), strong brown 7.5YR 5/6, fine grained, little clay, well graded, no chemical odor, damp.
5.0	18.1			CLAYEY SAND (SC), strong brown 7.5YR 5/6, fine to medium grained, little clay, well graded, no chemical odor, damp.
6 7.0	8.1			CLAYEY SAND (SC), brownish yellow 10YR 6/6, fine to medium grained, little clay, well graded, no chemical odor, damp.
7 8.0	39.1			SANDY CLAY (CL), dark reddish brown 2.5YR 3/3 to light greenish gray GLEY 1 7/1, layered coloring, stiff, some fine sand, slightly plastic, no chemical odor, damp.
8 9.0	10.8			SANDY CLAY (CL), as above
9 10.0	5.3			CLAY (CL), pale yellow 5Y 8/2 to dark red 2.5YR 3/6, mottled, stiff, slightly plastic, few fine sand
10 11.0	9.0			

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. DPT-40
PAGE 2 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AECOM
EQUIPMENT: Hand Auger

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 03/03/14
DATE FINISH: 03/03/14
DRILLER: NA
PREPARED BY: ~~L. Alexander~~ C. Sudderth

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	NA	Hand Auger	NA
					SIZE ID	NA	3.25" ID	NA
					HAMMER WT	NA	NA	NA
					HAMMER FALL	NA	NA	NA

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
				CLAY (CL), as above
1.0	6.6			CLAY (CL), pale yellow 5Y 8/2 to strong brown 7.5YR 5/6, mottled, stiff, slightly plastic, no chemical odor, damp
2.0	5.6			Boring terminated at 12 ft
3.0				
4.0				
5.0				
7.0				
8.0				
9.0				
10.0				
11.0				

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. DPT-41
PAGE 1 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AECOM
EQUIPMENT: Hand Auger

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 3/21/14
DATE FINISH: 3/21/14
DRILLER: ~~NA~~ M Gonzales
PREPARED BY: L. Alexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	NA	Hand Auger	NA
					SIZE ID	NA	3.25" ID	NA
					HAMMER WT	NA	NA	NA
					HAMMER FALL	NA	NA	NA

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
				CONCRETE ~5" THICK.
1.0	8.7			0.5' POORLY GRADED SAND (SP) with SILT (SP-SM), dry, yellowish brown (10YR 5/4), mostly fine sand few-little silt.
2.0	5.7			1' grading to SILTY SAND (SM), as above but increasing silt content.
3.0	5.3			2' POORLY GRADED SAND (SP) dry - moist, light olive brown (2.5Y 5/4), mostly fine sand, trace-few silt ~~clay~~
4.0	10.3			3' grading to CLAYEY SAND (SC), moist, dark yellowish brown (10YR 4/6), mostly fine-coarse sand, little-some clay.
5.0	8.3			4' Same as above but mostly fine-med sand.
6 ~~7.0~~	7.9	DPT-41 (6-8) D:6-8 T:1535 N:VOCs,SVOCs		5' same as above but increasing clay content - some clay, color change to strong brown (7.5YR 5/8).
7 8.0	8.3			6' SANDY CLAY (SC) same as above, interbedded w/ few-little CLAY (CL), lenses/layers, moist, strong brown (7.5YR 5/8) & light gray (2.5Y 7/2).
8 ~~9.0~~	7.5			7' as above but increase in clay layers
9 ~~10.0~~	11			8 CLAY (CL), moist, brownish yellow (10YR 6/8) mottled w/ red yellow (5YR 4/6) and light gray (2.5Y 7/2), mostly clay few sand w/ layers of SANDY CLAY (CL), little-some fine sand as above w/
10 ~~11.0~~	9.7			9' Same as 9' above

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLER ID.		DESCRIPTIONS		NOTES	
0-4	VERY LOOSE	0-2	VERY SOFT	SS	SPLIT SPOON	MOSTLY	50-100%	WD	WHILE DRILLING
5-10	LOOSE	3-4	SOFT	ST	SHELBY TUBE	SOME	30-45%	NE	NOT ENCOUNTERED
11-30	MEDIUM DENSE	5-8	MEDIUM STIFF	G	GRAB SAMPLE	LITTLE	15-25%	UR	NOT READ
31-50	DENSE	9-15	STIFF	MC	MACRO-CORE	FEW	5-10%	NR	NO RECOVERY
50+	VERY DENSE	16-30	VERY STIFF			TRACE	<5%		
		31+	HARD						

AECOM

Test Boring Report

BORING NO. DPT-41
PAGE 2 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AECOM
EQUIPMENT: Hand Auger

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 3/2/14
DATE FINISH: 3/2/14
DRILLER: ~~NA~~ M Gargulay
PREPARED BY: L. Alexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	NA	Hand Auger	NA
					SIZE ID	NA	3.25" ID	NA
					HAMMER WT	NA	NA	NA
					HAMMER FALL	NA	NA	NA

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
11 1.0	9.5			10' CLAY (CL), moist, stiff, light gray (2.5Y 7/2), w/ strong brown (7.5YR 5/8) and yellowish red (5YR 4/6) mottles, mostly clay, a few layers of sandy clay.
12 2.0	9.1			11' as above but mostly light gray (5Y 7/1.) w/ few strong brown (7.5Y R5/8) and yellowish red (5YR 4/6) mottles, mostly clay, sandy clay layers decreasing to absent.
13 3.0	8.8			12 grading to CLAYEY SAND (SC), moist-wet, yellowish red (5YR 4/6), mostly f-coarse sand, little clay. - some.
14 4.0	8.2			13' same as above but increasing clay content and few-little layers of CLAY (CL), moist, light gray (2.5Y 7/1).
15 5.0	8.9			14' same as above 14.5 grading to CLAYEY SAND (SC), wet, light gray (5Y 7/1) mostly f-c sand, some clay.
16 7.0				Boring terminated at 15' 4" bgs
17 8.0				Installed with MW-20 - screened 5-15' below concrete surface
18 9.8				Sand pack to 4' below concrete surface
19 10.0				bentonite to 2' - stopped 3/2/14 & clean up
20 11.0				grout to top on 3/3/14

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLER ID.		DESCRIPTIONS		NOTES	
0-4	VERY LOOSE	0-2	VERY SOFT	SS	SPLIT SPOON	MOSTLY	50-100%	WD	WHILE DRILLING
5-10	LOOSE	3-4	SOFT	ST	SHELBY TUBE	SOME	30-45%	NE	NOT ENCOUNTERED
11-30	MEDIUM DENSE	5-8	MEDIUM STIFF	G	GRAB SAMPLE	LITTLE	15-25%	UR	NOT READ
31-50	DENSE	9-15	STIFF	MC	MACRO-CORE	FEW	5-10%	NR	NO RECOVERY
50+	VERY DENSE	16-30	VERY STIFF			TRACE	<5%		
		31+	HARD						

AECOM Test Boring Report

BORING NO. DPT-42
PAGE 1 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AECOM
EQUIPMENT: Hand Auger

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 3/31/14
DATE FINISH: 3/31/14
DRILLER: ~~NA~~ M. Gonzales
PREPARED BY: L. Alexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	NA	Hand Auger	NA
					SIZE ID	NA	3.25" ID	NA
					HAMMER WT	NA	NA	NA
					HAMMER FALL	NA	NA	NA

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
				CONCRETE - 3.25" THICK
				0.25 SILTY SANDS (SM), dry, brown (10YR 4/3), mostly fine sand little silt.
1.0	5.3			1' grading to POORLY GRADED SAND W/ SILT (SP-SM), dry, yellowish brown (10YR 5/4), mostly fine sand, few-little silt
				1.5 same as 0.25' above
2.0	5.1			2' same as above
3.0	6.2			3.2 Same as 1' above
				3.5 grading to POORLY GRADED SAND W/ SILT & CLAY (SP-SM/SP-SC), like above but few-little silt & clay.
4.0	5.8			
				4.5 CLAYEY SAND (SC), moist, light olive brown (2.5Y 5/6), mostly fine-med sand, little-some clay
5.0	5.6			5' POORLY GRADED SAND W/ SILT & CLAY (SP-SM/SP-SC), moist, yellowish brown (10YR 5/6), mostly fine sand,
6.0	5.0			few-little silt & clay
				6' same as above but clay content slightly higher-
7.0	4.7			7' CLAYEY SAND (SC). same as above but little-some clay, mostly fine-med sand
8.0	4.5	DPT-42(8-10) D:8-10ft T:1020 A:VOCs & SVOCs		9' same as above but dark yellowish brown (10YR 4/6)
9.0	6.3			9' as above but mottled w/ few light gray (10YR 7/1) and yellowish red (5YR 4/6), interbedded with
10.0	6.3			POORLY GRADED SAND W/ CLAY (SP-SC)

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. DPT-42

PAGE 2 OF 2

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
10.0				
	7.1			~10.5' SANDY CLAY (SC), same as above w/ POORLY GRADED SAND w/ CLAY (SP-SC), as above & few layers of CLAY (CL) moist, light gray (10YR 7/1)
	8.2			
	12.2			~12.2' grading to wet
12.5				Boring terminated at 12'3" - wet
15.0				
17.5				
20.0				
22.5				

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

	SAMPLER ID.
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

	NOTES
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. DPT-43
PAGE 1 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AECOM
EQUIPMENT: Hand Auger

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 3/3/14
DATE FINISH: 3/3/14
DRILLER: NA M. Gonzales
PREPARED BY: L. Alexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	NA	Hand Auger	NA
					SIZE ID	NA	3.25" ID	NA
					HAMMER WT	NA	NA	NA
					HAMMER FALL	NA	NA	NA

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
				CONCRETE - 7 1/4" thick
1.0	21.0			0.6 POORLY GRADED SAND w/ SILT (SP-SM), dry, brown, (10YR 4/3), mostly fine sand, few-little silt, no odor
				-background PID to high b/c of equipment but reading comes down in head space bag & stabilizes
2.0	21.2			1' same as above but yellowish brown (10YR 5/6)
				2' grading to POORLY GRADED SAND (SP), dry-moist, light olive brown (2.5Y 5/4), mostly fine sand, trace-few silt.
3.0	19.7			2.5' grading to CLAYEY SAND (SC), moist, yellowish brown, (10YR 5/6), mostly fine-med sand, little-some clay
				3' same as above but dark yellowish brown (10YR 4/6)
4.0	14.7			4' same as above but interbedded SANDY CLAY (CL), moist, mostly clay, little sand & mottled w/ red (2.5YR 4/6)
5.0	25.1	DPT-43(5-7)		5' same as 4' above but few lenses of CLAY (CL), light gray (10YR 7/1).
	2M	D: 5-7'		
6.0	21.7	T: 1325		6' CLAYEY SAND (SC), same as 2.5 ft above w/ lenses of CLAY (CL) & SANDY CLAY (CL), moist, gray (10YR 6/1) and dark red (2.5YR 3/6).
		A: VOLS, ~~STOCK~~ w/ moisture		
7.0	23.2			7' grading to CLAY (CL) & SANDY CLAY (CL), moist, stiff, light gray (2.5Y 7/1), mottled w/ strong brown (7.5YR 5/6) and dark red (2.5YR 3/6), mostly clay, few little fine-med sand
8.0	29.1	no odor PID reading high B/C of equipment & dropping when headspace is collected stabilizing		
9.0	35.0			
10.0	44.1			

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. DPT-43
PAGE 2 OF 2

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
10.0				10' decreasing sand content, mostly CLAY like above but trace-few sand
	48.6			11' CLAY (CL), as above ~~brown~~, interbedded w/CLAYEY SAND (SC), moist, reddish brown (5YR 5/4), mostly fine-coarse sand, some clay
		DPT-43(11-12)		
		D:11-12		
	52.0	T:1520		
		A:VOCs		12' grading to wet
		moisture		
12.5				Boring terminated at 12' 3" bgs
15.0				
17.5				
20.0				
22.5				

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

	SAMPLER ID.
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

	NOTES
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. DPT-44
PAGE 1 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: ~~AE Drilling~~ NM
EQUIPMENT: ~~Geoprobe~~ HandAuger

PROJECT NO: 60314964
LOCATION: TST lab
ELEVATION:
DATE START: 3/3/14
DATE FINISH: 3/3/14
DRILLER: R Morgan
PREPARED BY: L Alexander

GROUND WATER		DEPTH TO:			CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE			
					TYPE		
					SIZE ID		
					HAMMER WT		
					HAMMER FALL		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
				7" thick concrete
	12.7			0.6 SILTY SAND (SM), dry, light olive brown (2.5Y 5/4), mostly fine sand, little silt.
				1' grading to POORLY GRADED SAND w/ SILT (SP-SM), dry, light olive brown (2.5Y 5/4), mostly ~~poorly graded~~ fine SAND (1.4C CSR), few silt
	14.0	Note! bkgd PID		2 same as above
2.5 - 5.0				
	13.3	readings high b/c		3' grading to POORLY GRADED SAND w/ CLAY (SP-SC) moist, dark grayish brown (10YR 4/6), mostly fine ~~to~~ sand, few-little clay
	12.0	facility equipment.		4' grading to CLAYEY SAND (SC), moist, strong brown (7.5YR 5/6), mostly fine-med sand, little clay
5 - 10.0	13.9	Drops in headspace bag &		5' same as above but yellowish brown (10YR 5/8), little-some clay.
	11.8	Stabalizes		6' grading to SANDY CLAY (CL), moist, yellowish brown (10YR 5/8) mostly clay, little-some fine-med sand.
	14.5			7' CLAY (CL), moist, yellowish brown (10YR 5/6), ~~light~~ dk gray (10YR 5/1), mostly clay, little sand, interbedded w/ CLAYEY SAND (SC), like 4' above
7.5 - 10.0				
	11.4			8 grading to as above but ~~light~~ mostly thin clay intervals, less clayey SAND (SC), clay is yellowish brown (10YR 5/6) and light gray (2.5Y 7/2) mottled w/ dark red (2.5YR 3/6), stiff, dry-moist.
		DPT-44 (0 TO 7.9')		
	14.1	D: 0807.9 T: 1320		
		A: VOCs, SVOCs		
10 - 20.0	22.6			

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLER ID.		DESCRIPTIONS		NOTES	
0-4	VERY LOOSE	0-2	VERY SOFT	SS	SPLIT SPOON	MOSTLY	50-100%	WD	WHILE DRILLING
5-10	LOOSE	3-4	SOFT	ST	SHELBY TUBE	SOME	30-45%	NE	NOT ENCOUNTERED
11-30	MEDIUM DENSE	5-8	MEDIUM STIFF	G	GRAB SAMPLE	LITTLE	15-25%	UR	NOT READ
31-50	DENSE	9-15	STIFF	MC	MACRO-CORE	FEW	5-10%	NR	NO RECOVERY
50+	VERY DENSE	16-30	VERY STIFF			TRACE	<5%		
		31+	HARD						

AECOM

Test Boring Report

BORING NO. DPT-44
PAGE 2 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: ~~AE Drilling~~ NA
EQUIPMENT: Geoprobe Hand Auger

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 3/3/14
DATE FINISH: 3/3/14
DRILLER: R Morgan
PREPARED BY: L Alexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE			
					SIZE ID			
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
				CLAY (CL), moist, light gray (2.5Y 7/2), mottled w/ yellowish brown (10YR 5/8) and red (2.5 YR 4/6), few ~~fine~~ sand.
	24.1			
	28			
12.5				-grading to wet at ~12'
~~5.0~~				Boring terminated at 12.2' bgs.
15				
~~10.0~~				
17.5				
~~15.0~~				
20.0				

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

	SAMPLER ID.
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

	NOTES
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. DPT-46
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/28/14
DATE FINISH: 2/28/14
DRILLER: M. Gonzales
PREPARED BY: L Alexander

GROUND WATER		DEPTH TO:			CASING		SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE			
					SIZE ID			
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			4.5/5.0	SILTY SAND (SM), dry - moist, dark brown (10YR 3/3) mostly fine sand, 1.4ft - some silt.
	0.3			SANDY CLAY (CL), moist, dark yellowish brown (10YR 3/6), mostly clay little - some fine - med sand
	1.1	DPT-46(1.5-3.5)		
	4.8	D:1.5-3.5	2	- increasing clay content & decreasing sand content w/ depth
2.5		T:1240	0-5'	
5.0		A: VOCs, SVOCs, metals, herbicides		
	1.9	W/field	3	- grading to CLAY (CL), moist, stiff, dark gray (10YR 4/1) mottled w/ dark yellowish brown (10YR 4/6).
		duplicate		
	0.1	DPT-46(1.5-3.5)-a		
5 10.0	0.8			
				Same as above
	1.3			
	1.3		5/5'	- 6.5 grading to sandy CLAY (CL), moist, dark gray (10YR 4/1) and dark yellowish brown (10YR 4/4), mostly clay, some fine - med sand.
	0.5			
7.5 15.0			5-10	
	1.0			- 7.5 grading to CLAYEY SAND (CL) to well graded SAND w/ clay (SW), moist, gray (10YR 5/1) and yellowish brown (10YR 5/6), mostly fine - coarse sand, little - some clay. w/ lenses of CLAY (CL), white (10YR 8/1) moist, ~0.2-0.5" thick between 8.2 and 9.5 ft.
	3.1			
	2.8			
	2.6			
10 20.0	1.8			
				Boring terminated at 10 ft bgs

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLER ID.		DESCRIPTIONS		NOTES	
0-4	VERY LOOSE	0-2	VERY SOFT	SS	SPLIT SPOON	MOSTLY	50-100%	WD	WHILE DRILLING
5-10	LOOSE	3-4	SOFT	ST	SHELBY TUBE	SOME	30-45%	NE	NOT ENCOUNTERED
11-30	MEDIUM DENSE	5-8	MEDIUM STIFF	G	GRAB SAMPLE	LITTLE	15-25%	UR	NOT READ
31-50	DENSE	9-15	STIFF	MC	MACRO-CORE	FEW	5-10%	NR	NO RECOVERY
50+	VERY DENSE	16-30	VERY STIFF			TRACE	<5%		
		31+	HARD						

AECOM Test Boring Report

BORING NO. DPT-47
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/29/14
DATE FINISH: 2/28/14
DRILLER: M Gonzales
PREPARED BY: LAlexander

GROUND WATER		DEPTH TO:			CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE			
					TYPE		
					SIZE ID		
					HAMMER WT		
					HAMMER FALL		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
	0		4'/4'	SILTY SAND (SM), dry - moist, dark brown (10YR 3/3), mostly fine sand, little - some silt,
				0.5 color change to yellowish brown, decrease in silt
	0			1 ft grading to CLAYEY SAND (SC), moist, yellowish brown (10YR 5/4), mostly fine - medium sand, some clay/silt.
2.5 - 5.0	0		0-4'	2.5 grading to SANDY CLAY (CL), moist, SLIGHT gray (10YR 5/1) mottled w/ dark yellowish brown (10YR 4/6) and red (2.5YR 4/8), mostly clay, little - some fine - coarse sand
	0			
	0		4'/4'	grading to CLAYEY SAND (SC), as above but mostly fine - coarse sand, little to some clay.
5 - 10.0	0.2			
	0.3	DPT-47 (5-7) D:5-7 T:1205 A: VOCs, SVOCs metals hexchrom.		
	0.2		4-8'	
	0.4			
	0.2			color change to gray (10YR 5/1), no mottles, sand size decrease → mostly fine - med sand, few coarse
7.5 - 15.0	0			
	0			
	0.1		2'/2'	
	0.5			8.5 grading to POORLY GRADED SAND W/ CLAY (SP-SC) moist, gray (10YR 5/1), mostly med sand, few - little clay/silt
	0.3		8'/0'	
	0.4			9.2 grading to wet
10 - 20.0				Boring terminated at 10'

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLER ID.		DESCRIPTIONS		NOTES	
0-4	VERY LOOSE	0-2	VERY SOFT	SS	SPLIT SPOON	MOSTLY	50-100%	WD	WHILE DRILLING
5-10	LOOSE	3-4	SOFT	ST	SHELBY TUBE	SOME	30-45%	NE	NOT ENCOUNTERED
11-30	MEDIUM DENSE	5-8	MEDIUM STIFF	G	GRAB SAMPLE	LITTLE	15-25%	UR	NOT READ
31-50	DENSE	9-15	STIFF	MC	MACRO-CORE	FEW	5-10%	NR	NO RECOVERY
50+	VERY DENSE	16-30	VERY STIFF			TRACE	<5%		
		31+	HARD						

AECOM Test Boring Report

BORING NO. DPT-48
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/20/14
DATE FINISH: 2/20/14
DRILLER: M Gonzalez
PREPARED BY: Alexander

GROUND WATER		DEPTH TO:			CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE			
					TYPE		
					SIZE ID		
					HAMMER WT		
					HAMMER FALL		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
				SILTY SAND (SM), dry-moist, dark brown (10YR 3/3), mostly fine sand, little-some silt
	0.7		5/5'	
				grading to CLAYEY SAND (SC), moist, yellowish-brown (10YR 5/4), mostly fine sand, little-some clay
	3.1			
2.5 - 5.0			0-5	
	0.2		2.5	same as above but yellowish brown (10YR 5/4) mottled w/ gray (10YR 5/1).
	0.1			
	0.1		4	grading to SANDY CLAY (CL) moist, stiff, yellowish brown (10YR 5/4), gray (10YR 5/1) and red (2.5YR 4/6), mostly clay, some fine-coarse sand
5 - 10.0	0.1			
				5' interbedded SANDY CLAY (CL), as above but no red and CLAYEY SAND (SC) moist, gray (10YR 5/1), mostly fine-coarse sand, little-some clay
	0.4			
	0.4		5/5'	
	0.4			
7.5 - 15.0		DPT-48[7.5-9.5] D: 7.5-9.5		
	6.0	T: 1220	5-10'	
		A: VOCs, SVOCs, metals, hex chrom		
	0.9			
	1.5			
10 - 20.0	1.3			Boring terminated at 10' bgs

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLER ID.		DESCRIPTIONS		NOTES	
0-4	VERY LOOSE	0-2	VERY SOFT	SS	SPLIT SPOON	MOSTLY	50-100%	WD	WHILE DRILLING
5-10	LOOSE	3-4	SOFT	ST	SHELBY TUBE	SOME	30-45%	NE	NOT ENCOUNTERED
11-30	MEDIUM DENSE	5-8	MEDIUM STIFF	G	GRAB SAMPLE	LITTLE	15-25%	UR	NOT READ
31-50	DENSE	9-15	STIFF	MC	MACRO-CORE	FEW	5-10%	NR	NO RECOVERY
50+	VERY DENSE	16-30	VERY STIFF			TRACE	<5%		
		31+	HARD						

AECOM Test Boring Report

BORING NO. DPT-49
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe 6610 Track-Mounted DPT Rig

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/26/14
DATE FINISH: 2/26/14
DRILLER: G.Winbourn/M.Gonzales
PREPARED BY: LAlexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE		Acetate Liners	Core barrel
					SIZE ID		1.75"	2.25"
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0-5'	SILTY SAND (SM), dry - moist, brown (10YR 4/3), mostly fine sand, little - some silt
	1.3		3 1/5'	
				1' grading to POORLY GRADED SAND w/ SILT (SP), moist, light yellowish brown (2.5Y 6/3), mostly fine sand, few - little silt & clay
	2.4			
				2' grading to CLAYEY SAND (SC), moist, light olive brown (2.5Y 5/3), mostly fine sand, little - some clay/silt
2.5	2.0			
	4.4			
5.0	1.9		5-10'	5' SANDY CLAY (CL), moist, stiff, light brownish gray (10YR 6/2), mottled w/ strong brown (7.5YR 5/8), and yellowish red (5YR 4/6), mostly clay, little - some fine - med sand, few 0.1-0.25" clay lenses
	6.0	DPT-49(6-8) T:1500 D:6-8 Ft A: VOCs, SVOCs, metals hex chrom.	5 5/5'	
	13.1			
				7' grading to CLAYEY SAND (SC), interbedded w/ SANDY CLAY (CL), moist, light brownish gray (2.5Y 6/2), SC is mostly fine - coarse sand, little - some clays, CL is mostly clay, some fine - coarse sand, occasional strong brown (7.5YR 5/8) mottles and thin (0.1-0.25 in) lenses of clay
7.5				
10.0				Boring terminated at 10' bgs

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. DPT-SO
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe 6610 Track-Mounted DPT Rig

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/26/14
DATE FINISH: 2/26/14
DRILLER: G.Winbourn/M.Gonzales
PREPARED BY: LAlexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE		Acetate Liners	Core barrel
					SIZE ID		1.75"	2.25"
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0-5'	SILTY SAND (SM), dry-moist, dark brown (10YR 3/3), mostly fine sand, little silt
	1.5			
	50.6			1.5 grading to CLAYEY SAND (SC), moist, brown (10YR 5/3) mostly fine sand, little-some clay
	69.8			
2.5				
	210.7			
	305.7	Petro odor		3' grading to POORLY GRADED SAND w/ SILT / CLAY (SP-SM / SP-SC), moist, brown (10YR 5/3), w/ mottles of yellowish brown (10YR 5/8), mostly fine sand, little clay
		DPT-SO (4-6)		
	1035	D: 4-6' bgs		4' grading to CLAY (CL), moist, brown (10YR 5/3) w/ yellowish brown (10YR 5/8), mostly clay, trace silt/fine sand, interbedded w/ SANDY CLAY (CL), moist, brown (10YR 5/3) and yellowish brown (10YR 5/8), mostly clay, little-some fine-med sand
		T: 1515		
5.0		A: VOCs, SVOCs,		
	1463	metals, hex chrom	5-10'	5' SANDY CLAY (CL), moist, light brownish gray (10YR 6/2), mostly clay, some fine-med sand
	939	Petro odor		
	~~839~~ 4			
	231			
	~~231~~ 4			
7.5				
	317			7.5 grading to as above w/ interbedded thin (0.1-0.3") lenses of CLAY (CL), light gray (10YR 7/1) to white (10YR 8/1) and interbedded POORLY GRADED SAND (SP), wet, light gray (10YR 7/1), mostly fine sand, trace-few silt/clay
	~~317~~ 4			
	131			
	~~44~~			
	107			
10.0				boring terminated at 10' bgs

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. DPT-51
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe 6610 Track-Mounted DPT Rig

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/26/14
DATE FINISH: 2/26/14
DRILLER: G.Winbourn/M.Gonzales
PREPARED BY: LAlexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE		Acetate Liners	Core barrel
					SIZE ID		1.75"	2.25"
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0-5'	SILTY ~~SAND~~ (SM), moist, dark brown (10YR 3/3), mostly fine sand, little - some silt.
	0.5			0.5' SILTY SANDS (SM), moist, light olive brown (2.5Y 5/6) mostly fine sand, few-little silt.
	0.5			
	0.6			
2.5	0.6			
				3' grading to POORLY GRADED SAND w/ SILT & CLAY (SP), moist, light yellowish brown (2.5Y 6/4), mostly fine sand, few-little clay / silt.
	0.5			4' grading to wet; trace - few silt / clay
	0.6			4.5' POORLY GRADED SANDS (SP), wet, light gray (2.5Y 7/2), mostly fine - med sand
5.0				
			5-10'	
	1.2			
		DPT-51(7-9)		
	12.4	D:7-9' bgs		
	12	T:1550		7' increase in clay content & grading to POORLY GRADED SANDS w/ CLAY (SP-SC), strong fuel odor
7.5	160	A: VOCs, SVOCs, metals, hex chrom	Strong Petro odor	8' grading to CLAYEY SANDS (SC), moist, light brownish gray (2.5Y 6/2), mostly fine - med sand, little clay, petro odor
				9' grading to SANDY CLAY (CL), stiff
	207			
	47			
10.0				Boring terminated at 10' bgs

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. DPT-S2
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe 6610 Track-Mounted DPT Rig

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/26/14
DATE FINISH: 2/26/14
DRILLER: G.Winbourn/M.Gonzales
PREPARED BY: LAlexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE		Acetate Liners	Core barrel
					SIZE ID		1.75"	2.25"
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
				SILTY SAND (SM), dry to moist, dark brown (10YR 3/3), mostly fine sand, little-some silt.
	0.5			-1' grading to light yellowish brown (2.5 Y 6/4)
	1.2			
	1.5			-2' grading to POORLY GRADED SAND (W) CLAYEY/SILT (SP-SC/SP-SM), moist, light olive brown (2.5 Y 5/4), mostly fine sand, few little clay/silt.
2.5				
	1.3			-3.2' grading to POORLY GRADED SAND W/SILT (SP-SM), as above but no-trace clay, olive yellow (2.5 Y 6/6).
	0.9			
				-4.5 SANDY CLAY (CL), moist, moderately stiff, light gray (2.5 Y 7/2), mostly clay, little-some fine-med sand
	0.5			
5.0				
	0.5			-6' increase in sand content & size
	5.9			
	6.5			-7' grading to CLAYEY SAND (SC), moist, light gray (2.5 Y 7/1), mostly fine-coarse sand, little-some clay
7.5		DPT-S2(8-10) & DPT-S2(8-10)-RE		
	4.9	D: 8-10'		
		T: 1430		
		A: VOCs, SVOCs, metals, hex chrom		-8' as above but interbedded w/ SANDY CLAY (CL). Lense at 4.5' and few thin (0.1-0.25") lenses of CLAY (CL), moist, white (2.5 Y 8/1)
	37.1			
	51.8			
10.0				boring terminated at 10' bgs

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. DPT-53
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe 6610 Track-Mounted DPT Rig

PROJECT NO: 60314964
LOCATION:
ELEVATION: ~~2/26/14~~ ft
DATE START: 2/26/14
DATE FINISH: 2/26/14
DRILLER: G.Winbourn/M.Gonzales
PREPARED BY: LAlexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE		Acetate Liners	Core barrel
					SIZE ID		1.75"	2.25"
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0-5'	SILTY SAND (SM), dry-moist, dark brown (10YR 3/3) mostly fine sand, some silt.
	0.3		4.5' / 5'	-1' grading to POORLY GRADED SAND W/ SILT (SP-SM), moist-light yellowish brown (2.5Y 6/3), mostly fine sand, few-little silt
	0.3			
	0.4			-2' increase in clay content
2.5				
	0.3			-3' grading to CLAYEY SAND (SC), moist, light brownish gray (10YR 6/2), mostly fine-med sand, little-some clay
	0.4			-4' decrease in clay - grading to POORLY GRADED SAND (SP) to W/ CLAY (SP-SC), as above but few-little clay.
				-4.5 POORLY GRADED SAND (SP), as above but trace-few clay.
	0.7			
5.0			5'-10' / 4.8' / 5'	5' POORLY GRADED SAND W/ CLAY (SP), wet, light yellowish brown (10YR 6/4), mostly fine-med sand, few-little clay
	0.3			
				-6.5' increasing clay content
	0.3			
				-7' grading to SANDY CLAY (CL), moist, light gray (10YR 7/2), mostly clay, some fine-med sand
	0.4			
7.5		DPT-53(8-10) D: 8-10' T: 1410 A: VOCs, SVOCs, metals, hex Chrom		-7.8' as above but increasing clay; occasional strong brown (7.5YR 5/8) mottles, thin ~~lenses~~ lenses of CLAY (CL).
	0.6			
	1.8			
				-9.3 WELL GRADED SAND W/ CLAY (SW), wet, pale brown (10YR 6/3), mostly fine-coarse sand, few-little clay
	14.4			
10.0				Boring terminated at 10' bgs

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. DPT-54
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe 6610 Track-Mounted DPT Rig

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/26/14
DATE FINISH: 2/26/14
DRILLER: G.Winbourn/M.Gonzales
PREPARED BY: LAlexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE		Acetate Liners	Core barrel
					SIZE ID		1.75"	2.25"
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
	0.6			SILTY SAND (SM), dry-moist, brown (10YR 4/3); mostly fine sand, some silt; 2 inches of SILTY/CLAYEY SAND (SC-SM), dark yellowish brown (10YR 4/6), from 0.5-0.7 ft, as above but little clay.
	0.6			
	0.6			
	1.1			-2' grades to POORLY GRADED SAND (SP), moist, yellowish brown (10YR 5/6), mostly fine sand, trace-little silt.
2.5	0.6			-2.8' grades to CLAYEY SAND (SC), as above but some CLAY (10%).
	0.6			
	0.6			-4.5' grades to SILTY SAND (SM), moist, brown (10YR 5/3), mostly fine sand, little-some silt.
5.0				-5' grading to wet
	0.6			
	0.7			-6.7' grades to brownish yellow (10YR 5/8), moist, trace-few clay.
	0.7	DPT-54(8-10) w/MS/MSD		-7' SANDY CLAY (CL), moist, light brownish gray (10YR 6/2), mostly clay, little-some fine sand & silt.
7.5	0.7	D: 8-10' bgs		-8' grading to dry-moist, stiff, light brownish gray (10YR 6/2) mottled w/ few yellowish red (5YR 4/6), mostly clay, little-some clay & silt
	0.7	T: 1640		
	0.6	A: VOCs, SVOCs, metals, hex chrom		
	0.7			-9.2 WELL GRADED SAND w/ CLAY (SW-SC), moist, light brownish gray (10YR 6/2), mostly fine-coarse sand, little clay
10.0	1.0			Boring terminated at 10' bgs

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. DPT-55
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe 6610 Track-Mounted DPT Rig

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/26/14
DATE FINISH: 2/26/14
DRILLER: G.Winbourn/M.Gonzales
PREPARED BY: LAlexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE		Acetate Liners	Core barrel
					SIZE ID		1.75"	2.25"
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0-5'	SILTY SAND (SM), dry-moist, dark brown (10YR 3/3), mostly fine sand, little silt.
	1.1			
				1.5' grades to POORLY GRADED SAND (SP) dry-moist, light olive brown (2.5Y 5/6), mostly fine sand, trace-few silt.
	1.8		3.5'/5'	
			hit root	
2.5				2.5' grades to CLAYEY SAND (SC), moist, yellowish brown (10YR 5/6), mostly fine-med sand, little-some clay.
	1.7	DPT-55 (3-5) D: 3-5' T: 17 20 A: VOCs, SVOCs, metals, hex chrom		
	1.8			
5.0				5' SANDY CLAY (CL), moist, stiff, ~~light~~ light brownish gray (10YR 6/2), mottled with few yellowish red (5YR 4/6), mostly clay, little-some fine-med sand & silt.
	0.5		5-10'	
	0.2		5'/5'	
	0.4			
	0.6			
7.5				
	0.3			
				Sand content increases slightly downward
	0.5			
	1.9			
10.0				Boring terminated at 10' bgs

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. DPT-S6
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe 6610 Track-Mounted DPT Rig

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/26/14
DATE FINISH: 2/26/14
DRILLER: G.Winbourn/M.Gonzales
PREPARED BY: LAlexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE		Acetate Liners	Core barrel
					SIZE ID		1.75"	2.25"
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0-5'	Silty SAND (SM), dry-moist, brown (10YR 4/3), mostly fine sand, little - some silt
	0.8			
				-1.0 grading to POORLY GRADED SAND W/ SILT (SP-SM), moist, yellowish brown (10YR 5/8), mostly fine sand, few-little silt
	0.9			
		DPT-S6(2-4) D:2-4' T:1625 A: VOCs, SVOCs, metals, hex chrom		-2' grading to POORLY GRADED SAND W/ CLAY (SP-SC) moist, strong brown (7.5YR 5/8), mostly fine sand, little med sand, few-little clay & silt.
2.5				
	3.4			
	3.6			
				-3.5' SANDY CLAY (CL), moist, stiff, light brownish gray (10YR 6/2), mottled w/ strong brown (7.5YR 5/8) and yellowish red (5YR 4/6), mostly clay, little - some fine - med sand
	1.2			
5.0				
	1.2		5-10'	
	1.1			
	0.8			
				-7.0 grading to less mottling, increase in sand content, increase in med. sand
7.5	1.1			
	1.7			
	2.8			
	1.7			
				-9' as above but no mottles; few interbeds of CLAYEY SAND (SC), med-coarse sand w/ little clay
	4.0			
10.0				Boring terminated at 10' bgs

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. DPT-S7
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe 6610 Track-Mounted DPT Rig

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/26/14
DATE FINISH: 2/26/14
DRILLER: G.Winbourn/M.Gonzales
PREPARED BY: CAlexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE		Acetate Liners	Core barrel
					SIZE ID		1.75"	2.25"
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0-5'	SILTY SAND (SM), dry-moist, brown (10YR 4/3), mostly fine Sand, little-some silt
	5.4			0.5 grading to POORLY GRADED SAND w/ SILT (SP-SM), moist, yellowish brown (10YR 5/8), mostly fine sand, few-little silt.
	4.2			1.5 grading to POORLY GRADED SAND w/ CLAY (SP-SC), moist, Strong brown (7.5YR 5/8) mostly fine sand, little med sand, few-little silt/clay
2.5	3.3			2.8 CLAYEY SAND (SC), moist, olive yellow (2.5Y 6/8), mostly fine-med sand, little clay.
	2.6			
	1.5			3.5 grading to SANDY CLAY (CL), moist, stiff, light brownish gray (10YR 6/2), mottled w/ strong brown (7.5YR 5/8) and yellowish red (5YR 4/6), mostly clay, little-some fine-med sand.
	0.5			
5.0			5-10'	
	1.2	DPT-S7 (6-8)		
	3.9	T: 1610		6.5 grading to less mottling; increase in sand size & content
	2.0	D: 6-8'		
		A: VOCs, SVOCs, metals, hexchrom w/ eq. blank DPT-S7 (6-8)-d		
7.5	5.7			
	2.5			9' as above but few interbeds of CLAYEY SAND (SC), moist, yellowish brown (10YR 5/8), med-coarse sand, w/ little clay.
	4.3			
10.0				Boring terminated at 10 Ft bgs

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. BG-1
PAGE 1 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe 6610

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/28/14
DATE FINISH: 2/28/14
DRILLER: M Gonzales
PREPARED BY: LAlexander

GROUND WATER		DEPTH TO:			CASING		SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE			
					SIZE ID			
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			3'/4'	POORLY GRADED w/ SILT (SP-SM) dry, brown (10YR 4/3), mostly fine-med sand, few-little silt.
		BG-1(1-2) D1-2 T:1050 A:metals hexchrom	MI Driver	0.8' POORLY GRADED SAND (SP), damp-moist, light yellowish brown (2.5Y 6/4), mostly fine sand, trace-few silt
2.5 - 5.0			0-4	
				-3.2' color change to strong brown (7.5YR 4/6).
				-4' CLAYEY SAND (SC), moist, yellowish brown (10YR 5/8), mostly f-m sand, little-some clay.
5 - 10.0			4'/4'	-5' SANDY CLAY (CL), most, stiff, light gray (2.5Y 7/1), mostly CL mottled w/ strong brown (7.5YR 5/8) and red (2.5YR 4/6), mostly clay, little-some fine sand
			4-8	
7.5 - 15.0				-grading to hard at 8'
			6"/4'	
			8-12	NO recovery
			hard clay - blocked/ compacted	
10 - 20.0				

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. BG-1
PAGE 2 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe 6610

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/28/14
DATE FINISH: 2/28/14
DRILLER: M Gonzales
PREPARED BY: LAlexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE			
					SIZE ID			
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			9-11	
				-11' POORLY GRADED SAND (SP), moist, brownish yellow (10YR 6/6), mostly fine-med sand, ~~few~~ few silt
			4'/3'	
12.5 / 5.0				-12.5 SANDY CLAY (CL), same as 5' above
			11-14	
			5'/3'	
15 / 10.0			14-17'	
		BG-1(16-17) D:16-17' T:1115 A: metals, hex chrom		-15.6' CLAYEY SAND (SC), wet, brownish yellow (10YR 6/8), mostly fine-coarse sand, little clay.
				-17 same as above but clay content looks like it's decreasing, though hard to tell b/c it's soupy/wet.
17.5 / 15.0			5/3'	
			17-20	
20.0				Boring terminated at 20' bgs

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. BG-2
PAGE 1 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe 6610 Track-Mounted DPT Rig

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/28/14
DATE FINISH: 2/28/14
DRILLER: G.Winbourn/M.Gonzales
PREPARED BY: LAlexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE		Acetate Liners	Core barrel
					SIZE ID		1.75"	2.25"
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			3.5'/4'	SILTY SAND (SM), dry, brown (10YR 4/3), mostly fine-med sand, little silt
			0-4	1' grading to POORLY GRADED SAND (SP), dry, light yellowish brown (2.5Y 6/4), mostly fine sand, trace few silt.
		BG-2(1.5-2.5) D:1.5-2.5 T:0925 A: metals hex chrom		
2.5				
			4-8	4' grading to CLAYEY SAND (SC), moist, yellowish brown, (10YR 5/8), mostly fine-med, few coarse sand, some clay/silt.
		BG-2(4-5) D:4-5 T:0928 A: metals hex chrom	3.5'/4'	5' CLAY (CL), stiff, light gray (2.5Y 7/1), mottled w/ strong brown (7.5YR 5/8) and dark red (2.5YR 3/6), mostly clay, few-little fine sand/silt.
5.0				
		BG-2(7-8) D:7-8' T:0930 A: metals hex chrom		
7.5				
			8-11'	8' grading to SANDY CLAY (CL), moist, stiff, light gray, (2.5Y 7/1), mostly clay, some med-coarse sand.
			3'/3'	
10.0				

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. BG-2

PAGE 2 OF 2

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
10.0				-10.5' layer of CLAYEY SAND (SC), moist, yellowish red (5YR 5/6), mostly med-coarse sand, little-some clay.
		BG-2(12-14)		
		BG-2(12-14)-A	11-14	-12' CLAY (CL), moist, stiff, yellowish red (5YR 4/6),
12.5		D: 12-14		mostly clay; a few layers w/little med-coarse sand.
		T: 0940	3/3'	
		A: metals hex chrom w/fieldup		
				-14' as above but no sand; color change to light
			14-17	gray (5Y 7/1), w/mottles of reddish yellow (7.5YR 6/8) and weak red (10R 4/2).
15.0			3/3'	
				-16' SILTY CLAY (CL), moist-wet, soft, brownish
		BG-2(16-17)		yellow (10YR 6/8), mostly clay; little-some
		D: 16-17		silt.
		T: 0950		
17.5		A: metals hex chrom	17-20	
			3'/3'	
20.0				Boring terminated at 20' bgs
22.5				

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. BG-3
PAGE 1 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe 6610

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/28/14
DATE FINISH: 2/28/14
DRILLER: M Gonzales
PREPARED BY: LAlexander

GROUND WATER		DEPTH TO:			CASING		SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE			
					SIZE ID			
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
		3/4' recovered	3/4'	SILTY SAND (SM), dry, dark brown (10YR 3/3), mostly fine sand, little - some silt.
		BG-3 (0.5-1.5')		0.5 POORLY GRADED SAND (SP) dry - light yellowish brown (10YR 6/4), mostly fine sand.
		D: 0.5-1.5'		1.5 POORLY GRADED SAND w/ CLAY (SP-SC), dry, yellowish
		T: 0944		brown (10YR 5/8), mostly f to v. fine - med sand, few-little
2.5		A: metals	0-4	clay/silt.
5.0		BG-3 (2-3)		
		D: 2-3		
		T: 0950		
		A: metals		
			3.5'/4'	
5				
10.0			8/8	
				7 SANDY CLAY (CL), moist, gray (10YR 6/1), yellowish
7.5				brown (10YR 5/8) and red (2.5YR 4/6), mostly clay,
15.0				some f-c sand.
			2.9'/4'	
			8-12	
		BG-3 (9-11)		
10		D: 9-11		
20.0		T: 0955		
		A: metals		

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLER ID.		DESCRIPTIONS		NOTES	
0-4	VERY LOOSE	0-2	VERY SOFT	SS	SPLIT SPOON	MOSTLY	50-100%	WD	WHILE DRILLING
5-10	LOOSE	3-4	SOFT	ST	SHELBY TUBE	SOME	30-45%	NE	NOT ENCOUNTERED
11-30	MEDIUM DENSE	5-8	MEDIUM STIFF	G	GRAB SAMPLE	LITTLE	15-25%	UR	NOT READ
31-50	DENSE	9-15	STIFF	MC	MACRO-CORE	FEW	5-10%	NR	NO RECOVERY
50+	VERY DENSE	16-30	VERY STIFF			TRACE	<5%		
		31+	HARD						

AECOM Test Boring Report

BORING NO. BG-3
PAGE 2 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe 6610

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/28/14
DATE FINISH: 2/28/14
DRILLER: M Gonzales
PREPARED BY: L Alexander

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE			
					SIZE ID			
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			8-12	
12.5 ~~6.0~~				12' Sand size decreasing to v.fine-fine sand & s.cl
		BG-3(14-16) D: 14-16' T: 0900 A: metals hexchrom	12.5	
15 ~~10.0~~				15' CLAY increasing-grading to CLAY (CL) like above but no sand, interbedded w/ a few layers of SANDY/SILTY CLAY (CL) like 12' above.
				16' CLAY (CL) like above but wet, soapy.
17.5 ~~10.0~~			16' 20	17' SILTY CLAY (CL), moist, soft, white (5Y 8/1) mottled w/ reddish yellow (7.5YR 6/8) and reddish brown (2.5 YR 5/4), mostly clay, little-some silt & very fine sand
		BG-3(18-20) D: 18-20 T: 0905 A: metals hexchrom		
20.0				Boring terminated at 20' bgs

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. BG-4
PAGE 1 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe 6610 Track-Mounted DPT Rig

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/27/14
DATE FINISH: 2/27/14
DRILLER: G.Winbourn/M.Gonzales
PREPARED BY: LAGrandy

GROUND WATER		DEPTH TO:				CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE		Acetate Liners	Core barrel
					SIZE ID		1.75"	2.25"
					HAMMER WT			
					HAMMER FALL			

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0-4'	POORLY GRADED SAND w/ SILT (SP-SM), dry, dark yellowish brown (10YR 4/4), mostly fine sand, few-little silt.
		BG-4(1-3) D: 1-3' T: 1715 A: ~~VOCs~~ M metals hex chrom w/ dup BG-4(1-3)-a	4'/4'	0.5 grading to POORLY GRADED SAND (SP), dry, light yellowish brown (2.5Y 6/4), mostly fine-med sand, trace silt. 1.0' SANDY CLAY (CL), moist, light olive brown (2.5Y 5/6), mostly clay, some fine-med sand.
2.5				
			4-8'	-4' grading to as above but color change to light gray (2.5Y 7/1) mottled w/ yellowish brown (10YR 5/8), mostly clay, little-some fine-coarse sand.
5.0		BG-4(5-7) D: 5-7 T: 1720 A: metals hex chrom	4'/4'	
7.5				
			8-11'	8' SANDY CLAY (CL), like 1' above but light gray (2.5Y 7/1).
		BG-4(9-11) D: 9-11 T: 1725 A: metals hex chrom	3'/3'	
10.0				

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

	SAMPLER ID.
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

	NOTES
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM

Test Boring Report

BORING NO. BG-4

PAGE 2 OF 2

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
10.0				
			11-14	11' increasing sand content; grading to CLAYEY SAND (SC), as above but mostly med-coarse sand, some clay.
			3'/3'	
12.5				
		BG-4(14-16)	14-17'	14' as above but sand size increase to med-very coarse sand, clay content decrease to little clay, wet.
		T:1740		
		D:14-16	3'/3'	
15.0		A: Metals hex chrom		
				16.5 grading to decreasing clay & WELL GRADED SAND W/ CLAY (SW-SC), wet, like above but mostly med-U. coarse sand, fine-little clay.
		BG-4(17-19)	17-20'	
17.5		D:17-19'		
		T:1750		
		A: metals hex chrom	3'/3'	
20.0				Boring terminated at 20' bgs
22.5				

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

	SAMPLER ID.
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

	NOTES
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. BG-5
PAGE 1 OF 1

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe 6610

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/27/14
DATE FINISH: 2/27/14
DRILLER: M Gonzalez
PREPARED BY: LAlexander

GROUND WATER		DEPTH TO:			CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE			
					TYPE		
					SIZE ID		
					HAMMER WT		
					HAMMER FALL		

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
		4'/4'	0-4	Poorly graded SAND (SP), dry, yellowish brown (10YR 5/4), mostly fine sand, trace-few silt.
		BG-5 (1-3) D: 1-3' T: 1610 A: metals, hex chrom	4'/4'	-1' grading to CLAYEY SAND (SC), moist, yellowish brown (10YR 5/8), mostly fine-med sand, some clay.
2.5 -8.0				
		BG-5 (3-5) D: 3-5' T: 1615 A: metals, hex Chrom		-3' grading to sandy CLAY (CL), moist, light gray (10YR 7/1) mottled w/ brownish yellow (10YR 6/8) and dark red (2.5YR 3/6), mostly clay, some f-med sand.
5 -10.0			4-8	
		BG-5 (6-7.5) D: 6-7.5' T: 1625 A: metals, hex chrom		-6 grading to CLAY (CL), like above but no sand, Stiff.
7.5 -10.0				-7.5' grading to CLAY (CL) as above at 6' interbedded w/ CLAYEY SAND (SC), like 1' above but med-coarse sand moist.
		BG-5 (8-9) D: 8-9' T: 1630 A: metals, hex Chrom	8-11	
10 -20.0				-9.5 WELL GRADED SAND w/ CLAY (SW-SC), moist, reddish yellow (2.5YR 6/6), mostly f-c sand, few-little clay w/ few thin beds of CLAY (CL), moist, white (2.5Y 8/1), mostly clay

BLOWS/FT.	DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
50+	VERY DENSE

BLOWS/FT.	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	MEDIUM STIFF
9-15	STIFF
16-30	VERY STIFF
31+	HARD

SAMPLER ID.	
SS	SPLIT SPOON
ST	SHELBY TUBE
G	GRAB SAMPLE
MC	MACRO-CORE

DESCRIPTIONS	
MOSTLY	50-100%
SOME	30-45%
LITTLE	15-25%
FEW	5-10%
TRACE	<5%

NOTES	
WD	WHILE DRILLING
NE	NOT ENCOUNTERED
UR	NOT READ
NR	NO RECOVERY

AECOM Test Boring Report

BORING NO. B6-5
PAGE 2 OF 2

PROJECT: UTC Delavan Spray Technologies Site
CLIENT: UTC
CONTRACTOR: AE Drilling
EQUIPMENT: Geoprobe

PROJECT NO: 60314964
LOCATION:
ELEVATION:
DATE START: 2/27/14
DATE FINISH: 2/27/14
DRILLER: M Gonzalez
PREPARED BY: LAlexander

GROUND WATER		DEPTH TO:			CASING		SAMPLER		CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE				
					SIZE ID				
					HAMMER WT				
					HAMMER FALL				

DEPTH IN FEET	ORGANIC VAPOR SCREENING (PPM)	SAMPLE INFIORMATION	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
		~~B6-5 (11-13)~~		11' WELL GRADED SAND (SW), wet, reddish yellow (7.5YR 6/6), mostly f-v. coarse sand, ~~some~~ few clay
			11-M	
12.5 ~~5.0~~		B6-5 (12-13) D: 12-13' T: 1638 A: metals hex chrom		
				13 SILTY CLAY (CL), moist, soft, white (2.5Y 8/1), mostly clay, some silt w/ interbedded layers of WELL GRADED SAND (SW) like 11' above
			14-17	
15 ~~10.0~~				
		B6-5 (16-17) D: 16-17' T: 1645 A: metals hex chrom w/ms/msd		16' same 13' above but SILTY CLAY is light reddish brown (5YR 6/4).
17.5 ~~15.0~~				17' SILTY CLAY (CL), moist, soft, brownish yellow, (10YR 6/8), mostly clay, little sand.
			17-20	
~~20.0~~				Boring terminated at 20ft bgs

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLER ID.		DESCRIPTIONS		NOTES	
0-4	VERY LOOSE	0-2	VERY SOFT	SS	SPLIT SPOON	MOSTLY	50-100%	WD	WHILE DRILLING
5-10	LOOSE	3-4	SOFT	ST	SHELBY TUBE	SOME	30-45%	NE	NOT ENCOUNTERED
11-30	MEDIUM DENSE	5-8	MEDIUM STIFF	G	GRAB SAMPLE	LITTLE	15-25%	UR	NOT READ
31-50	DENSE	9-15	STIFF	MC	MACRO-CORE	FEW	5-10%	NR	NO RECOVERY
50+	VERY DENSE	16-30	VERY STIFF			TRACE	<5%		
		31+	HARD						

Monitoring Well Construction Details

Shallow Monitoring Well Construction Details

PROJECT:	UTC Delavan Spray Technologies Site	**WELL NUMBER:**	MW-17
LOCATION:	Bamberg, SC	**JOB NUMBER:**	60314964
CLIENT:	United Technologies	**TYPE OF INSTALLATION:**	Monitoring Well
CONTRACTOR:	AE Drilling		
DRILLER:	B. Burnette	**LOCATION:**	Wooded area north of plant
FIELD REPRESENTATIVE:	C. Suddeth	**INSTALLATION DATE:**	03/04/14

SURVEY DATUM: SC State Plane, NAVD 88 (Vertical)
NAD 83 (Horizontal)

NORTHING: 528054.31

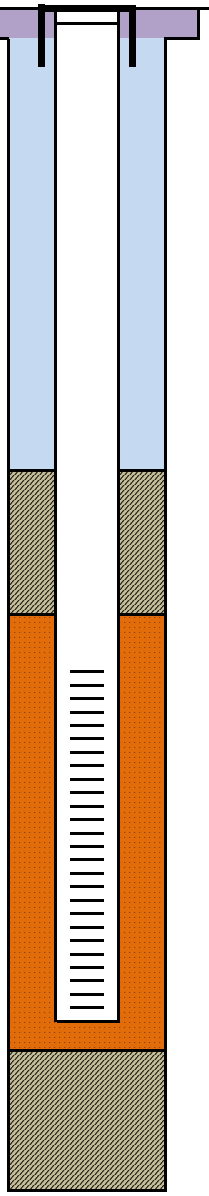
TOP OF CASING ELEVATION: 141.66 ft

EASTING: 1985785.06

GROUND SURFACE ELEVATION: 142.07 ft

CASING STICKUP: -0.41 feet

COMMENTS:



TYPE OF ANNULAR SEAL	Neat Cement	
TYPE OF WELL CASING OR RISER	Sch. 40 PVC	
INSIDE DIAMETER	2.0	inch
NOMINAL BOREHOLE DIAMETER	8.0	inch
TOP OF WELL SEAL	9.0	feet
TYPE OF SEAL	Bentonite Chips	
TOP OF SAND FILTER PACK	11.0	feet
TOP OF SCREENED INTERVAL	13.0	feet
TYPE OF SCREEN	PVC	
SLOT SIZE	0.010	inch
INSIDE DIAMETER	2.0	inch
SCREEN LENGTH	15.0	feet
FILTER PACK AROUND SCREEN	No. 2 sand	
BOTTOM OF WELL	28.4	feet
TOP OF BOREHOLE SEAL	30.0	feet
TYPE OF SEAL	Bentonite Chips	
BOTTOM OF BOREHOLE	45.5	feet

NOTE: ALL DEPTHS ARE REFERENCED TO GROUND SURFACE
DIAGRAM NOT TO SCALE

Shallow Monitoring Well Construction Details

PROJECT:	UTC Delavan Spray Technologies Site	**WELL NUMBER:**	MW-18
LOCATION:	Bamberg, SC	**JOB NUMBER:**	60314964
CLIENT:	United Technologies	**TYPE OF INSTALLATION:**	
CONTRACTOR:	AE Drilling		Monitoring Well
DRILLER:	B. Burnette	**LOCATION:**	Senior Center property NE of plant
FIELD REPRESENTATIVE:	C. Suddeth	**INSTALLATION DATE:**	03/03/14

SURVEY DATUM: SC State Plane, NAVD 88 (Vertical)
NAD 83 (Horizontal)

NORTHING: 527976.58

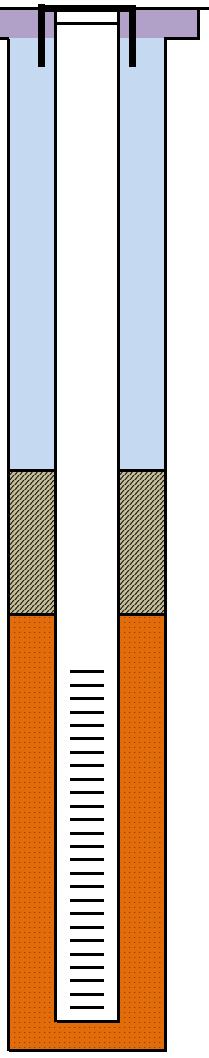
TOP OF CASING ELEVATION: 145.41 ft

EASTING: 1986054.35

GROUND SURFACE ELEVATION: 145.68 ft

CASING STICKUP: -0.27 feet

COMMENTS:



TYPE OF ANNULAR SEAL	Neat Cement	
TYPE OF WELL CASING OR RISER	Sch. 40 PVC	
INSIDE DIAMETER	2.0	inch
NOMINAL BOREHOLE DIAMETER	8.0	inch
TOP OF WELL SEAL	7.0	feet
TYPE OF SEAL	Bentonite Chips	
TOP OF SAND FILTER PACK	9.0	feet
TOP OF SCREENED INTERVAL	11.0	feet
TYPE OF SCREEN	PVC	
SLOT SIZE	0.010	inch
INSIDE DIAMETER	2.0	inch
SCREEN LENGTH	15.0	feet
FILTER PACK AROUND SCREEN	No. 2 sand	
BOTTOM OF WELL	26.4	feet
BOTTOM OF BOREHOLE	31.0	feet

NOTE: ALL DEPTHS ARE REFERENCED TO GROUND SURFACE
DIAGRAM NOT TO SCALE

Shallow Monitoring Well Construction Details

PROJECT:	UTC Delavan Spray Technologies Site	**WELL NUMBER:**	MW-19
LOCATION:	Bamberg, SC	**JOB NUMBER:**	60314964
CLIENT:	United Technologies	**TYPE OF INSTALLATION:**	
CONTRACTOR:	AE Drilling		Monitoring Well - pre-pack well screen
DRILLER:	M. Gonzales	**LOCATION:**	DPT-35 - inside multi-spindling machine room
FIELD REPRESENTATIVE:	L. Alexander	**INSTALLATION DATE:**	03/01/14

SURVEY DATUM: SC State Plane, NAVD 88 (Vertical)
NAD 83 (Horizontal)

TOP OF CASING ELEVATION: 148.22 ft

NORTHING: 527456.18

EASTING: 1985777.81

GROUND SURFACE ELEVATION: 148.47 ft

CASING STICKUP: -0.25 feet

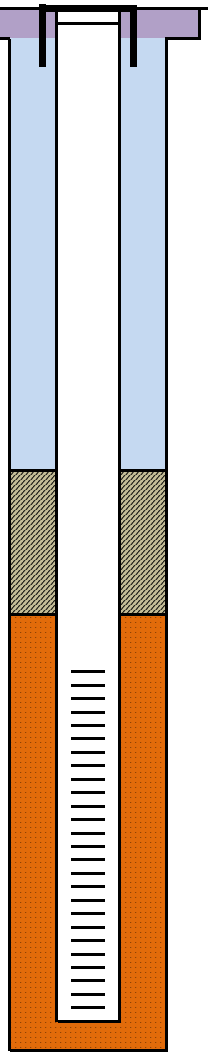
COMMENTS:

8" corehole in concrete
6" flushmount vault

DPT-35 probed to 20' bgs with 2" core then over-bored with 3.25" core

Bentonite hydrated with Tap water

Screen is Sch 40 PVC, 0.10 inch slot pre-pack screen with 20/40 mesh & filter sand



TYPE OF ANNULAR SEAL	grout
TYPE OF WELL CASING OR RISER	Sch. 40 PVC
INSIDE DIAMETER	1.0 inch
NOMINAL BOREHOLE DIAMETER	3.25 inch
TOP OF WELL SEAL	2.0 feet
TYPE OF SEAL	Bentonite Pellets
TOP OF SAND FILTER PACK	4.0 feet
TOP OF SCREENED INTERVAL	5.0 feet
TYPE OF SCREEN	Sch 40 PVC
SLOT SIZE	0.010 inch
INSIDE DIAMETER	1.0 inch
SCREEN LENGTH	15.0 feet
FILTER PACK AROUND SCREEN	20/40 mesh
BOTTOM OF WELL	20.15 feet
BOTTOM OF BOREHOLE	20.0 feet

NOTE: ALL DEPTHS ARE REFERENCED TO GROUND SURFACE
DIAGRAM NOT TO SCALE

Shallow Monitoring Well Construction Details

PROJECT:	UTC Delavan Spray Technologies Site	**WELL NUMBER:**	MW-20
LOCATION:	Bamberg, SC	**JOB NUMBER:**	60314964
CLIENT:	United Technologies	**TYPE OF INSTALLATION:**	
CONTRACTOR:	AE Drilling		Monitoring Well - pre-pack well screen
DRILLER:	M. Gonzales	**LOCATION:**	DPT-41 -hallway before test room
FIELD REPRESENTATIVE:	L. Alexander	**INSTALLATION DATE:**	03/02/14

SURVEY DATUM: SC State Plane, NAVD 88 (Vertical)
NAD 83 (Horizontal)

NORTHING: 527388.72

TOP OF CASING ELEVATION: 148.19 ft

EASTING: 1985893.51

GROUND SURFACE ELEVATION: 148.50 ft

CASING STICKUP: -0.31 feet

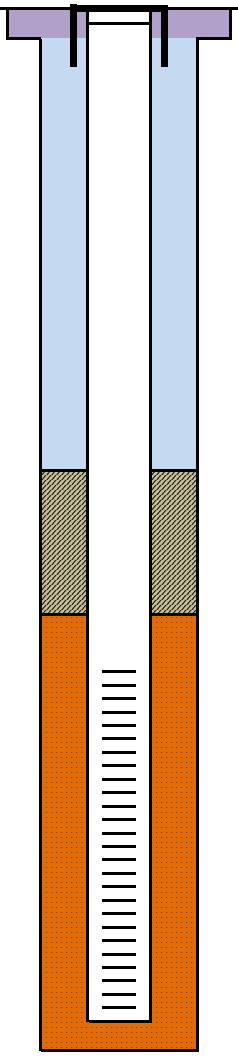
COMMENTS:

8" corehole in concrete
6" flushmount vault

DPT-41 hand augered to ~15'4"
with 3.25" hand auger

Bentonite hydrated with Tap water

Screen is Sch 40 PVC, 0.10 inch slot
pre-pack screen with 20/40 mesh
& filter sand



TYPE OF ANNULAR SEAL	grout
TYPE OF WELL CASING OR RISER	Sch. 40 PVC
INSIDE DIAMETER	1.0 inch
NOMINAL BOREHOLE DIAMETER	3.25 inch
TOP OF WELL SEAL	2.0 feet
TYPE OF SEAL	Bentonite Pellets
TOP OF SAND FILTER PACK	4.0 feet
TOP OF SCREENED INTERVAL	5.0 feet
TYPE OF SCREEN	Sch 40 PVC
SLOT SIZE	0.010 inch
INSIDE DIAMETER	1.0 inch
SCREEN LENGTH	10.0 feet
FILTER PACK AROUND SCREEN	20/40 mesh
BOTTOM OF WELL	15.15 feet
BOTTOM OF BOREHOLE	15.4 feet

NOTE: ALL DEPTHS ARE REFERENCED TO GROUND SURFACE
DIAGRAM NOT TO SCALE

Shallow Monitoring Well Construction Details

PROJECT:	UTC Delavan Spray Technologies Site	**WELL NUMBER:**	MW-21
LOCATION:	Bamberg, SC	**JOB NUMBER:**	60314964
CLIENT:	United Technologies	**TYPE OF INSTALLATION:**	
CONTRACTOR:	AE Drilling		Monitoring Well
DRILLER:	B. Burnette	**LOCATION:**	South side of plant building
FIELD REPRESENTATIVE:	C. Suddeth	**INSTALLATION DATE:**	02/25/14

SURVEY DATUM: SC State Plane, NAVD 88 (Vertical)
NAD 83 (Horizontal)

NORTHING: 527332.46

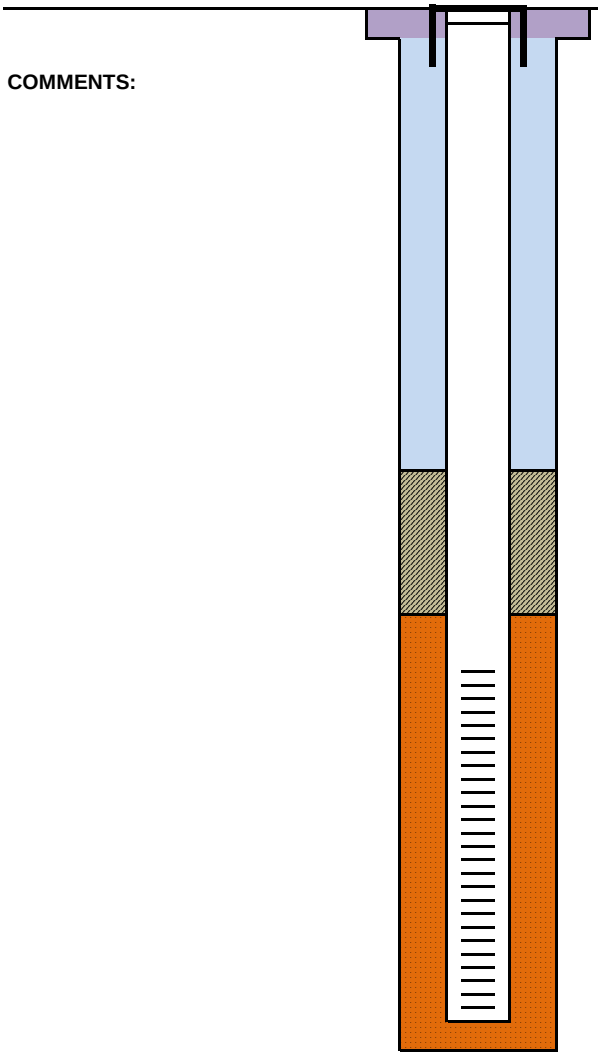
TOP OF CASING ELEVATION: 147.97 ft

EASTING: 1985891.49

GROUND SURFACE ELEVATION: 148.43 ft

CASING STICKUP: -0.46 feet

COMMENTS:



TYPE OF ANNULAR SEAL	Neat Cement	
TYPE OF WELL CASING OR RISER	Sch. 40 PVC	
INSIDE DIAMETER	2.0	inch
NOMINAL BOREHOLE DIAMETER	8.0	inch
TOP OF WELL SEAL	15.0	feet
TYPE OF SEAL	Bentonite Chips	
TOP OF SAND FILTER PACK	17.0	feet
TOP OF SCREENED INTERVAL	19.0	feet
TYPE OF SCREEN	PVC	
SLOT SIZE	0.010	inch
INSIDE DIAMETER	2.0	inch
SCREEN LENGTH	15.0	feet
FILTER PACK AROUND SCREEN	No. 2 sand	
BOTTOM OF WELL	34.4	feet
BOTTOM OF BOREHOLE	35.0	feet

NOTE: ALL DEPTHS ARE REFERENCED TO GROUND SURFACE
DIAGRAM NOT TO SCALE

Deep Monitoring Well Construction Details

PROJECT:	UTC Delavan Spray Technologies Site	**WELL NUMBER:**	MW-21D
LOCATION:	Bamberg, SC	**JOB NUMBER:**	60314964
CLIENT:	United Technologies	**TYPE OF INSTALLATION:**	Monitoring Well
CONTRACTOR:	AE Drilling		
DRILLER:	B. Burnette	**LOCATION:**	Approx. 60' south of plant
FIELD REPRESENTATIVE:	C. Suddeth	**INSTALLATION DATE:**	02/25/14

SURVEY DATUM: SC State Plane, NAVD 88 (Vertical)
NAD 83 (Horizontal)

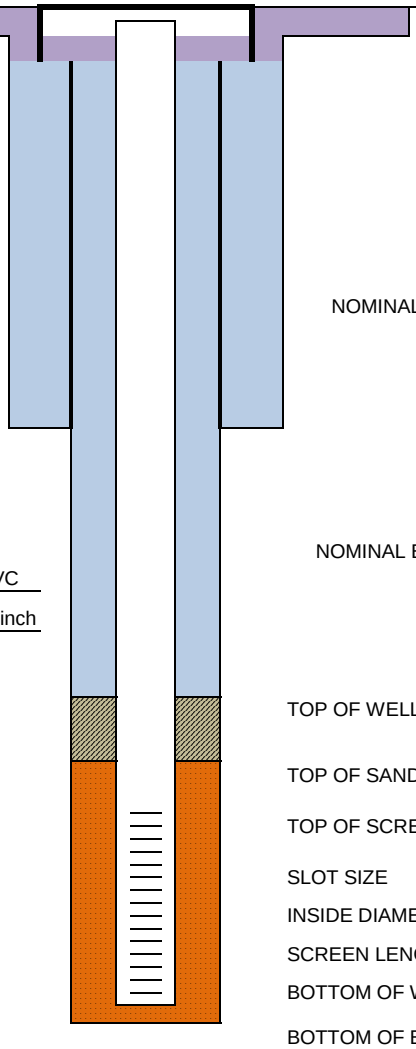
NORTHING: 527235.35

TOP OF CASING ELEVATION: 146.92 ft

EASTING: 1985871.60

GROUND ELEVATION: 147.28 ft

CASING STICKUP: -0.36 feet



TYPE OF SURFACE CASING: Sch. 40 PVC
INSIDE DIAMETER: 6.0 inch

TYPE OF ANNULAR SEAL: Portland Cement

NOMINAL BOREHOLE DIAMETER: 12.0 inch

TOP OF LIMESTONE: 29.5 feet
BOTTOM OF SURFACE CASING: 31.5 feet

NOMINAL BOREHOLE DIAMETER: 6.0 inch

TYPE OF WELL CASING OR RISER: Sch. 40 PVC
INSIDE DIAMETER: 2.0 inch

TYPE OF SEAL: Bentonite Chips

TOP OF WELL SEAL: 31.0 feet

TOP OF SAND PACK: 42.0 feet

TOP OF SCREENED INTERVAL: 43.0 feet

TYPE OF SAND PACK: No. 2 Sand

SLOT SIZE: 0.010 inch

INSIDE DIAMETER: 2.0 inch

TYPE OF SCREEN: PVC

SCREEN LENGTH: 10.0 feet

BOTTOM OF WELL: 53.4 feet

BOTTOM OF BOREHOLE: 54.0 feet

NOTE: ALL DEPTHS ARE REFERENCED TO GROUND SURFACE
DIAGRAM NOT TO SCALE

Deep Monitoring Well Construction Details

PROJECT:	UTC Delavan Spray Technologies Site	**WELL NUMBER:**	MW-22D
LOCATION:	Bamberg, SC	**JOB NUMBER:**	60314964
CLIENT:	United Technologies	**TYPE OF INSTALLATION:**	Monitoring Well
CONTRACTOR:	AE Drilling		
DRILLER:	B. Burnette	**LOCATION:**	Approx. 700' south of plant
FIELD REPRESENTATIVE:	C. Suddeth	**INSTALLATION DATE:**	02/26/14

SURVEY DATUM: SC State Plane, NAVD 88 (Vertical)
NAD 83 (Horizontal)

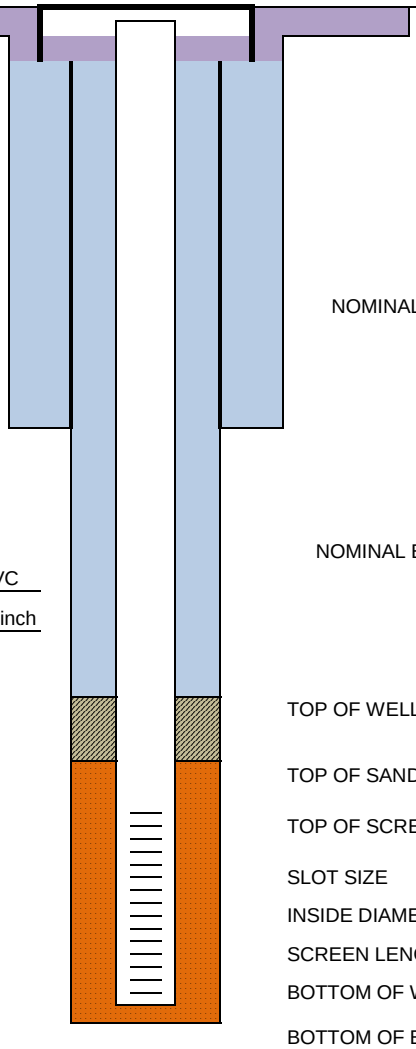
TOP OF CASING ELEVATION: 145.96 ft

NORTHING: 526303.91

EASTING: 1985723.83

GROUND ELEVATION: 146.42 ft

CASING STICKUP: -0.46 feet



TYPE OF SURFACE CASING: Sch. 40 PVC

INSIDE DIAMETER: 6.0 inch

TYPE OF ANNULAR SEAL: Portland Cement

NOMINAL BOREHOLE DIAMETER: 12.0 inch

TOP OF LIMESTONE: 34.0 feet

BOTTOM OF SURFACE CASING: 36.0 feet

NOMINAL BOREHOLE DIAMETER: 6.0 inch

TYPE OF WELL CASING OR RISER: Sch. 40 PVC

INSIDE DIAMETER: 2.0 inch

TYPE OF SEAL: Bentonite Chips

TOP OF WELL SEAL: 34.0 feet

TOP OF SAND PACK: 37.0 feet

TOP OF SCREENED INTERVAL: 38.0 feet

TYPE OF SAND PACK: No. 2 Sand

SLOT SIZE: 0.010 inch

TYPE OF SCREEN: PVC

INSIDE DIAMETER: 2.0 inch

SCREEN LENGTH: 10.0 feet

BOTTOM OF WELL: 48.4 feet

BOTTOM OF BOREHOLE: 51.5 feet

NOTE: ALL DEPTHS ARE REFERENCED TO GROUND SURFACE
DIAGRAM NOT TO SCALE

Deep Monitoring Well Construction Details

PROJECT:	UTC Delavan Spray Technologies Site	**WELL NUMBER:**	MW-23D
LOCATION:	Bamberg, SC	**JOB NUMBER:**	60314964
CLIENT:	United Technologies	**TYPE OF INSTALLATION:**	Monitoring Well
CONTRACTOR:	AE Drilling		
DRILLER:	B. Burnette	**LOCATION:**	South side of Hwy 301 SE of plant
FIELD REPRESENTATIVE:	C. Suddeth	**INSTALLATION DATE:**	02/27/14

SURVEY DATUM: SC State Plane, NAVD 88 (Vertical)
NAD 83 (Horizontal)

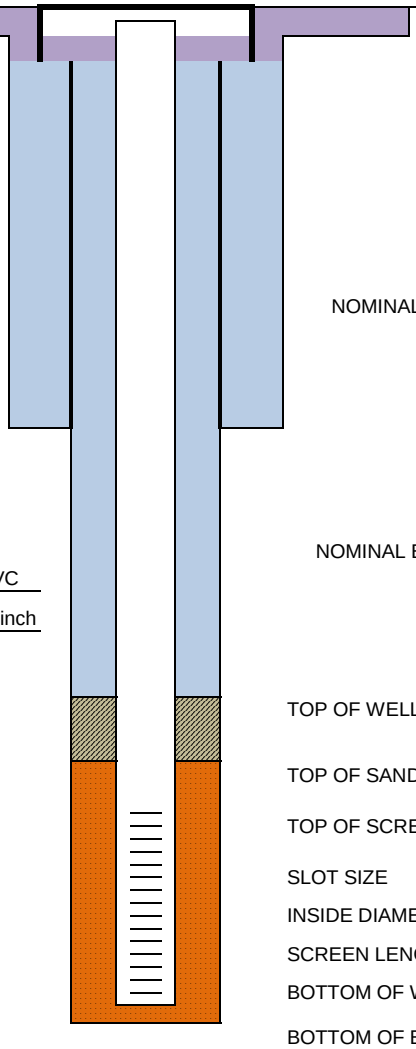
NORTHING: 527141.40

TOP OF CASING ELEVATION: 145.96 ft

EASTING: 1985723.83

GROUND ELEVATION: 146.42 ft

CASING STICKUP: -0.22 feet



TYPE OF SURFACE CASING: Sch. 40 PVC
INSIDE DIAMETER: 6.0 inch

TYPE OF ANNULAR SEAL: Portland Cement

NOMINAL BOREHOLE DIAMETER: 12.0 inch

TOP OF LIMESTONE: 31.0 feet
BOTTOM OF SURFACE CASING: 34.0 feet

NOMINAL BOREHOLE DIAMETER: 6.0 inch

TYPE OF WELL CASING OR RISER: Sch. 40 PVC
INSIDE DIAMETER: 2.0 inch

TYPE OF SEAL: Bentonite Chips

TOP OF WELL SEAL: 33.5 feet

TOP OF SAND PACK: 37.9 feet

TOP OF SCREENED INTERVAL: 40.0 feet

TYPE OF SAND PACK: No. 2 Sand

SLOT SIZE: 0.010 inch

INSIDE DIAMETER: 2.0 inch

TYPE OF SCREEN: PVC

SCREEN LENGTH: 10.0 feet

BOTTOM OF WELL: 50.4 feet

BOTTOM OF BOREHOLE: 51.5 feet

NOTE: ALL DEPTHS ARE REFERENCED TO GROUND SURFACE
DIAGRAM NOT TO SCALE

Water Well Records

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: DeLAVAN (last) SPRAY (first) LLC
Address: 4334 MAIN HIGHWAY
City: Bamberg State: SC Zip: 29003
Telephone: Work: Home:

2. LOCATION OF WELL: COUNTY: Orangeburg
Name:
Street Address: 4334 Main Highway
City: Bamberg Zip: 29003
Latitude: 33° 16' 58.448" N Longitude: 81° 02' 42.217"

3. PUBLIC SYSTEM NAME: Well Designation **PUBLIC SYSTEM NUMBER:** MW-20

4. ABANDONMENT: ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other Direct Push

7. PERMIT NUMBER: MW-09366

8. USE: ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 20 ft. Date Started: 3/11/14 Date Completed: 3/11/14

10. CASING: ☑ Threaded ☐ Welded
Diam.: 1 inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
1 in. to 5 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface 0 ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

11. SCREEN:
Type: PVC Prepack Diam.: 1 inch
Slot/Gauge: 0.010 Length: 15 feet
Set Between: 5 ft. and 20 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 3 ft. to 20 ft.
Effective size #1 Sand Uniformity Coefficient _____

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Bentonite ☐ Bentonite/Cement ☐ Other _____
Depth: From 1 ft. to 3 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☑
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity _____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Gary Winbourn CERT. NO.: 1891
Address: (Print) A-1 Drilling Two United Way Greenville, SC 29607
Level: A B C (D) (circle one)
Telephone No.: 864 288-1986 Fax No.:

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Gary Winbourn Well Driller Date: 3/12/14

If D Level Driller, provide supervising driller's name:
Bill Barnes #562A

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: DELAVAN SPRAY (last) LLC (first)
Address: 4334 MAIN Highway
City: Bamberg State: SC Zip: 29003
Telephone: Work: Home:

2. LOCATION OF WELL: **COUNTY:** Orangeburg
Name:
Street Address: 4334 MAIN Highway
City: Bamberg Zip: 29003
Latitude: 33° 16' 58.7100 N Longitude: 81° 02' 47.3631 W

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:**
Well Designation MW1-19

4. ABANDONMENT: ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		
5. REMARKS:		

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. PERMIT NUMBER: MW-093660

8. USE: ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 15 ft. Date Started: 3/12/14 Date Completed: 3/12/14

10. CASING: ☑ Threaded ☐ Welded
Diam.: 1 inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
1 in. to 5 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

11. SCREEN:
Type: PVC Prepack Diam.: 1-inch
Slot/Gauge: 0.010 Length: 10 Feet
Set Between: 5 ft. and 15 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 3 ft. to 15 ft.
Effective size 0.010 Uniformity Coefficient _____

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Bentonite ☐ Bentonite/Cement ☐ Other _____
Depth: From 1 ft. to 3 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☑
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity _____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Gary Wilburn CERT. NO.: 1891
Address: (Print) AE Drilling
Two United Way
Greenville, SC 29607
Level: A B C (D) (circle one)
Telephone No.: 864 [illegible] 288-1980 Fax No.:

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ (Well Driller) Date: 3/12/14

If D Level Driller, provide supervising driller's name:
Bill Barnes #562A

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: Delavan Spray, LLC (last) (first)
Address: 4334 MAIN Highway
City: Bamberg State: SC Zip: 29003
Telephone: Work: Home:

2. LOCATION OF WELL: COUNTY: Orangeburg
Name: Rhodes Senior Ctr
Street Address: 498 Log Branch Rd
City: Bamberg SC Zip: 29003
Latitude: 33°17'4.0254"N Longitude: 81°02'47.4760"W

3. PUBLIC SYSTEM NAME: MW-18 **PUBLIC SYSTEM NUMBER:**

4. ABANDONMENT: ☐ Yes ☒ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS: Bentonite Seal 7'-9'

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☒ Other Auger

7. PERMIT NUMBER: MW-09366

8. USE: ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☒ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 26 ft. Date Started: 3-3-14 Date Completed: 3-3-14

10. CASING: ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 11 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface 3' ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☒ No

11. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 15'
Set Between: 11 ft. and 26 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☒ Yes ☐ No
Installed from 9 ft. to 26 ft.
Effective size #1 Uniformity Coefficient SAND

16. WELL GROUTED? ☒ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☒ Bentonite/Cement ☐ Other _____
Depth: From 0 ft. to 7 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Brett Burnette CERT. NO.: 2079-D
Address: (Print) TNO United Way Greenville, SC
Level: A B C (D) (circle one)
Telephone No. 864-288-1986 Fax No. 864-288-2272

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Brett Burnette (Well Driller) Date: 3-14-14

If D Level Driller, provide supervising driller's name:
Bill Bames #562A

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: Delavan Spray, LLC (last) (first)
Address: 4334 Main Highway
City: Bamberg State: SC Zip: 29003
Telephone: Work: Home:

2. LOCATION OF WELL: COUNTY: Orangeburg
Name: Rhodes Senior Ctr
Street Address: 498 Log Branch Rd
City: Bamberg Zip: 29003
Latitude: 33° 17' 4.905" N Longitude: 81° 02' 47.476" W

3. PUBLIC SYSTEM NAME: PUBLIC SYSTEM NUMBER: MW-17

4. ABANDONMENT: ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS: Bentonite Seal 9'-11'

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other Auger

7. PERMIT NUMBER: MW-09366

8. USE: ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 28 ft. Date Started: 3-4-14 Date Completed: 3-4-14

10. CASING: ☑ Threaded ☐ Welded
Diam.: 2"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 13 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface 3' ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☑ No

11. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 15
Set Between: 13 ft. and 28 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 11 ft. to 28 ft.
Effective size #1 Uniformity Coefficient SAND

16. WELL GROUTED? ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0 ft. to 9 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity _____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Brett Burnette CERT. NO.: 2079-D
Address: (Print) Two United Way
Greenville, SC 29607
Level: A B C (D) (circle one)
Telephone No.: 864-288-1986 Fax No.: 864-288-2272

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Brett Burnette Well Driller Date: 3-14-14

If D Level Driller, provide supervising driller's name:
Bill Barnes # 562A

DHEC 1903 (03/2004)

COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Delavan Spray, LLC (last) (first)
Address: 4334 Main Highway
City: Bamberg State: SC Zip: 29003
Telephone: Work: Home:

2. LOCATION OF WELL: **COUNTY:**
Name:
Street Address: Same As Above
City: Zip:
Latitude: 33° 16' 57.6548"N Longitude: 81° 02' 46.1340"W

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:**
MW-21

4. ABANDONMENT: ☐ Yes ☒ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
Bentonite Seal 15-17'

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☒ Other Auger

7. PERMIT NUMBER: MW-09366

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☒ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 34 ft. Date Started: 2-26-14 Date Completed: 2-26-14

10. CASING: ☐ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 19 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface 3' ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☒ No

11. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 15'
Set Between: 19 ft. and 34 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☒ Yes ☐ No
Installed from 17 ft. to 34 ft.
Effective size #1 Uniformity Coefficient Sand

16. WELL GROUTED? ☒ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☒ Bentonite/Cement ☐ Other _____
Depth: From 0 ft. to 15 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe_____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: CERT. NO.: 2079-D
Address: (Print) Brett Burnette
Two United Way
Greenville, SC 29607
Level: A B C (D) (circle one)
Telephone No.: 864-288-1966 Fax No. 864-288-2272

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Brett Burnette Well Driller Date: 3-14-14

If D Level Driller, provide supervising driller's name:
Bill Barnes II 562-A

DHEC 1903 (03/2004)

COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Delavan Spray, LLC (last) (first)
Address: 4334 Main Highway
City: Bamberg State: SC Zip: 29003
Telephone: Work: Home:

2. LOCATION OF WELL: **COUNTY:**
Name:
Street Address: Same as Above
City: Zip:
Latitude: 33°16'57.029"N Longitude: 81°02'46.017"W

3. PUBLIC SYSTEM NAME: MW21-D **PUBLIC SYSTEM NUMBER:**

4. ABANDONMENT: ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS: Bentonite Seal 39'-41'

6. TYPE: ☑ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

7. PERMIT NUMBER: MW-09366

8. USE: ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 53 ft. Date Started: 2-24-14 Date Completed: 3-7-14

10. CASING: ☑ Threaded ☐ Welded
Diam.: 6" & 2"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
6" 0 in. to 36.5 ft. depth
2" 0 in. to 43 ft. depth
Height: Above/Below Surface 3' ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☑ No

11. SCREEN: Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 10 S.F
Set Between: 43 ft. and 53 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 41 ft. to 53 ft.
Effective size #1 Uniformity Coefficient Sand

16. WELL GROUTED? ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0 ft. to 39 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe_____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Address: (Print) Brett Burnette CERT. NO.: 2079-D
Two United Way Level: A B C (D) (circle one)
Greenville SC 29607
Telephone No.: 864-288-1986 Fax No. 864-288-2272

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Brett Burnette Date: 3-14-14
Well Driller

If D Level Driller, provide supervising driller's name:
Bill Barnes II 562-A

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Delavan Spray, LLC (last) (first)
Address: 4334 Main Highway
City: Bamberg State: SC Zip: 29003
Telephone: Work: Home:

2. LOCATION OF WELL: COUNTY: Orangeburg
Name: Henry F. Bamberg IV
Street Address: US 301
City: Bamberg SC Zip: 29003
Latitude: 33° 16' 47.5549" N Longitude: 81° 02' 48.2080" W

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:**
MW-22D

4. ABANDONMENT: ☐ Yes ☒ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
Bentonite Seal 34'-36'

6. TYPE: ☑ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☒ Other Auger

7. PERMIT NUMBER: MW 09366

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☒ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 48' ft. Date Started: 2-26-14 Date Completed: 3-6-14

10. CASING: ☒ Threaded ☐ Welded
Diam.: 6" & 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
6" 0 in. to 36 ft. depth
2" 0 in. to 38 ft. depth
Height: Above/Below Surface 3' ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☒ No

11. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 10
Set Between: 38 ft. and 48 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 36 ft. to 48 ft.
Effective size #1 Uniformity Coefficient SAND

16. WELL GROUTED? ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☐ Bentonite/Cement ☐ Other _____
Depth: From 0 ft. to 34 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Brett Burnette CERT. NO.: 2079-D
Address: (Print) Two United Way Greenville SC Level: A B C (D) (circle one)
Telephone No.: 864 288 1986 Fax No. 864 288 2272

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Brett Burnette Well Driller Date: 3-14-14

If D Level Driller, provide supervising driller's name:
Bill Barnes #562-A

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Delavan Spray, LLC
Address: 4334 (last) MAIN (first) Highway
City: Bamberg State: SC Zip: 29003
Telephone: Work: Home:

2. LOCATION OF WELL: COUNTY: Orangeburg
Name: SC DOT
Street Address: 45301 right of-way
City: Bamberg Zip: 29003
Latitude: 33° 16' 55.8454" N Longitude: 81° 02' 40.4370" W

3. PUBLIC SYSTEM NAME: MW-23D **PUBLIC SYSTEM NUMBER:**

4. ABANDONMENT: ☐ Yes ☒ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
Bentonite Seal 36'-38'

6. TYPE: ☒ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☒ Other

7. PERMIT NUMBER: MW-093666

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☒ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 50 ft. Date Started: 2-25-14 Date Completed: 3-6-14

10. CASING: ☒ Threaded ☐ Welded
Diam.: 6" to 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
6" 0 in. to 34 ft. depth
2" 0 in. to 40.0 ft. depth
Height: Above/Below Surface 3' ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☒ No

11. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 10 ft
Set Between: 40 ft. and 50 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☒ Yes ☐ No
Installed from 38 ft. to 50 ft.
Effective size #1 Uniformity Coefficient SAND

16. WELL GROUTED? ☒ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☒ Bentonite/Cement ☐ Other _____
Depth: From 0 ft. to 36 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Brett Burnette CERT. NO.: 2079-D
Address: (Print) Two United Way Greenville, SC
Level: A B C (D) (circle one)
Telephone No.: 864 288 1986 Fax No.: 864 288 2272

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Brett Burnette (Well Driller) Date: 3-14-14

If D Level Driller, provide supervising driller's name:
Bill Barnes #562-A

DHEC 1903 (03/2004)

COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

Monitoring Well Development Logs

AECOM

Monitoring Well Development Log

Date Started (yr/mo/day) 2014-3-10 Date Completed (yr/mo/day) 2014-3-10

Field Personnel Randy Morgan

Site Name UTC Deleavan Spray Technologies Site

Job # 60314964

Well ID # MW-17

____ Upgradient ____ Downgradient

Weather Conditions clear/sunny

Air Temperature 65F °F

Total Well Depth (TWD) = 28.40 BGS 1/100 ft

Depth to Ground Water (DGW) = 2.20 BGS 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 26.20 1/100 ft

1 Casing Volume (OCV) = LWC x 0.16 = 4.27 gallons

5 Casing Volumes = 21.35 gallons

Method of Well Development bailed / whale pump - surge

Equipment Used teflon bailer / whale pump

Total Volume of Water Removed 82.5 gallons

Date/Time	Discharge Rate (~~ml/min~~)	Volume Purged (gallons)	Water Temp. (°C)	Specific Conductivity (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity/Color	Sand Content (%)	Remarks
1050	bailed	2.5	—	—	—	—	—	>1100 Brn	silt	bailed
1103	1.0 GPM	12.50	17.36	0.260	1.64	6.07	145.3	>1100 Brn	0%	whale pump started
1123	1.0 GPM	22.50	17.51	0.208	1.25	5.14	158.8	>1100 Brn	0%	" " "
1133	1.0 GPM	32.50	17.27	0.212	1.22	5.01	153.0	>1100 Brn	0%	" " "
1143	1.0 GPM	42.50	17.37	0.201	1.29	5.03	136.1	>1100 Brn	0%	pump top of water column
1153	1.0 GPM	52.50	17.55	0.196	1.60	4.80	134.7	958.4 Brn	0%	" "
1305	1.0 GPM	65.0	17.83	0.191	1.83	4.23	169.1	>1100 Brn	0%	" "
1315	1.0 GPM	75.0	17.69	0.192	1.70	4.24	162.8	871.6 Brn	0%	" "
1320	.5 GPM	77.5	18.11	0.189	1.66	4.49	146.6	7.77 Clear	0%	" "
1325	.5 GPM	80.0	17.78	0.193	1.60	4.40	147.0	1.13 clear	0%	" "
1330	.5 GPM	82.5	17.86	0.193	1.53	4.36	152.7	3.26 clear	0%	" "

COMMENTS/OBSERVATIONS: well has not been completed as of today 3-10-14

PID at well head 0.0 ppm

1155 stopped to empty drums at site

1255 start back developing

1320 reduced flow rate - cleared right up

AECOM

Monitoring Well Development Log

Date Started (yr/mo/day) 2014-3-10 Date Completed (yr/mo/day) 2014-3-10

Field Personnel Randy Morgan

Site Name UTC Deleavan Spray Technologies Site

Job # 60314964

Well ID # MW-18

____ Upgradient ____ Downgradient

Weather Conditions Clear / sunny

Air Temperature 74F °F

Total Well Depth (TWD) = 26.50 BGS 1/100 ft

Depth to Ground Water (DGW) = 8.05 BGS 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 18.45 1/100 ft

1 Casing Volume (OCV) = LWC x 0.16 = 3.0 gallons

5 Casing Volumes = 15.00 gallons

Method of Well Development bailing / whale pump surging thru screen

Equipment Used teflon bailer / whale pump

Total Volume of Water Removed 51.0 gallons

Date/Time 3-10-14	Discharge Rate (ml/min)	Volume Purged (gallons)	Water Temp. (°C)	Specific Conductivity (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity/Color	Sand Content (%)	Remarks
1435	bailed	10	~	—	—	—	—	1100 yellowish brn	silt	bailed
1525	1.0 GPM	20	16.91	0.533	3.79	6.38	136.4	1100 "	silt	surged whale pump
1535	.5 GPM	25	15.98	0.411	4.39	6.90	141.5	1100 "	0%	surged " "
1545	.5 GPM	30	16.14	0.451	5.34	6.56	149.9	1100 "	0%	surged " "
1555	.35 GPM	33.50	16.25	0.150	3.54	~~8.04~~ 6.04	143.8	617.6 "	0%	(top of screen) pumping
1605	.35 GPM	37.00	16.32	0.065	3.37	4.81	156.7	149.8 "	0%	" "
1615	.35 GPM	40.5	16.20	0.069	3.36	4.41	167.9	2.12 clear	0%	" "
1625	.35 GPM	44.0	16.08	0.071	3.09	4.46	166.7	4.31 clear	0%	" "
1635	.35 GPM	47.5	16.07	0.072	3.05	4.52	165.0	4.47 clear	0%	" "
1645	.35 GPM	51.0	15.98	0.072	3.02	4.51	166.4	4.22 clear	0%	" "

COMMENTS/OBSERVATIONS: 1524 start developing w/ whale pump
1535 turn down flow WL drops to 23.00
PID at well head = 0.0 ppm well completion has not be completed as of 3-10-14
1555 turn down flow again .35 GPM

AECOM

Monitoring Well Development Log

Date Started (yr/mo/day) 2014/03/01 Date Completed (yr/mo/day) 2014/03/06

Field Personnel LAlexander

Site Name UTC Deleavan Spray Technologies Site

Job # 60314964

Well ID # MW19

___ Upgradient X Downgradient /Source

Weather Conditions cold, rainy, windy

Air Temperature ~35-40°F °F

Total Well Depth (TWD) = 20.03 Ft BTOC (measured) 1/100 ft

Depth to Ground Water (DGW) = 12.13 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 7.90 1/100 ft

1 Casing Volume (OCV) = LWC x 0.16 = 1.29 gallons

5 Casing Volumes = 6.45 gallons

Method of Well Development surge & purge w/ peristaltic pump

Equipment Used geopump & stainless pump

Total Volume of Water Removed ___ gallons

Date/Time	Discharge Rate (ml/min)	Volume Purged (gallons)	Water Temp. (°C)	Specific Conductivity (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity/Color	Sand Content (%)	Remarks
03/06/14 1340	~300	initial	20.50	0.197	~~17.53~~ 1.53	5.61	92.0	>1100	NA	turbid - light orange-brown
03/06/14 1350	~300	~1 gal	21.14	0.217	1.25	5.60	45.6	>1100	NA	DTW=13.55ft BTOC
~~13~~ 1400	~300	~2 gal	21.32	0.204	1.77	5.53	34.2	328.4	NA	DTW=15.05ft BTOC
1410	~300	~3 gal	21.36	0.198	2.05	5.35	40.0	152.6	NA	DTW=15.23ft BTOC
1420	~300	~4 gal	21.41	0.195	2.25	5.26	51.3	122.2	NA	DTW=15.18ft BTOC
1430	~300	~5 gal	21.40	0.189	2.39	5.18	64.6	56.29	NA	DTW=15.53ft BTOC
1440	~300	~6 gal	21.42	0.187	2.55	5.11	82.4	27.67	NA	DTW=15.48ft BTOC

COMMENTS/OBSERVATIONS: Start pump 1337; 1400 water starting to clear up between surging; 1410 fairly clear between surgings; starting to clear up during surging; 1420 staying clear ~~between~~ white surging

AECOM

Monitoring Well Development Log

Page 1 of 1

Date Started (yr/mo/day) 2014-3-6 Date Completed (yr/mo/day) 2014-3-6

Field Personnel Randy Morgan

Site Name UTC Deleavan Spray Technologies Site

Job # 60314964

Well ID # MW-20

____ Upgradient ____ Downgradient

Weather Conditions

Air Temperature °F

Total Well Depth (TWD) = 15' 1/100 ft

Depth to Ground Water (DGW) = 11.98 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 3.02 1/100 ft

1 Casing Volume (OCV) = LWC x ~~0.0408~~ 0.16 = 0.123 gallons

5 Casing Volumes = 0.615 gallons

Method of Well Development peristaltic pump

Equipment Used

Total Volume of Water Removed 3.25 gallons

Date/Time 3-6-14	Discharge Rate (ml/min)	Volume Purged (gallons)	Water Temp. (°C)	Specific Conductivity (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity/Color	Sand Content (%)	Remarks
1339		Initial	19.88	0.041	6.18	5.63	188.0			surged tubing in well
1350		1.0	20.52	0.044	5.11	4.63	163.3			Surged using water level tape
1415		2.0	20.65	0.041	5.09	4.39	176.5			Surged " " "
1430		2.5	20.64	0.040	4.81	4.09	181.7	17.43		tubing 6" off bottom
1435		2.75	20.64	0.040	4.69	4.15	177.2	6.76		" "
1440		3.0	20.63	0.040	4.68	4.09	180.4	1.37		" "
1445		3.25	20.64	0.040	4.65	4.08	180.1	0.94		" "

COMMENTS/OBSERVATIONS:

AECOM

Monitoring Well Development Log

Date Started (yr/mo/day) 2014/03/04 Date Completed (yr/mo/day) _____

Field Personnel L Alexander

Site Name UTC Deleavan Spray Technologies Site

Job # 60314964 ~~MW-25A~~

Well ID # ~~MW-25A~~ MW-21

_____ Upgradient X Downgradient

Weather Conditions cloudy, cold

Air Temperature ~40 °F

Total Well Depth (TWD) = ~34.10 1/100 ft

Depth to Ground Water (DGW) = 13.68 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 20.42 1/100 ft

1 Casing Volume (OCV) = LWC x 0.16 = 3.27 gallons

5 Casing Volumes = 16.35 gallons

Method of Well Development surge & purge w/ pump

Equipment Used Nomad pump - submersible

Total Volume of Water Removed ~52 gallons

Date/Time	Discharge Rate (ml/min)	Volume Purged (gallons)	Water Temp. (°C)	Specific Conductivity (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity/Color	Sand Content (%)	Remarks
3/4/14/1607		~5	19.46	0.121	2.63	6.09	137.1	reddish brown & turbid		surge & purge
1627		~10	19.85	0.132	~~8.94~~ 4.21	5.89	112.5	" " "		" " "
1637		~20	19.79	0.122	0.97	5.59	114.8	slightly less turbid		Water level at 14.73
1647		~30	19.21	0.047	1.33	4.60	140.5	light orange less turbid		starting to clear up between purging
1654		~37	19.94	0.040	0.78	4.44	109.0	>1100NTU		>1100NTU clearing in between surges
1700		~43	19.93	0.039	0.80	4.60	102.1	180.4		cloudy Stop surging
1704		~47	19.92	0.039	0.89	4.74	100.3	94.46	pH=14.80	slightly cloudy
1710		~52	19.37	0.041	0.96	4.87	90.6	78.43		fairly clear

COMMENTS/OBSERVATIONS: _____

Chain of Custody Forms

AECOM

Chain of Custody and Analytical Request

Page 1 of 1
Project Number: 60269713
Chain of Custody Number [1]: 0225H-Z
LIMS Number:

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

Client Name: UTC

Collected by: L Alexander & R Morgan

Project Manager: Walter Gerald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	See Comments: GRAB	See Comments: Well	Sample Information (i.e., location, depth, filtered, etc.)	Sample Analysis Requested: TCL VOCs (8260C)	TCL SVOCs (8270D)	Priority Pollutant Metals (6010B / 7470A)	TDL (SM3510D)	Nitrate/Nitrite (300.0)	Sulfate (300.0)	Chloride (300.0)	Dissolved Gases - MEE (RSK 175)	hr Chrom 7196A	COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
MW-15D	25-FEB-2014	1420		X			X									A	13
MW-15D-ms	↓	↓		X			X									A	↓
MW-15D-msd	↓	↓		X			X									A	↓
MW-15	25-FEB-2014	1630		X			X									A	↓
MW-2	↓	1700		X			X									A	↓
MW-2-a	↓	1700		X			X									A	↓
MW-15DI	↓	1537		X			X									A	↓
MW-15D-c	25-FEB-2014	1420		X			X									A	↓
MW-1	26-FEB-2014	1025		X			X	X	X		X	X	X	X	X	A	↓
MW-1-a	↓	1025		X			X	X	X		X	X	X	X	X	A	↓
MW-14	↓	0935		X			X									A	↓
MW-14D	↓	1045		X			X				X	X	X	X	X	A	↓
DPT-57(6-8)-d	26-FEB-2014	1530		X			X	X	X						X	A	↓
		L Alexander				2/26/14											

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	L Alexander (AECOM)	2/26/14	1915			
2.						
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: ____ Shipped: X
Method of Shipment: Fed Ex Airbill #: 8047 3475 6235
Analytical Lab: Accutest Location: Orlando FL
Lab Recipient: ____ Date: ____ Time: ____

8047 3475 6257

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

TCL VOCs by 8260C - Unpreserved 3 VOA vials - 7 day holding time

Hex Chrom - 24hr holding time

AECOM

Chain of Custody and Analytical Request

Page 1 of 1
Project Number: ~~60269713~~ 60349
Chain of Custody Number [1]: 622514-1
LIMS Number:

Project Name / Location: UTC DelavanSpray Technologies St RI / Bamberg, SC

Client Name: UTC

Collected by: Alexander

Project Manager: Walter Gerald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.)	Sample Analysis Requested: TCL VOCs (8260B)	Moisture	TCL SVOCs (8270D)	Perchlorate (6850/314.0)	Hex. Chromium (7196A)							COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
DPT-45 (2-4)	25-FEB-2014	1600	X	X		2-4 Ft	3	1										S	2,3
DPT-45 (2-4)-a	25-FEB-2014	1600	X	X		2-4 Ft	3	1										S	
DPT-53 (8-10)	26-FEB-2014	1410	X	X		8-10	X		X	X	X							S	
DPT-52 (8-10)		1430	X	X		8-10	X		X	X	X							S	
DPT-52 (8-10)-a		1430	X	X		8-10	X		X	X	X							S	
DPT-50 (4-6)		1515	X	X		4-6	X		X	X	X							S	
DPT-49 (6-8)		1500	X	X		6-8	X		X	X	X							S	
DPT-51 (7-9)		1550	X	X		7-9	X		X	X	X							S	
DPT-57 (6-8)		1610	X	X		6-8	X		X	X	X							S	
DPT-52 (2-4)		1625	X	X		2-4	X		X	X	X							S	
DPT-54 (8-10)		1640	X	X		8-10	X		X	X	X							S	
DPT-54 (8-10)-ms/msd		1640	X	X		8-10	X		X	X	X							S	
DPT-55 (3-5)		1720	X	X		3-5	X		X	X	X							S	
Trip blank																			
						Alexander	2/26/14												

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	Alexander (AECOM)	2/26/14	18:15			
2.						
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: _____ Shipped: X
Method of Shipment: FedEx Airbill #: 8047 3475 6246
Analytical Lab: Accutest Location: Orlando, FL
Lab Recipient: _____ Date: _____ Time: _____

8047 3475 6257

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

* TCL VOCs - ~~Unpreserved - 7 day holding time~~ 3 VOAs & 1 jar for matrix - VOCs are grab & others are composite (if no other jars, SVOCs, metals & hex chrom in 1 jar

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

AECOM

Chain of Custody and Analytical Request

Page 1 of 1
Project Number: ~~60269713~~ 603478
Chain of Custody Number [1]: 022714-1
LIMS Number:

Project Name / Location: UTC Delavan Spray Technologies Site RI
Client Name: UTC
Collected by: LAlexander & RMorgan
Project Manager: Walter Gerald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.)	VOCs (8260B)	SVOCs (8270D)	Select Metals (6010B/7470A)	Hex. Chrom. (7196A)	pH (9045D)							COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
DPT-28(3-5)	27 FEB-2014	1000	X	X		3-5Ft	X	X	X	X	X							S	1
DPT-30(7-9)		1035	X	X		7-9Ft	X	X	X	X	X							S	
DPT-31(5-7)		1055	X	X		5-7Ft	X	X	X	X	X							S	
DPT-29(2-4)		1200	X	X		2-4Ft	X	X	X	X	X							S	
DPT-32(8-10)		1330	X	X		8-10Ft	X	X	X	X	X							S	
DPT-33(6-8)	↓	1440	X	X		6-8Ft	X	X	X	X	X							S	↓
BG-5(12-13)	27 FEB-2014	1638	X			12-13Ft			X	X								S	
BG-5(1-3)		1610	X			1-3 Ft			X	X								S	
BG-5(3-5		1615	X			3-5 Ft			X	X								S	
BG-5(6-7.5)		1625	X			6-7.5Ft			X	X								S	
BG-5(8-9)		1630	X			8-9Ft			X	X								S	
BG-5(16-17)		1645	X			16-17Ft			X	X								S	
BG-5(16-17)mslmsd		1645	X			16-17Ft			X	X								S	
BG-4(1-3)		1715	X			1-3Ft			X	X								S	
BG-4(5-7)	↓	1720	X			5-7Ft			X	X								S	↓

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	LAlexander/Aecom	2/28/14	1800			
2.						
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: _____ Shipped: X
Method of Shipment: FedEx Airbill #: 804734756268
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 are grab, remainder is composited
3 vials for VOCs & rest in 1 8 oz jar

AECOM

Chain of Custody and Analytical Request

Page 1 of 1
Project Number: ~~60269713~~ 603
Chain of Custody Number (1): 022714-2
LIMS Number:

Project Name / Location: UTC Delavan Spray Technologies Site RI

Client Name: UTC

Collected by: L. Alexander & R. Morgan

Project Manager: Walter Gerald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	See Comments: GRAB	See Comments: Well	Sample Information (i.e., location, depth, filtered, etc.)	Sample Analysis Requested: VOCs (8260B)	SVOCs (8270D)	Metals (6010B/7470A)	Hex Chrom (7196A)	Hardness	COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
~~DPT-28(2-4)-d~~	~~27-FEB-2014~~	1140	~~X~~	X									
DPT-28(3-5)-12	27-FEB-2014	1000		X			X					A	1
DPT-29(2-4)-d	"	1140		X			X	X	X	X		A	1
BG-4(9-11)	"	1725	X			9-11 Ft	X	X	X	X		S	1
BG-4(14-16)	"	1740	X			14-16 Ft	X	X	X	X		S	1
BG-4(17-19)	↓	1750	X			17-19 Ft	X	X	X	X		S	1
							4	4					
Temp blank													

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	L. Alexander/Aecom	2/28/14	1300			
2.						
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: ____ Shipped: X
Method of Shipment: FedEx Airbill #: 8047 3475 6268
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)

AECOM

Chain of Custody and Analytical Request

Page 1 of 1
Project Number: 60269713
Chain of Custody Number [1]: 022814-02
LIMS Number:

Project Name / Location: UTC Delaven Spray Technologies SWR, Hanahan SC
Client Name: UTC
Collected by: C. Alexander, ER Morgan
Project Manager: Walter Gerald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:min)	See Comments: COMP	See Comments: GRAB	See Comments: Well	Sample Information (i.e., location, depth, filtered, etc.)	Sample Analysis Requested: TCL VOCs (8260B)	TCL SVOCs (8270D)	PP13 Priority Pollutant Metals (6010B / 7470A / 7471B)	Hex Chrom (7196A)	COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
DPT-46(1.5-3.5)	28-FEB-2014	1240	X	X		1.5-3.5ft	X	X	X	X	S	1
DPT-46(1.5-3.5)a	↓	1240	X	X		1.5-3.5ft	X	X	X	X	S	1
Temp Blank												

Relinquished By (Signed) Date Time
1. C Alexander/AECOM 2/28/14 1615
2.
3.

Received by (signed) Date Time
1.
2.
3.

Delivered Directly to Lab:
Method of Shipment: FedEx
Analytical Lab: Accutest
Lab Recipient:

Shipped: X
Airbill #: 4804 3475 6279
Location: Orlando FL
Date: Time:

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

VOCs are grab, all else is composite

AECOM

Chain of Custody and Analytical Request

Page 1 of 1
Project Number: ~~60269713~~ 603149
Chain of Custody Number [1]: 022814-01
LIMS Number:

Project Name / Location: Delavan Spray Technologies St. Rt. Bombers, SC

Client Name: DTC

Collected by: L Alexander, R Morgan

Project Manager: Walter Everald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm) Depth	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, ~~etc.~~) Time	TCL VOCs (8260B)	TCL SVOCs (8270C)	Project Pollutant Metals (6010C / 7470A)	Hexavalent Chromium (7196A)	COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
BG-3(0.5-1.5)	28-FEB-2024	0.5-1.5 ft	X	X		0848			X	X	S	1
BG-3(2-3)		2-3 ft	X	X		0850			X	X		
BG-3(9-11)		9-11 ft	X	X		0855			X	X		
BG-3(14-16)		14-16 ft	X	X		0900			X	X		
BG-3(18-20)		18-20 ft	X	X		0905			X	X		
BG-2(1.5-2.5)		1.5-2.5 ft	X	X		0925			X	X		
BG-2(4-5)		4-5 ft	X	X		0929			X	X		
BG-2(7-8)		7-8 ft	X			0930			X	X		
BG-2(12-14)		12-14 ft	X			0940			X	X		
BG-2(12-14)-a		12-14 ft	X			0940			X	X		
BG-2(16-17)		16-17 ft	X			0950			X	X		
BG-1(16-17)		16-17 ft	X			1115			X	X		
BG-1(1-2)		1-2 ft	X			1050			X	X		
DPT-47(5-7)		5-7 ft	X	X		1205	X	X	X	X		
DPT-48(7.5-9.5)		7.5-9.5 ft	X	X		1220	X	X	X	X	↓	↓

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	[signature]		1615			
2.						
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: _____ Shipped: X
Method of Shipment: FedEx Airbill #: 9047 3475 6279
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 are grab, rest is composite

AECOM

Chain of Custody and Analytical Request

Page: 1 of 2
Project Number: 60269713 (03496)
Chain of Custody Number [1]: 030114-01
LIMS Number:

Project Name / Location: UTC Delavan Spray Technologies St, Banting SC

Client Name: UTC

Collected by: LAlexander, RMorgan

Project Manager: Wade Gerald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.)	Sample Analysis Requested: TCL VOCs	TCL SVOCs	Metals	Hex Chrome	pH (4.0 & 6.0)	COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
DPT-34(8-10)	01-MAR-2014	0955	X	X		8-10	X	X	X	X	X	S	
DPT-34(8-10)a		0955	X	X		8-10	X	X	X	X	X	S	
DPT-36(5-7)		1200	X	X		5-7	X	X				S	
DPT-36(5-7)a		1200	X	X		5-7	X	X				S	
DPT-36(12-14)		1215	X	X		12-14	X	X				S	
DPT-35(3-5)		1520	X	X		3-5	X	X				S high PID (200-800ppm)	
DPT-35(3-5)-matrix		1520	X	X		3-5	X	X				S high PID (200-800 ppm)	
DPT-35(10.5-12.5)	↓	1620	X	X		10.5-12.5	X	X				S	
DPT-37(6-8)	02-MAR-2014	0950	X	X		6-8	X	X				S	
DPT-38(8-10)		1010	X	X		8-10	X	X				S	
DPT-39(8-10)-d		1240		X		8-10	X	X				A; hydrazine rinsate	
DPT-39(8-10)		1305	X	X		8-10	X	X				S	
DPT-41(6-8)		1335	X	X		6-8	X	X				S	
DPT-39(8-10)-c'	↓	1240		X				X				A; trip blank	
DPT-42(8-10)	03-MAR-2014	1020	X	X		8-10	X	X				S	

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	LAlexander	3/3/14	1900			
2.						
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: ____ Shipped: X
Method of Shipment: FedEx Airbill #: 8047 3475 6290
Analytical Lab: Air Direct Location: Orlando FL
Lab Recipient: ____ Date: ____ Time: ____

8047 3475 6290

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

VOCs are grab, are also in composite
Aqueous VOCs are unpreserved — 7 day holding time

AECOM

Chain of Custody and Analytical Request

Page 2 of 2
Project Number: 60269713
Chain of Custody Number [1]: 030114-01
LIMS Number:

Project Name / Location: UTC Delavan Spray Technologies SL RI

Client Name: UTC

Collected by: LAlexander RMorgan

Project Manager: WalterGerald

Sample Analysis Requested

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	See Comments: GRAB	See Comments: Well	Sample Information (i.e., location, depth, filtered, etc.)	TCL VOCs (8260B)	TCL SVOCs (8270D)	Moisture	COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
DPT-40(9-11)	03-MAR 2014	1110	X	X		9-11	X	X		S	
DPT-44(7-9)		1320	X	X		7-9	X		X	S	
DPT-43(5-7)		1325	X	X		5-7	X		X	S	
DPT-43(11-12)		1520	X	X		11-12	X		X	S	
trip blank											

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	LAlexander	3/3/14	1300			
2.						
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: _____ Shipped: X
Method of Shipment: Fedex Airbill #: 8047 3475 6290
Analytical Lab: Accutest Location: Orlando FL
Lab Recipient: _____ Date: _____ Time: _____

8047 3475 4280

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

VOCs are grab; rest are composite

AECOM

Chain of Custody and Analytical Request

Page 1 of 1
Project Number: 60269713.02349
Chain of Custody Number [1]: 030514-01
LIMS Number:

Project Name / Location: UTC Defavran Spray Technologies Site RI

Client Name: UTC

Collected by: RMorgan, LAlexander

Project Manager: Walter Gould

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.)	Sample Analysis Requested: VOCs (8260C)	SVOCs (8270D)	Priority Pollutant Metals (Filtered and Unfiltered) (6010C and 7470A)	TOC (SM5310B)	Nitrate (300.0)	Nitrite (300.0)	Sulfate (300.0)	Chloride (300.0)	Dissolved Gases (RSK 175)		COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
MW-3-C	05-MAR-2014	1010		X			X										A	
MW-3		1010		X			X	X	X	X	X	X	X	X	X		A	
MW-3-MS/MSD		1010		X			X	X	X	X	X	X	X	X			A	
MW-5		1025		X			X	X	X								A	
MW-10		1510		X			X	X	X	X	X	X	X	X	X		A	
MW-30		1423		X			X			X	X	X	X	X	X		A	
MW-301		1537		X			X										A	
MW-100		1635		X			X										A	
MW-7		1703		X			X										A	
temp blank																		

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	[signature]	3/5/14	1730			
2.						
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:
Method of Shipment: FedEx
Analytical Lab: Accutest
Lab Recipient:

Shipped: X
Airbill #: 804734756349
Location: Orlando FL
Date: Time:

804734756339

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

Unpreserved VOCs - 7 day hold
Nitrate/Nitrite - 48 hr hold

AECOM

Chain of Custody and Analytical Request

Page 1 of 1
Project Number: ~~60269713~~ 603
Chain of Custody Number [1]: 030614-01
LIMS Number:

Project Name / Location: UTC Delavan Spray Technologies Site RI

Client Name: UTC

Collected by: LAlexander & RMorgan

Project Manager: Walter Gerald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.)	Sample Analysis Requested: TCL VOCs (8260)	TCL SVOCs (8270D)	Priority Pollutant Metals (6010B/7470A)	TOC (SM 5310D)	Nitrate (300.0)	Nitrite (300.0)	Sulfate (300.0)	Chloride (300.0)	Dissolved Oxygen (Hach 8215HR)		COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
MW-16-C	06-MAR-2014	0920	~~X~~	X	X		X										A	
MW-16		0920	~~X~~	X	X		X			X	X	X	X	X	X		A	
MW-16D		1020		X	X		X			X	X	X	X	X	X		A	
MW-9		0950		X	X		X	X	X	X	X	X	X	X	X		A	
MW-9D		1130		X	X		X										A	
MW-19		1520		X	X		X	X	X								A	
MW-20		1510		X	X		X	X	X								A	
temp blank																		

L Alexander 3/6/14

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	L Alexander	3/6/14	1630			
2.						
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: ____
Shipped: X
Method of Shipment: Fed Ex
Airbill #: 8047 3476 1635
Analytical Lab: Accutest
Location: Orlando, FL
Lab Recipient: ____
Date: ____ Time: ____

8047 3476 1624

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

* Unpreserved VOCs - 7 day hold
* Nitrate/Nitrite - 48hr hold

CHAIN OF CUSTODY

ACCUTEST LABORATORIES

Air Sampling Field Data Sheet

FED-EX Tracking # 5638 2208 4965 | Bottle Order Control # MJ-21912014-2 | PAGE 1 OF 1

Lab Quote # | Lab Job #

Client / Reporting Information

Company Name: AECOM

Address: ~~495 Main Hwy~~ 10 Patewood Dr. Bldg V, #500

City: ~~Boiling Springs~~ Greenville State: SC Zip: 29615

Project Contact: Doria Callon E-mail: doria.callon@aecom.com

Phone #: 864-234-8928 Fax #: 864-234-3069

Sampler(s) Name(s): Leslee Arencibia & Randy Morgan

Project Information

Project Name: UTC Delavan Spray Technologies S.D. RT

Street: 4334 Main Hwy

City: Bamberg State: SC

Project #: 60314964

Client Purchase Order #

Weather Parameters

Temperature (Fahrenheit)

Start: Maximum:

Stop: Minimum:

Atmoshpheric Pressure (inches of Hg)

Start: Maximum:

Stop: Minimum:

Other weather comment: raining/cloud cover but warm

Requested Analysis

Standard TO-15 Reporting List

Lab Sample #	Field ID / Point of Collection	Air Type: Indoor(I) Soil Vap(SV) Ambient(A)	Sampling Equipment Info: Canister Serial #	Canister Size 6L or 1L	Flow Controller Serial #	Start Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.	Stop Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.	Standard TO-15 Reporting List
A793	SSV-1	SV	1491	1L	06154	3/7/14	1041	30	~70°	LA/RM	3/7/14	1141	~8	~70°F	LA/RM	X
A539	SSV-4	SV	1299	1L	06166	3/7/14	1125	28	~70	LA/RM	3/7/14	1225	~8	~70°F	LA/RM	X
A607	SSV-4-a	SV	1320	1L	02073	3/7/14	1125	28	~70	LA/RM	3/7/14	1225	~6	~70°F	LA/RM	X
A513	SSV-2	SV	1166	1L	02075	3/7/14	1215	30	~70	LA/RM	3/7/14	1315	~9	~70°F	LA/RM	X
A1118	SSV-3	SV	1303	1L	02771	3/7/14	1310	30	~70	LA/RM	3/7/14	1410	~5"	~70°F	LA/RM	X

Turnaround Time (Business days)

Standard - 15 Days	X
10 Day	
5 Day	
3 Day	
2 Day	
1 Day	
Other	

Approved By: _____

Date: _____

Data Deliverable Information

All NJDEP TO-15 is mandatory Full T1

Comm A	
Comm B	
Reduced T2	
Full T1	X
Other:	

Comments / Remarks

extra summa canister not used

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

Relinquished by Laboratory:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 Ray Maiorano	2/26/14 14:45	1 FedEx	2 FedEx	2/29/14	2
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3	3/7/14 1445	3 FedEx	4		4
Relinquished by:	Date Time:	Received By:	Custody Seal #		
5		5	890		

AECOM

Chain of Custody and Analytical Request

Page 1 of 1
Project Number: ~~60269713~~
Chain of Custody Number [1]: 60314964
LIMS Number:

Project Name / Location: UTC Delavan Spray Technologies Site RI
Client Name: UTC
Collected by: Randy Morgan
Project Manager: Walter Gerald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.)	Sample Analysis Requested: VOCs (8260B)	SVOCs (8270D)	Metals (6010C) PM13	TOC (9060) SM5310B	Nitr (300.0)	Nitr (300.0)	SO4 (300.0)	CH4 (3000)	Dissolved Gases RSK175			COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
MW-17	10-Mar-2014	1420		X			X											A	
MW-17-C	10-Mar-2014	1420		X			X											A	
MW-18	10-Mar-2014	1715		X			X											A	
MW-8	11-Mar-2014	0825		X			X	X	X									A	
MW-11	11-Mar-2014	1037		X			X											A	
~~MW-12D~~	~~11-Mar-2014~~	~~1410~~		X		RM	X	X	X	)								A (RM)	
MW-12D	11-Mar-2014	1410		X			X			X	X	X	X	X	X			A	

Custody Transfers Prior to Receipt by Laboratory

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

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: Shipped: XX
Method of Shipment: Fed Ex Airbill #: 8074 3775 6325
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)

Unpreserved VOCs 7-day Hold Time
Nitrate / Nitrite 48 Hour Hold Time

AECOM

Chain of Custody and Analytical Request

Page 1 of 1
Project Number: 60269713
Chain of Custody Number (1): 60269713-1
LIMS Number:

Project Name / Location: UTC Delavan Spray Technologies Site RI
Client Name: UTC
Collected by: Randy Morgan
Project Manager:

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.)	VOCs (8260B)	SVOCs (8270D)	Metals (6010C) MW-2	TOC SM 5310B	NO2 (300)	NO3 (300)	SO4 (300)	CHL (300)	Dissolved gases (RSK175)			COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
230																			
MW-21 4	11-March-2014	1840		X		RM 1840	X	X	X									A	
MW-21SC 4	11-Mar-2014	1840		X		RM 1840	X											A	
MW-21D	12-Mar-2014	0837		X		RM 0837	X	X	X									A	
MW-6	12-Mar-2014	1017		X		RM 1017	X	X	X									A	
MW-13D	12-Mar-2014	1213		X			X			X	X	X	X	X	X			A	
MW-220 4	12-Mar-2014	1432		X			X											A	

Randy Morgan 3/12/14

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	Randy Morgan	3-12-14	1500			
2.						
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: Shipped:
Method of Shipment: Fed Ex Airbill #: 8049 3475 9922
Analytical Lab: Accutest Location: Orlando FLA
Lab Recipient: Date: Time:

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

Unpreserved VOCs 7 Day Hold Time
Nitrate/Nitrite 48 Hour Hold Time

AECOM

Chain of Custody and Analytical Request

Page: 1 of 1
Project Number: 60269713
Chain of Custody Number [1]: 6031464
LIMS Number:

Project Name / Location: UTC Delavan Spray Technologies Site KY
Client Name: UTC
Collected by: Kandy Morgan
Project Manager: Walter Gerald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	See Comments: GRAB	See Comments: Well	Sample Information (i.e., location, depth, filtered, etc.)	Sample Analysis Requested: VOCs 8260B	TCL VOCs + 20 Tentatively Identified Compounds	TCL SVOCs + 20 TICs	TCL Pesticides + 10 TICs	TCL SVOCs + 20 TICs	Filtered for Dissolved Metals (Fe, Mn)					COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
MW-230	12-Mar-2014	1637		X			X										A	
MW-230-C	12-Mar-2014	1637		X			X										A	
MW-4	12-Mar-2014	1237		X			X										A	
IDW-5	12-Mar-2014	1846	X					X	X	X							S	
IDW-6	12-Mar-2014	1920	X					X	X	X							S	
IDW-7	12-Mar-2014	1940	X					X	X	X							S	
IDW-8	12-Mar-2014	2000	X					X	X	X							S	
IDW-9	13-Mar-2014	0830	X					X	X	X							M	
IDW-1	13-Mar-2014	0855		X							X	X	X				A	
IDW-2	13-Mar-2014	0915		X							X	X	X				A	
IDW-3	13-Mar-2014	0933		X							X	X	X				A	
IDW-4	13-Mar-2014	0948		X							X	X	X				A	
		Kandy Morgan					3-13-14											

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	Kandy Morgan	3-13-14	1915			
2.						
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: ____ Shipped: XX
Method of Shipment: Fed Ex Airbill #: 8049 5475 9733
Analytical Lab: Accutest Location: Orlando FLA
Lab Recipient: ____ Date: ____ Time: ____

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

VOC's are unpreserved 7 Day hold time

8049 5475 6316 (2 coolers)

Field Data Information Logs for Groundwater Sampling

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	02/25/2014
Field Personnel	L Alexander
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	mw-1
Upgradient / Downgradient / Sidegradient	X Sidegradient
Weather Conditions	raining
Air Temperature	~50°F
Total Well Depth (TWD) =	18.00 1/100 ft
Depth to Ground Water (DGW) =	11.62 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	6.38 1/100 ft
1 Casing Volume (OCV)* = LWC x 0.163 =	1.04 gal
3 Casing Volumes =	3.12 gal = Standard Evacuation Volume
Method of Sample Evacuation	Purge w/ 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	147.19 1/100 ft
Height of Riser (above land surface)	-0.37 1/100 ft
Land Surface Elevation	147.56 1/100 ft
Screened Interval	3-18 1/100 ft
Dedicated Pump or Bailer	YES ___ NO X Type ___
Steel Guard Pipe Around Casing	YES ___ NO X
Locking Cap	YES X NO ___
Protective Post/Abutment	YES ___ NO X
Well Integrity Satisfactory	YES X NO ~~X~~ lock is like mod escutcheon
Yield	LOW X MODERATE ___ HIGH ___ slow recovery
Comments/Observations	See page
Sample Time:	1025
Sample Analytes:	VOCs, SVOCs, select metals & MNA
	HACH kit: 0.03 mg/L with field duplicate

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	initial	0.3	0.8	1.0	1.2	1.5	1.8				
TIME (Military)	0941	0946	0956	1001	1006	1011	1016				
Water Level (ft BTOC)	11.95	12.19	12.54	12.70	12.83	12.93	13.03				
pH (S.U.)	4.40	4.18	3.88	3.65	3.87	3.91	3.90				
Sp. Cond. (mS/cm)	0.037	0.036	0.037	0.037	0.037	0.037	0.037				
Water Temp. (°C)	16.56	16.26	15.91	15.24	15.45	15.47	15.38				
Turbidity (NTUs)	34.68	29.39	14.33	8.54	5.86	5.91	~~6.06~~ 5.37				
Dissolved Oxygen (mg/L)	123.98	11.32	6.61	6.35	6.06	6.53	6.06				
ORP (mV)	210.7	214.3	213.1	220.9	210.7	212.4	215.4				

COMMENTS/OBSERVATIONS

Began purging at 0939 — breathing zone 0-0.4 ppm (erratic in rain)

Purging ml/min ~250 — wellhead 0.5-1.0 ppm | reduce flowrate at 0955 to ~170 ml/min

0925 set up

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	02/25/2014
Field Personnel	
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-2
Upgradient / Downgradient / Sidegradient	X (Downgradient)
Weather Conditions	sunny ~75°F breezy
Air Temperature	~75°F °F
Total Well Depth (TWD) =	18 1/100 ft
Depth to Ground Water (DGW) =	10.79 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	7.22 1/100 ft
1 Casing Volume (OCV)* = LWC x 0.163 =	1.18 gal
3 Casing Volumes =	3.54 gal = Standard Evacuation Volume
Method of Sample Evacuation	purging w/ peristaltic
Method of Sample Collection	purging w/ peristaltic (pipette method for VOCs)
Total Volume of Water Removed	gal

Casing Diameter	2" PVC inches
Measuring Point Elevation	147.63 1/100 ft
Height of Riser (above land surface)	-0.18 1/100 ft
Land Surface Elevation	~~3-18~~ 147.81 1/100 ft
Screened Interval	3-18' 1/100 ft
Dedicated Pump or Bailer	YES ___ NO X Type ___
Steel Guard Pipe Around Casing	YES ___ NO X
Locking Cap	YES X NO ___
Protective Post/Abutment	YES ___ NO X
Well Integrity Satisfactory	YES X NO ___ but no bolts in wellhead
Yield	LOW ___ MODERATE X HIGH ___
Comments/Observations	
Sample Time:	1700
Sample Analytes:	VOCs + duplicate MW-2 & MW-2-a

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	1538	0.66	0.99	1.3	2.3	~~2.8~~ 3.0	3.5	3.8	4.4	~~5~~ 4.9	
TIME (Military)	1538	1548	1553	1603	1618	1628	1633	1643	1648	1653	
Water Level (ft BTOC)	10.86	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	
pH (S.U.)	3.67	3.62	3.91	3.83	3.72	3.55	3.30	3.50	~~3.63~~	3.46	
Sp. Cond. (mS/cm)	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	
Water Temp. (°C)	19.20	18.91	19.07	19.04	18.58	18.57	18.37	18.44	18.65	18.42	
Turbidity (NTUs)	364.7	290.2	172.8	109.7	95.34	98.02	156.2	3.12	2.90	3.14	
Dissolved Oxygen (mg/L)	10.88	9.21	9.83	9.60	9.26	9.71	~~8.55~~	9.38	9.39	~~8.77~~	
ORP (mV)	194	199.9	194.3	199.1	204.2	211.5	213	215	211.9	216.1	

COMMENTS/OBSERVATIONS

Began purging at 1530 PID Breathing Zone & Well head = 0.0 ppm

Purging ml/min 250 ≈ 0.066 gal/min

1L = 0.264 gallons

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	3-5-2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-3
____ Upgradient	X Downgradient ____ Sidegradient
Weather Conditions	overcast
Air Temperature	36F feels like 31 °F
Total Well Depth (TWD) =	18.00 1/100 ft
Depth to Ground Water (DGW) =	13.20 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	4.80 1/100 ft
1 Casing Volume (OCV)* = LWC x .163 =	0.782 gal
3 Casing Volumes =	2.35 gal = Standard Evacuation Volume
Method of Sample Evacuation	peristaltic Pump
Method of Sample Collection	peristaltic pump - reverse flow
Total Volume of Water Removed	2.0 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 X
Comments/Observations	Fe- 0.70
Sample Time:	1010
Sample Analytes:	VOC's, SVOC's, Metals, MNA MS/MSD, for all Analytes & triplicate for VOCs

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.25	.50	.75	1.0	1.25	1.50	1.75	2.0		
TIME (Military)	0925	0930	0935	0940	0945	0950	0955	1000	1005		
Water Level (ft BTOC)	13.28	13.29	13.30	13.30	13.31	13.31	13.31	13.31	13.31		
pH (S.U.)	5.65	4.22	3.95	3.72	3.75	3.72	3.80	3.87	3.83		
Sp. Cond. (mS/cm)	0.024	0.024	0.024	0.024	0.023	0.023	0.023	0.023	0.024		
Water Temp. (°C)	5.72	8.37	8.99	9.09	9.12	9.42	9.80	9.61	10.01		
Turbidity (NTUs)	7.41	4.60	3.98	3.15	3.00	3.28	2.25	2.31	2.22		
Dissolved Oxygen (mg/L)	7.45	10.56	7.25	7.04	10.94	10.44	10.43	10.32	10.30		
ORP (mV)	363.7	209.2	194.0	207.3	205.1	206.9	203.3	208.5	208.7		

COMMENTS/OBSERVATIONS

Began purging at 0920

Purging ml/min 1.25

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	March 5, 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-3D
Upgradient: RW	Downgradient: 1 Sidegradient:
Weather Conditions	~~Rain~~ overcast
Air Temperature	40 ° F
Total Well Depth (TWD) =	49.00 1/100 ft
Depth to Ground Water (DGW) =	14.39 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	34.61 1/100 ft
1 Casing Volume (OCV)* = LWC x .163 =	5.64 gal
3 Casing Volumes =	16.92 gal = Standard Evacuation Volume
Method of Sample Evacuation	peristaltic pump
Method of Sample Collection	peristaltic pump reverse flow
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	44 - 49 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 X
Comments/Observations	Fe = 0.01 mg/L
Sample Time:	1423
Sample Analytes:	VOCs / MNA

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.35	.70	1.05	1.40	1.75	2.10				
TIME (Military)	1350	1355	1400	1405	1410	1415	1420				
Water Level (ft BTOC)	14.39	14.39	14.39	14.39	14.39	14.39	14.39				
pH (S.U.)	6.90	6.35	6.30	6.30	6.36	6.31	6.31				
Sp. Cond. (mS/cm)	0.232	0.235	0.235	0.235	0.235	0.235	0.236				
Water Temp. (°C)	14.57	14.97	14.79	14.83	15.10	14.94	14.95				
Turbidity (NTUs)	22.15	4.08	3.49	2.31	1.37	1.26	1.46				
Dissolved Oxygen (mg/L)	4.89	3.83	3.97	4.03	3.84	3.80	3.85				
ORP (mV)	140	143.0	143.5	144.7	142.9	144.5	144.1				

COMMENTS/OBSERVATIONS

Began purging at 1340 pumped at high rate to clear sediment out of line / water level never dropped

Purging ml/min 200

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	March 5, 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-30I
Upgradient / Downgradient / Sidegradient	___ / X / ___
Weather Conditions	overcast
Air Temperature	41 ° F
Total Well Depth (TWD) =	85.00 1/100 ft
Depth to Ground Water (DGW) =	14.14 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	70.91 1/100 ft
1 Casing Volume (OCV)* = LWC x 0.163 =	11.5 gal
3 Casing Volumes =	34.6 gal = Standard Evacuation Volume
Method of Sample Evacuation	peristaltic pump
Method of Sample Collection	peristaltic pump - reverse flow
Total Volume of Water Removed	1.80 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	75 - 85 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 X
Comments/Observations	
Sample Time:	1537
Sample Analytes:	VOCs

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.30	.60	.90	1.20	1.50	1.80				
TIME (Military)	1505	1510	1515	1520	1525	1530	1535				
Water Level (ft BTOC)	14.23	14.22	14.22	14.22	14.22	14.22	14.22				
pH (S.U.)	6.75	6.44	6.44	6.42	6.41	6.39	6.35				
Sp. Cond. (mS/cm)	0.232	0.232	0.232	0.233	0.233	0.233	0.234				
Water Temp. (°C)	14.37	14.95	15.23	15.56	15.71	15.65	15.43				
Turbidity (NTUs)	7.27	9.77	7.76	6.47	5.31	3.90	3.68				
Dissolved Oxygen (mg/L)	1.22	1.13	1.05	0.94	0.84	0.84	0.87				
ORP (mV)	133.6	130.8	108.9	103.7	96.9	90.1	88.5				

COMMENTS/OBSERVATIONS

Began purging at 1500

Purging ml/min

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	03/12/14
Field Personnel	Randy Mezga
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-4
X Upgradient	____ Downgradient ____ Sidegradient
Weather Conditions	partly Cloudy
Air Temperature	74 ° F
Total Well Depth (TWD) =	~~14.00~~ 13.98 1/100 ft
Depth to Ground Water (DGW) =	~~3.90~~ 5.16 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	8.82 1/100 ft
1 Casing Volume (OCV)* = LWC x .163 =	1.43 gal
3 Casing Volumes =	4.31 gal = Standard Evacuation Volume
Method of Sample Evacuation	peristaltic pump
Method of Sample Collection	peristaltic pump - reverse flow
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 - 14 1/100 ft
Dedicated Pump or Bailer	YES ____ NO X Type ____
Steel Guard Pipe Around Casing	YES X NO ____ Bolts are broken off
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:	1737
Sample Analytes:	VOCs

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.30	.60	.90	1.20	1.50	1.80	2.10			
TIME (Military)	1700	1705	1710	1715	1720	1725	1730	1735			
Water Level (ft BTOC)	5.43	5.70	5.89	5.95	6.14	6.23	6.33	6.47			
pH (S.U.)	4.93	3.89	4.27	4.35	4.10	4.15	4.23	4.30			
Sp. Cond. (mS/cm)	0.200	0.193	0.191	0.193	0.184	0.183	0.185	0.189			
Water Temp. (°C)	18.84	18.33	18.53	18.19	17.94	18.03	18.06	18.19			
Turbidity (NTUs)	46.23	11.74	6.83	6.18	6.35	5.95	6.10	5.44			
Dissolved Oxygen (mg/L)	0.85	0.91	1.28	1.44	1.91	2.12	2.26	2.30			
ORP (mV)	324.4	328.8	373.5	374.7	391.8	386.2	381.7	372.7			

COMMENTS/OBSERVATIONS

Began purging at 1657

Purging ml/min 250 min

PID . 0.0 at well head

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	03/05/14
Field Personnel	LAlexander
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-5
X Upgradient / ___ Downgradient / ___ Sidegradient	
Weather Conditions	partly - light rain
Air Temperature	37 ° F
Total Well Depth (TWD) =	14 1/100 ft
Depth to Ground Water (DGW) =	6.51 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	7.49 1/100 ft
1 Casing Volume (OCV)* = LWC x 0.163 =	1.22 gal
3 Casing Volumes =	3.66 gal = Standard Evacuation Volume
Method of Sample Evacuation	Peristaltic pump
Method of Sample Collection	peristaltic pump + pipette method (for VOCs)
Total Volume of Water Removed	~2.8 gal

Casing Diameter	2" inches
Casing Material	PVC
Measuring Point Elevation	145.46 1/100 ft
Height of Riser (above land surface)	1/100 ft
Land Surface Elevation	145.34 1/100 ft
Screened Interval	4-14 1/100 ft
Dedicated Pump or Bailer	YES ___ NO X Type ___
Steel Guard Pipe Around Casing	YES ___ NO X
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:	1025
Sample Analytes:	VOCs, SVOCs, metals

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	initial	0.5	0.9	1.3	1.7	2.1	2.5				
TIME (Military)	0950	0955	1000	1005	1010	1015	1020				
Water Level (ft BTOC)	6.72	7.01	7.11	7.18	7.21	7.24	7.25				
pH (S.U.)	4.56	4.32	4.21	4.14	4.09	4.06	4.01				
Sp. Cond. (mS/cm)	0.030	0.029	0.029	0.029	0.029	0.029	0.029				
Water Temp. (°C)	14.48	14.69	14.50	14.52	14.48	14.48	14.48				
Turbidity (NTUs)	2.14	1.45	0.10	0.05	0.00	0.00	0.00				
Dissolved Oxygen (mg/L)	9.57	9.12	9.04	8.97	8.99	8.85	8.91				
ORP (mV)	200.9	202.2	205.3	207.3	209.3	209.9	211.9				

COMMENTS/OBSERVATIONS

Began purging at 0945 NOTE: TOC & LS elev may be wrong on table - waiting for finalized and below ground surface

Purging ml/min 300

1L = 0.264 gallons

0.3L = X

X = 0.09 gpm = 0.4 gallons/5 min

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr): _____
Field Personnel: Randy Morga
Site Name: UTC Delavan Spray Technologies Site
AECOM Job #: 60314964
Sample ID*: MW-6
X Upgradient ____ Downgradient ____ Sidegradient
Weather Conditions: overcast / light rain
Air Temperature: 55 °F
Total Well Depth (TWD) = ~~14.00~~ 13.94 1/100 ft
Depth to Ground Water (DGW) = 3.44 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.45 1/100 ft
1 Casing Volume (OCV)* = LWC x .163 = 1.70 gal
3 Casing Volumes = 5.11 gal = Standard Evacuation Volume
Method of Sample Evacuation: peristaltic pump
Method of Sample Collection: peristaltic pump / reverse flow
Total Volume of Water Removed: 3.0 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 - 14 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 X
Comments/Observations
Sample Time: 1019
Sample Analytes: VOC's, SVOC's, metals

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.30	.60	.90	1.20	1.50	1.80	2.10	2.40	2.70	3.0
TIME (Military)	0925	0930	0935	0940	0945	0950	0953	1000	1005	1010	1015
Water Level (ft BTOC)	3.64	3.73	3.79	3.83	3.87	3.89	3.89	3.91	3.94	3.94	3.95
pH (S.U.)	3.43	2.93	2.82	3.06	3.07	3.12	3.15	3.19	3.24	3.29	3.33
Sp. Cond. (mS/cm)	0.024	0.024	0.023	0.023	0.024	0.023	0.023	0.023	0.022	0.022	0.022
Water Temp. (°C)	15.06	14.53	14.46	14.40	14.32	14.30	14.28	14.35	14.34	14.36	14.39
Turbidity (NTUs)	33.87	25.77	41.89	16.43	12.33	9.74	8.63	6.23	5.91	5.06	3.81
Dissolved Oxygen (mg/L)	7.20	5.95	5.72	5.53	5.33	5.19	5.20	5.11	5.15	5.17	5.20
ORP (mV)	783.2	643.9	632.5	521.3	513.8	508.0	503.4	495.9	492.7	490.4	489.0

COMMENTS/OBSERVATIONS
Began purging at 0922
Purging ml/min 250/min
PID = is not working properly due to rain ~~2.0~~ 2.1 at well head 0.0 breathing zone

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	March 5, 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-17
Upgradient / Downgradient / Sidegradient	X Downgradient
Weather Conditions	overcast
Air Temperature	50 ° F
Total Well Depth (TWD) =	20.00 1/100 ft
Depth to Ground Water (DGW) =	12.99 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	7.01 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	peristaltic pump
Method of Sample Collection	peristaltic pump - reverse flow
Total Volume of Water Removed	1.50 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 - 20 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:	1703
Sample Analytes:	VOC's

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	initial	.25	.50	.75	1.0	1.25	1.50				
TIME (Military)	1630	1635	1640	1645	1650	1655	1700				
Water Level (ft BTOC)	13.30	13.62	13.78	13.98	14.13	14.30	14.47				
pH (S.U.)	5.52	4.54	4.31	4.09	4.09	3.95	3.91				
Sp. Cond. (mS/cm)	0.017	0.016	0.016	0.016	0.016	0.016	0.016				
Water Temp. (°C)	14.05	14.27	14.54	14.46	14.29	14.09	13.91				
Turbidity (NTUs)	1.73	2.00	2.35	1.77	1.78	1.73	1.70				
Dissolved Oxygen (mg/L)	7.80	7.54	7.84	7.75	7.79	7.89	7.95				
ORP (mV)	176.5	188.4	194.5	202.6	198.4	204.3	214.8				

COMMENTS/OBSERVATIONS

Began purging at 1625

Purging ml/min

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	3-11-14
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-8
	X Upgradient ___ Downgradient ___ Sidegradient
Weather Conditions	clear / sunny
Air Temperature	47 °F
Total Well Depth (TWD) =	20.00 1/100 ft
Depth to Ground Water (DGW) =	10.47 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	9.53 1/100 ft
1 Casing Volume (OCV)* = LWC x .163 =	1.53 gal
3 Casing Volumes =	4.66 gal = Standard Evacuation Volume
Method of Sample Evacuation	peristaltic pump
Method of Sample Collection	peristaltic pump / reverse flow
Total Volume of Water Removed	1.50 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 - 20 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 X HIGH ___
Comments/Observations	
Sample Time:	0825
Sample Analytes:	VOCs, SVOCs, metals

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.25	.50	.75	1.0	1.25	1.50				
TIME (Military)	0753	0758	0803	0808	0813	0818	0823				
Water Level (ft BTOC)	10.69	10.82	10.91	10.94	11.00	11.02	11.02				
pH (S.U.)	4.19	4.20	4.10	4.09	4.09	4.06	4.06				
Sp. Cond. (mS/cm)	0.062	0.061	0.060	0.061	0.062	0.062	0.062				
Water Temp. (°C)	17.02	17.44	17.62	17.67	17.67	17.77	17.86				
Turbidity (NTUs)	9.10	5.70	5.80	2.84	1.82	0.66	0.62				
Dissolved Oxygen (mg/L)	5.49	5.34	5.37	5.30	5.26	5.14	5.10				
ORP (mV)	213.3	212.4	221.0	223.5	226.3	227.7	227.7				

COMMENTS/OBSERVATIONS

Began purging at 0750

Purging ml/min 200

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	03/06/14
Field Personnel	LAlexander
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-9
	X Upgradient ____ Downgradient ____ Sidegradient
Weather Conditions	cold, windy, cloudy
Air Temperature	37°F °F
Total Well Depth (TWD) =	20 1/100 ft
Depth to Ground Water (DGW) =	5.16 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	14.84 1/100 ft
1 Casing Volume (OCV)* = LWC x	0.163 = 2.42 gal
3 Casing Volumes =	7.26 gal = Standard Evacuation Volume
Method of Sample Evacuation	purge-low flow-per. stretic pump
Method of Sample Collection	low flow w/peristaltic-pump tubing
Total Volume of Water Removed	~4 gal

Casing Diameter	2" inches
Casing Material	PVC
Measuring Point Elevation	143.99 1/100 ft
Height of Riser (above land surface)	-0.22 1/100 ft
Land Surface Elevation	144.11 1/100 ft
Screened Interval	5.20 1/100 ft
Dedicated Pump or Bailer	YES ____ NO X Type ____
Steel Guard Pipe Around Casing	YES ____ NO X
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:	0950
Sample Analytes:	VOCs, SVOCs, metals, MNA
	Ferrous Iron = 0.0 mg/L

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	Stinitial	0.3	0.65	0.95	1.3	1.65	1.95	2.3	2.6	2.95	
TIME (Military)	0854	0859	0904	0909	0914	0919	0924	0929	0934	0939	
Water Level (ft BTOC)	5.40	5.69	5.95	6.14	6.23	6.44	6.54	6.59	6.64	6.69	
pH (S.U.)	3.24	3.31	3.52	3.51	3.46	3.49	3.53	3.63	3.72	3.70	
Sp. Cond. (mS/cm)	0.039	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.033	0.034	
Water Temp. (°C)	11.68	12.20	12.33	12.28	12.08	11.98	11.94	11.91	12.16	12.14	
Turbidity (NTUs)	7.15	4.33	3.65	2.13	3.36	2.83	1.00	0.06	0.36	0.29	
Dissolved Oxygen (mg/L)	11.11	4.66	4.44	4.30	4.10	3.90	3.91	3.97	4.01	~~3.71~~ 4.09	
ORP (mV)	250.6	234.2	228.0	222.7	205.3	174.1	160.4	149.8	142.1	141.5	

COMMENTS/OBSERVATIONS

Began purging at 0851

Purging ml/min 250

1L=0.264gal

0.25L = 0.066gal/min

5min = 0.33

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	03-06-14
Field Personnel	LAlexander, RM Bryan
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	~~MW-7~~ MW-9D
	X Upgradient ____ Downgradient ____ Sidegradient
Weather Conditions	cold, raining
Air Temperature	39 ° F
Total Well Depth (TWD) =	49 1/100 ft
Depth to Ground Water (DGW) =	9.83 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	39.17 1/100 ft
1 Casing Volume (OCV)* = LWC x	0.163 = 6.38 gal
3 Casing Volumes =	31.90 gal = Standard Evacuation Volume
Method of Sample Evacuation	low flow w/ peristaltic
Method of Sample Collection	low flow w/ peristaltic - pipette
Total Volume of Water Removed	~2.5 VOCs gal

Casing Diameter	2" inches
Casing Material	PVC
Measuring Point Elevation	144.20 1/100 ft
Height of Riser (above land surface)	≈0.60 1/100 ft
Land Surface Elevation	144.80 1/100 ft
Screened Interval	44-49' 1/100 ft
Dedicated Pump or Bailer	YES ____ NO X Type ____
Steel Guard Pipe Around Casing	YES ____ NO X
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:	1139
Sample Analytes:	VOCs

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	initial	0.3	0.65	0.95	1.3	1.6	1.95	2.3			
TIME (Military)	1050	1103	1108	1113	1118	1123	1128	1133			
Water Level (ft BTOC)	9.88	9.87	9.86	9.86	9.85	9.86	9.85	9.86			
pH (S.U.)	6.64	7.19	7.44	7.54	7.55	7.57	7.58	7.59			
Sp. Cond. (mS/cm)	0.225	0.237	0.239	0.239	0.239	0.239	0.239	0.239			
Water Temp. (°C)	14.24	14.88	15.00	15.20	15.15	15.15	15.24	15.32			
Turbidity (NTUs)	17.50	9.53	3.55	3.23	1.36	2.94	4.51	6.58			
Dissolved Oxygen (mg/L)	8.21	1.41	0.83	0.74	0.68	0.62	0.69	0.71			
ORP (mV)	140.0	98.6	43.8	20.2	13.1	3.60	1.70	-0.50			

COMMENTS/OBSERVATIONS

Began purging at 1055

Purging ml/min ~250

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr): 03/05/14
Field Personnel: LAlexander
Site Name: UTC Delavan Spray Technologies Site
AECOM Job #: 60314964
Sample ID*: MW-10

X Upgradient ____ Downgradient ____ Sidegradient

Weather Conditions: cloudy
Air Temperature: 43°F °F
Total Well Depth (TWD) = 18 1/100 ft
Depth to Ground Water (DGW) = 3.69 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 14.31 1/100 ft
1 Casing Volume (OCV)* = LWC x 0.163 = 2.33 gal
3 Casing Volumes = 6.99 gal = Standard Evacuation Volume
Method of Sample Evacuation: peristaltic pump - low flow
Method of Sample Collection: low flow-peristaltic pump) pipette method for VOCs
Total Volume of Water Removed: ~2.5 gal

Casing Diameter: 2 inches
Casing Material: PVC
Measuring Point Elevation: 142.19 1/100 ft
Height of Riser (above land surface): ~~142.1~~ 1/100 ft
Land Surface Elevation: 142.56 1/100 ft
Screened Interval: 3-18 1/100 ft
Dedicated Pump or Bailer: YES ____ NO X Type ____
Steel Guard Pipe Around Casing: YES ____ NO X
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: 1510
Sample Analytes: VOCs, SVOCs, metals, & MNA
Ferrous Iron = 0.0 mg/L

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	initial	0.5	0.8	1.15	1.45	1.80	2.10				
TIME (Military)	1443	1449	1453	1458	1503	1508	1503				
Water Level (ft BTOC)	3.84	3.85	3.87	3.89	3.90	3.91	3.91				
pH (S.U.)	4.16	4.20	4.08	4.00	3.99	3.96	3.96				
Sp. Cond. (mS/cm)	0.035	0.28	0.27	0.026	0.027	0.026	0.026				
Water Temp. (°C)	13.15	13.52	13.48	13.46	13.44	13.67	13.52				
Turbidity (NTUs)	21.6	11.49	7.50	9.36	6.46	~~6.28~~ 3.25	2.26				
Dissolved Oxygen (mg/L)	9.33	6.67	6.56	6.45	6.43	6.28	6.17				
ORP (mV)	209.4	199.1	204.9	212.0	213.9	216.1	214.5				

COMMENTS/OBSERVATIONS
Began purging at 1440
Purging ml/min 250

1L / 0.25L = 0.264 gal / x
x = 0.066
5x = 0.33

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr): 03/05/14
Field Personnel: LAlexander
Site Name: UTC Delavan Spray Technologies Site
AECOM Job #: 60314964
Sample ID*: MW-10D
X Upgradient ____ Downgradient ____ Sidegradient
Weather Conditions: pcloudy
Air Temperature: 45° ° F
Total Well Depth (TWD) = 74.48 1/100 ft
Depth to Ground Water (DGW) = 7.62 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 40.39 1/100 ft
1 Casing Volume (OCV)* = LWC x 0.163 = 6.58 gal
3 Casing Volumes = 32.9 gal = Standard Evacuation Volume
Method of Sample Evacuation: purg low flow w/ peristaltic pump
Method of Sample Collection: low flow w/ peristaltic - pipette for VOCs
Total Volume of Water Removed: ~1.7 gal

Casing Diameter: 2 inches
Casing Material: PVC
Measuring Point Elevation: 141.79 1/100 ft
Height of Riser (above land surface): +4 1/100 ft
Land Surface Elevation: 142.08 1/100 ft
Screened Interval: 43-48 1/100 ft
Dedicated Pump or Bailer: YES ____ NO X Type ____
Steel Guard Pipe Around Casing: YES ____ NO X
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: 1635
Sample Analytes: VOCs

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	0.3	0.65	0.95	1.3	1.6					
TIME (Military)	1604	1609	1614	1619	1624	1629					
Water Level (ft BTOC)	7.65	7.65	7.65	7.65	7.65	7.65					
pH (S.U.)	6.93	7.39	7.50	7.54	~~5.54~~ 7.57	7.59					
Sp. Cond. (mS/cm)	0.223	0.231	0.233	0.234	0.234	0.235					
Water Temp. (°C)	14.24	14.88	15.07	15.10	15.01	15.18					
Turbidity (NTUs)	0.00	0.00	0.00	0.00	0.00	0.00					
Dissolved Oxygen (mg/L)	5.81	5.38	5.27	5.29	5.27	5.20					
ORP (mV)	197.2	191.6	188.5	196.9	194.9	190.2					

COMMENTS/OBSERVATIONS
Began purging at 1600
Purging ml/min 250

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr): March 11, 2014
Field Personnel: Randy Morgan
Site Name: UTC Delavan Spray Technologies Site
AECOM Job #: 60314964
Sample ID*: MW-11
Upgradient ____ Downgradient X Sidegradient ____
Weather Conditions: Clear / Sunny
Air Temperature: 53 ° F
Total Well Depth (TWD) = 18.00 1/100 ft
Depth to Ground Water (DGW) = 6.70 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 11.30 1/100 ft
1 Casing Volume (OCV)* = LWC x .163 = 1.84 gal
3 Casing Volumes = 5.52 gal = Standard Evacuation Volume
Method of Sample Evacuation: peristaltic pump
Method of Sample Collection: peristaltic pump - reverse flow
Total Volume of Water Removed ____ 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 X
Comments/Observations
Sample Time: 1037
Sample Analytes: VOC's

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.30	.60	.90	1.20	1.50	1.80	2.10	2.40	2.70	
TIME (Military)	0950	0955	1000	1005	1010	1015	1020	1025	1030	1035	
Water Level (ft BTOC)	6.86	6.93	6.95	6.97	6.99	7.01	7.02	7.03	7.03	7.03	
pH (S.U.)	4.71	4.69	4.64	4.64	4.68	4.67	4.66	4.65	4.67	4.67	
Sp. Cond. (mS/cm)	0.257	0.258	0.258	0.258	0.259	0.259	0.260	0.260	0.260	0.260	
Water Temp. (°C)	15.62	15.63	15.54	15.56	15.68	15.72	15.68	15.74	15.78	15.83	
Turbidity (NTUs)	12.68	12.61	10.99	8.25	6.17	6.02	6.38	5.31	5.43	3.76	
Dissolved Oxygen (mg/L)	1.34	1.22	1.02	0.48	0.84	0.70	0.60	0.55	0.53	0.49	
ORP (mV)	225.4	227.1	188.0	163.7	140.3	126.8	115.2	108.5	103.8	100.4	

COMMENTS/OBSERVATIONS
Began purging at 0947
Purging ml/min 250

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	3-11-14
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-12D
Upgradient / Downgradient / Sidegradient	X Downgradient
Weather Conditions	clear/sunny
Air Temperature	68 ° F
Total Well Depth (TWD) =	50.00 1/100 ft
Depth to Ground Water (DGW) =	13.52 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	36.48 1/100 ft
1 Casing Volume (OCV)* = LWC x .163 =	5.94 gal
3 Casing Volumes =	17.83 gal = Standard Evacuation Volume
Method of Sample Evacuation	peristaltic pump
Method of Sample Collection	peristaltic pump / reverse flow
Total Volume of Water Removed	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 ___ 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 X
Comments/Observations	Fe = 0.10 mg/L
Sample Time:	1410
Sample Analytes:	VOC's, MNA

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.20	.40	.60	.80	1.0	1.20	1.40	1.60	1.80	2.0
TIME (Military)	1208	1213	1218	1223	1228	1233	1238	1243	1248	1253	1258
Water Level (ft BTOC)	14.16	14.44	14.77	14.90	14.96	14.98	14.96	14.96	14.93	14.93	14.89
pH (S.U.) *	12.21	12.13	12.12	12.16	12.14	12.12	12.09	12.00	11.91	11.83	11.68
Sp. Cond. (mS/cm) *	4.323	4.383	4.258	4.112	3.951	3.788	3.453	2.858	2.401	2.093	1.437
Water Temp. (°C)	23.35	22.50	22.26	22.22	22.12	22.02	21.94	21.94	21.83	21.73	21.80
Turbidity (NTUs)	4.79	2.07	1.20	0.77	1.96	0.64	0.85	1.26	0.57	0.13	0.40
Dissolved Oxygen (mg/L)	3.84	3.73	3.40	3.25	3.33	3.34	3.39	3.47	3.53	3.62	3.81
ORP (mV)	35.8	37.8	31.8	26.6	25.9	25.8	25.4	28.2	30.3	31.6	33.4

COMMENTS/OBSERVATIONS

Began purging at 1203

Purging ml/min 150

1130 Under pressure had to wait for it to equilibrate

* pH = is high + Conductivity is high + constantly dropping > Historically this is typical

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-12D

Date (mo/day/yr)	March 11, 2014
Field Personnel	Randy Morgan
Comments/Observations:	High pH + Conductivity (will drop during purging)

FIELD ANALYSES

									RM		
VOLUME PURGED (gallons)	2.4	2.8	3.20	3.60	4.0	4.40	4.80	5.20	5.60		
TIME (Military)	1308	1318	1328	1338	1348	1358	1403	1408	1423		
Water Level (ft BTOC)	14.88	14.82	14.80	14.78	14.73	14.71	14.69	14.69			
pH (S.U.)	11.64	11.58	11.51	11.39	11.36	11.26	11.24	11.22			
Sp. Cond. (mS/cm)	1.351	1.082	0.949	0.823	0.759	0.675	0.659	0.647			
Water Temp. (°C)	21.88	22.39	22.50	22.52	22.58	22.51	22.52	22.62			
Turbidity (NTUs)	0.60	0.54	0.57	0.40	0.38	0.58	1.12	0.84			
Dissolved Oxygen (mg/L)	3.80	3.86	3.94	4.02	4.03	4.08	4.07	4.07			
ORP (mV)	335	30.8	30.3	32.5	31.5	31.0	30.5	31.8			

COMMENTS/OBSERVATIONS

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)											
ORP (mV)											

COMMENTS/OBSERVATIONS

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	March 12, 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-13D
Upgradient / Downgradient / Sidegradient	X
Weather Conditions	overcast
Air Temperature	55 ° F
Total Well Depth (TWD) =	50.00 48.82 1/100 ft
Depth to Ground Water (DGW) =	12.18 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	36.64 1/100 ft
1 Casing Volume (OCV)* = LWC x .163 =	5.97 gal
3 Casing Volumes =	17.9 gal = Standard Evacuation Volume
Method of Sample Evacuation	peristaltic pump
Method of Sample Collection	peristaltic pump / reverse flow
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	40 - 50 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 X
Comments/Observations	Fe = 0.53
Sample Time:	1213
Sample Analytes:	VOCs, MNA

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	initial	30	.60	.90	1.20	1.50	1.80	2.10			
TIME (Military)	1135	1140	1145	1150	1155	1200	1205	1210			
Water Level (ft BTOC)	12.18	12.19	12.19	12.19	12.19	12.19	12.19	12.19			
pH (S.U.)	8.33	8.36	8.39	8.06	7.88	7.87	7.84	7.77			
Sp. Cond. (mS/cm)	0.242	0.253	0.254	0.259	0.261	0.262	0.263	0.264			
Water Temp. (°C)	18.15	18.48	18.63	18.42	18.33	18.40	18.53	18.44			
Turbidity (NTUs)	48.81	28.20	17.66	12.66	10.68	8.72	6.79	6.01			
Dissolved Oxygen (mg/L)	5.33	5.05	4.91	4.85	4.85	4.76	4.75	4.74			
ORP (mV)	310.3	298.2	294.3	302.1	306.9	304.8	304.3	306.4			

COMMENTS/OBSERVATIONS

Began purging at 1131

Purging ml/min 250 min

mud on bottom of well when tagged bottom after sampling

PID at well head 0.0 ppm

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	Feb 24, 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-14
Upgradient / Downgradient / Sidegradient	X
Weather Conditions	Clear/sunny
Air Temperature	69 ° F
Total Well Depth (TWD) =	20.00 1/100 ft
Depth to Ground Water (DGW) =	10.95 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	9.05 1/100 ft
1 Casing Volume (OCV)* = LWC x .163 =	1.47 gal
3 Casing Volumes =	4.41 gal = Standard Evacuation Volume
Method of Sample Evacuation	
Method of Sample Collection	peristaltic pump
Total Volume of Water Removed	pipette method 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 - 20 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:	1645 Trip Blank MW-14-c
Sample Analytes:	VOC's also duplicate MW-14-a
	PID 0.0 ppm at well head

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	initial	.30	.60	.90	1.10	1.30	1.50	1.70	1.90	2.10	2.30
TIME (Military)	1521	1526	1531	1536	1541	1546	1551	1556	1601	1606	1611
Water Level (ft BTOC)	11.34	11.59	11.86	12.02	12.20	12.35	12.53	12.69	12.89	13.04	13.22
pH (S.U.)	3.94	3.73	3.91	4.01	4.14	4.18	4.12	4.13	4.21	4.18	4.13
Sp. Cond. (mS/cm)	0.025	0.024	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023
Water Temp. (°C)	20.51	20.00	19.71	19.72	19.83	19.92	19.84	19.82	19.90	19.84	19.23
Turbidity (NTUs)	3.23	4.98	3.61	2.85	2.62	2.30	2.66	1.90	1.55	1.45	1.32
Dissolved Oxygen (mg/L)	10.29	10.42	10.44	10.33	9.53	9.40	9.34	9.37	9.30	9.31	9.19
ORP (mV)	116.2	136.1	134.2	131.9	129.4	129.9	136.3	138.1	135.4	137.9	143.2

COMMENTS/OBSERVATIONS

Began purging at 15:16

Purging ml/min 0.07

02/25/14 Will have to resample this well — lab sent preserved vials for VOCs instead of unpreserved

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Site Name	UTC Delavan Spray Technologies Site	Date (mo/day/yr)	Feb 24, 2014
AECOM Job #	60314964	Field Personnel	Randy Mogen
Sample ID*	MW-14	Comments/Observations:	

FIELD ANALYSES

	2.50										
VOLUME PURGED (gallons)	~~2.50~~	2.70	2.90	3.10	3.30	3.50					
TIME (Military)	1616	1621	1626	1631	1636	1641					
Water Level (ft BTOC)	13.39	13.57	13.71	13.90	14.00	14.12					
pH (S.U.)	4.23	4.16	4.22	4.27	4.29	4.21					
Sp. Cond. (mS/cm)	0.022	0.023	0.023	0.023	0.023	0.023					
Water Temp. (°C)	19.52	19.67	19.23	19.92	19.99	19.23					
Turbidity (NTUs)	1.46	1.36	1.23	1.17	1.44	1.28					
Dissolved Oxygen (mg/L)	9.10	9.16	9.09	8.93	8.97	9.00					
ORP (mV)	138.8	144.8	142.9	141.7	140.1	146.4					

COMMENTS/OBSERVATIONS

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)											
ORP (mV)											

COMMENTS/OBSERVATIONS

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	Feb 26, 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-14
Upgradient / Downgradient / Sidegradient	X
Weather Conditions	overcast / light rain
Air Temperature	50 ° F
Total Well Depth (TWD) =	20.00 1/100 ft
Depth to Ground Water (DGW) =	11.01 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	8.99 1/100 ft
1 Casing Volume (OCV)* = LWC x .163 =	1.46 gal
3 Casing Volumes =	4.38 gal = Standard Evacuation Volume
Method of Sample Evacuation	peristaltic pump
Method of Sample Collection	peristaltic pump reverse flow
Total Volume of Water Removed	1.80 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	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:	0935
Sample Analytes:	VOCs

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	initial	.30	.60	.90	1.20	1.50	1.80				
TIME (Military)	0902	0907	0912	0917	0922	0927	0932				
Water Level (ft BTOC)	11.26	11.52	11.67	11.86	12.02	12.18	12.32				
pH (S.U.)	4.15	4.00	3.91	3.83	3.79	3.77	3.82				
Sp. Cond. (mS/cm)	0.042	0.027	0.025	0.025	0.025	0.023	0.023				
Water Temp. (°C)	15.78	16.14	16.16	16.02	15.95	15.91	15.88				
Turbidity (NTUs)	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
Dissolved Oxygen (mg/L)	8.72	8.74	8.74	8.79	8.78	8.76	8.74				
ORP (mV)	180.4	184.6	184.0	196.1	201.3	202.8	201.3				

COMMENTS/OBSERVATIONS

Began purging at 0858 breathing zone PID = 0.0 ppm

Purging ml/min 125 ml/min

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	Feb 26, 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-14D
___ Upgradient	X Downgradient ___ Sidegradient
Weather Conditions	overcast / light rain
Air Temperature	50 ° F
Total Well Depth (TWD) =	50.00 1/100 ft
Depth to Ground Water (DGW) =	13.29 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	36.71 1/100 ft
1 Casing Volume (OCV)* = LWC x 0.163 =	5.98 gal
3 Casing Volumes = 17.95	gal = Standard Evacuation Volume
Method of Sample Evacuation	peristaltic pump
Method of Sample Collection	peristaltic pump - reverse flow
Total Volume of Water Removed	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 ___ 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:	1045
Sample Analytes:	VOC's & MNA
	Fe = 0.0 mg/L

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.30	.60	.90	1.20	1.50	1.80	2.10	2.40	2.70	3.0
TIME (Military)	0950	0955	1000	1005	1010	1015	1020	1025	1030	1035	1040
Water Level (ft BTOC)	13.29	13.29	13.29	13.29	13.29	13.29	13.29	13.29	13.29	13.29	13.29
pH (S.U.)	10.78	10.89	8.75	8.36	8.04	7.82	7.68	7.34	7.40	7.43	7.49
Sp. Cond. (mS/cm)	0.174	0.181	0.198	0.213	0.222	0.227	0.229	0.230	0.230	0.230	0.230
Water Temp. (°C)	17.25	17.86	18.09	18.15	18.17	18.16	18.17	17.50	16.98	16.97	17.06
Turbidity (NTUs)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dissolved Oxygen (mg/L)	8.00	7.85	7.80	7.78	7.74	7.72	7.65	8.32	8.19	8.20	8.08
ORP (mV)	131.9	111.4	129.1	130.4	130.8	131.1	129.7	151.2	145.3	144.1	139.1

COMMENTS/OBSERVATIONS

Began purging at 0946 breathing zone PID=0.0 ppm

Purging ml/min

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	Feb 25, 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-15
Upgradient / Downgradient / Sidegradient	Downgradient
Weather Conditions	clear / sunny
Air Temperature	° F
Total Well Depth (TWD) =	19.00 1/100 ft
Depth to Ground Water (DGW) =	1.90 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	17.1 1/100 ft
1 Casing Volume (OCV)* = LWC x 0.163 =	2.78 gal
3 Casing Volumes = 8.36	gal = Standard Evacuation Volume
Method of Sample Evacuation	peristaltic pump
Method of Sample Collection	peristaltic pump - reverse flow straw method
Total Volume of Water Removed	2.40 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 ____ 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 X
Comments/Observations	
Sample Time:	1630
Sample Analytes:	VOCs

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	initial	.30	.60	.90	1.20	1.50	1.80	2.10	2.40		
TIME (Military)	1547	1552	1557	1602	1607	1612	1617	1622	1627		
Water Level (ft BTOC)	2.02	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00		
pH (S.U.)	5.14	4.77	4.60	4.51	4.40	4.29	4.34	4.34	4.40		
Sp. Cond. (mS/cm)	0.312	0.313	0.315	0.314	0.315	0.314	0.309	0.306	0.304		
Water Temp. (°C)	20.30	20.17	19.61	19.12	18.50	17.92	17.83	17.68	17.58		
Turbidity (NTUs) (orange tint)	81.65	65.57	46.20	33.67	29.10	23.15	21.05	22.35	20.85		
Dissolved Oxygen (mg/L)	0.87	0.58	3.37	2.35	1.67	0.62	0.30	0.27	0.28		
ORP (mV)	128.4	152.8	183.1	212.0	226.3	235.6	225.1	220.5	216.4		

COMMENTS/OBSERVATIONS

Began purging at 1543

Purging ml/min

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	Feb 25, 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-15D
Upgradient / Downgradient / Sidegradient	X Downgradient
Weather Conditions	Clear/Sunny
Air Temperature	74 ° F
Total Well Depth (TWD) =	45.00 1/100 ft
Depth to Ground Water (DGW) =	2.33 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	42.67 1/100 ft
1 Casing Volume (OCV)* = LWC x .163 =	6.95 gal
3 Casing Volumes =	20.86 gal = Standard Evacuation Volume
Method of Sample Evacuation	peristaltic pump
Method of Sample Collection	peristaltic pump - reverse flow stepoy method
Total Volume of Water Removed	3.15 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 ___ 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 X

Comments/Observations

Sample Time: 1420

Sample Analytes: VOC's MS/MSD VOCs

tubing set in middle of screen

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	initial	.35	.70	1.05	1.40	1.75	2.10	2.45	2.80	3.15	
TIME (Military)	1329	1334	1339	1344	1349	1354	1359	1404	1409	1414	
Water Level (ft BTOC)	2.33	2.34	2.34	2.33	2.34	2.33	2.33	2.33	2.33	2.33	
pH (S.U.)	6.67	6.41	6.64	6.74	7.26	7.22	7.20	7.21	7.23	7.20	
Sp. Cond. (mS/cm)	0.402	0.431	0.436	0.436	0.440	0.438	0.438	0.438	0.439	0.439	
Water Temp. (°C)	20.66	20.17	20.10	20.00	22.01	22.03	22.07	22.15	22.31	22.14	
Turbidity (NTUs)	104.9	73.99	61.07	30.89	30.98	18.73	11.20	10.90	5.83	4.08	
Dissolved Oxygen (mg/L)	2.75	2.35	2.20	2.19	8.83	8.29	7.55	6.83	6.75	6.60	
ORP (mV)	80.6	80.2	69.3	65.7	40.1	41.7	44.1	45.7	46.7	47.9	

COMMENTS/OBSERVATIONS

Began purging at 1325

Purging ml/min

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	Feb 25 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-15DI
Upgradient / Downgradient / Sidegradient	X
Weather Conditions	Clear/Sunny
Air Temperature	72 ° F
Total Well Depth (TWD) =	85.00 1/100 ft
Depth to Ground Water (DGW) =	2.45 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	82.55 1/100 ft
1 Casing Volume (OCV)* = LWC x 1.63 =	13.45 gal
3 Casing Volumes =	40.36 gal = Standard Evacuation Volume
Method of Sample Evacuation	peristaltic pump
Method of Sample Collection	peristaltic pump - straw method, reverse flow
Total Volume of Water Removed	3.50 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 ___ 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 X
Comments/Observations	
Sample Time:	1537
Sample Analytes:	VOCs

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.35	.70	1.05	1.40	1.75	2.10	2.45	2.80	3.15	3.50
TIME (Military)	1445	1450	1455	1500	1505	1510	1515	1520	1525	1530	1535
Water Level (ft BTOC)	2.52	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
pH (S.U.)	7.05	6.84	7.08	7.23	7.40	7.48	7.40	7.34	7.57	7.54	7.59
Sp. Cond. (mS/cm)	0.195	0.198	0.198	0.199	0.199	0.199	0.199	0.199	0.199	0.201	0.201
Water Temp. (°C)	18.68	18.41	18.33	18.10	18.22	18.37	18.05	17.84	18.04	18.15	18.09
Turbidity (NTUs) (cloudy)	625.4	382.6	206.3	115.0	91.57	77.06	73.48	68.06	65.13	62.31	60.83
Dissolved Oxygen (mg/L)	1.38	0.45	0.27	0.20	0.19	0.18	0.17	0.17	0.17	0.17	0.16
ORP (mV)	-16.5	-25.5	-43.2	-57.2	-68.2	-77.9	-76.1	-75.3	-89.2	-90.8	-94.2

COMMENTS/OBSERVATIONS

Began purging at ~~1441~~ 1441

Purging ml/min

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	March 6, 2014
Field Personnel	Randy Murgo
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-16
Upgradient / Downgradient / Sidegradient	___ / X / ___
Weather Conditions	overcast
Air Temperature	36 ° F
Total Well Depth (TWD) =	19.00 1/100 ft
Depth to Ground Water (DGW) =	2.82 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	16.18 1/100 ft
1 Casing Volume (OCV)* = LWC x 0.163 =	2.64 gal
3 Casing Volumes =	7.92 gal = Standard Evacuation Volume
Method of Sample Evacuation	peristaltic pump
Method of Sample Collection	peristaltic pump / reverse flow
Total Volume of Water Removed	1.50 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 ___ 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 X
Comments/Observations	
Sample Time:	0920 Fe = 0.10 mg/L
Sample Analytes:	VOC's / MNA, Trip MW-16-C

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	initial	.25	.50	.75	1.0	1.25	1.50				
TIME (Military)	0846	0851	0856	0901	0906	0911	0916				
Water Level (ft BTOC)	2.98	2.98	2.98	2.98	2.98	2.98	2.98				
pH (S.U.)	~~3.80~~	3.88	4.07	4.14	4.04	3.96	3.90				
Sp. Cond. (mS/cm)	0.038	0.038	0.038	0.038	0.037	0.038	0.038				
Water Temp. (°C)	9.72	10.15	10.29	10.44	10.36	10.23	10.04				
Turbidity (NTUs)	47.52	33.82	24.18	18.16	16.10	14.52	13.04				
Dissolved Oxygen (mg/L)	6.37	4.34	3.92	3.22	2.69	2.69	2.50				
ORP (mV)	303.7	203.6	193.9	192.5	196.7	200.4	203.1				

COMMENTS/OBSERVATIONS

Began purging at 0843

Purging ml/min

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr): March 6, 2014
Field Personnel: Randy Mogan
Site Name: UTC Delavan Spray Technologies Site
AECOM Job #: 60314964
Sample ID*: MW-16D
___ Upgradient X Downgradient ___ Sidegradient
Weather Conditions: overcast
Air Temperature: 37 °F
Total Well Depth (TWD) = 45.00 1/100 ft
Depth to Ground Water (DGW) = 5.34 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: peristaltic pump
Method of Sample Collection: peristaltic pump / reverse flow
Total Volume of Water Removed: 1.50 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 ___ 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 X
Comments/Observations
Sample Time: 1020 Fe = 0.0 mg/L
Sample Analytes: VOCs / MNA

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.30	.60	.90	1.20	1.50					
TIME (Military)	0952	0957	1002	1007	1012	1017					
Water Level (ft BTOC)	5.34	5.34	5.34	5.34	5.34	5.34					
pH (S.U.)	6.60	6.45	6.47	6.48	6.47	6.47					
Sp. Cond. (mS/cm)	0.310	0.313	0.313	0.313	0.313	0.314					
Water Temp. (°C)	11.49	11.84	12.45	12.76	12.86	12.65					
Turbidity (NTUs)	16.27	1.51	1.24	0.36	0.05	0.00					
Dissolved Oxygen (mg/L)	8.77	8.76	8.45	8.32	8.30	8.37					
ORP (mV)	160.3	161.2	161.4	160.3	159.5	160.1					

COMMENTS/OBSERVATIONS: Began purging at 0949
Purging ml/min

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	March 10, 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-17
Upgradient / Downgradient / Sidegradient	___ / X / ___
Weather Conditions	clear/ Sunny
Air Temperature	17 ° F
Total Well Depth (TWD) =	28.40 BGS 1/100 ft
Depth to Ground Water (DGW) =	2.20 BGS 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	26.20 1/100 ft
1 Casing Volume (OCV)* = LWC x 0.163 =	4.27 gal
3 Casing Volumes =	12.81 gal = Standard Evacuation Volume
Method of Sample Evacuation	peristaltic pump
Method of Sample Collection	peristaltic pump reverse flow
Total Volume of Water Removed	2.0 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	1/100 ft
Dedicated Pump or Bailer	YES ___ NO X Type ___
Steel Guard Pipe Around Casing	YES ___ NO not completed
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:	1420
Sample Analytes:	VOCs

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.40	.80	1.20	1.60	2.0					
TIME (Military)	1353	1358	1403	1408	1413	1418					
Water Level ~~(ft BTOC)~~ BGS	3.47	3.54	3.57	3.54	3.54	3.54					
pH (S.U.)	4.62	4.27	4.30	4.37	4.35	4.42					
Sp. Cond. (mS/cm)	0.194	0.194	0.194	0.194	0.194	0.193					
Water Temp. (°C)	18.92	18.27	18.13	18.13	17.92	17.96					
Turbidity (NTUs)	118.4	33.05	13.63	8.76	6.71	5.96					
Dissolved Oxygen (mg/L)	0.92	0.62	0.73	0.61	0.59	0.58					
ORP (mV)	148.9	149.5	139.4	131.5	129.7	127.1					

COMMENTS/OBSERVATIONS

Began purging at 1350 Immediately following development

Purging ml/min

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr): March 10, 2014
Field Personnel: Randy Morgan
Site Name: UTC Delavan Spray Technologies Site
AECOM Job #: 60314964
Sample ID*: MW-18
Upgradient ____ X Downgradient ____ Sidegradient
Weather Conditions: Clear/Sunny
Air Temperature: 74F °F
Total Well Depth (TWD) = 26.50 1/100 ft
Depth to Ground Water (DGW) = 8.05 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 18.45 1/100 ft
1 Casing Volume (OCV)* = LWC x .163 = 3.00 gal
3 Casing Volumes = 9.00 gal = Standard Evacuation Volume
Method of Sample Evacuation: peristaltic pump
Method of Sample Collection: peristaltic pump reverse flow
Total Volume of Water Removed: 1.80 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: 1/100 ft
Dedicated Pump or Bailer YES ____ NO X Type ____
Steel Guard Pipe Around Casing YES ____ NO X not completed
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: 1718
Sample Analytes: VOCs

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.45	.90	1.35	1.80					
TIME (Military)	1655	1700	1705	1710	1715					
Water Level (ft ~~BTOC~~) BGS	9.00	9.31	9.32	9.34	9.34					
pH (S.U.)	5.20	4.44	4.71	4.65	4.67					
Sp. Cond. (mS/cm)	0.095	0.066	0.072	0.072	0.070					
Water Temp. (°C)	18.54	17.48	17.51	17.46	17.40					
Turbidity (NTUs)	30.83	11.60	6.53	4.34	3.77					
Dissolved Oxygen (mg/L)	3.13	3.03	2.80	2.76	2.74					
ORP (mV)	145.1	169.6	159.3	153.8	150.7					

COMMENTS/OBSERVATIONS
Began purging at 1652
Purging ml/min

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	03/06/14
Field Personnel	L Alexander
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	~~MW-19~~ MW-19
Upgradient / Downgradient / Sidegradient	_____ / X / _____ (Source)
Weather Conditions	cold, rainy, windy
Air Temperature	~40°F
Total Well Depth (TWD) =	20.03 (measured) 1/100 ft
Depth to Ground Water (DGW) =	12.98 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	7.05 1/100 ft
1 Casing Volume (OCV)* = LWC x 0.163 =	1.15 gal
3 Casing Volumes =	3.45 gal = Standard Evacuation Volume
Method of Sample Evacuation	low flow w/ peristaltic pump
Method of Sample Collection	low flow w/ peristaltic pump pipette for VOCs
Total Volume of Water Removed	~1.5 gal

Casing Diameter	1 inch inches
Casing Material	PVC
Measuring Point Elevation	NA 1/100 ft
Height of Riser (above land surface)	NA 1/100 ft
Land Surface Elevation	NA 1/100 ft
Screened Interval	~5-20 ft BTOC 1/100 ft
Dedicated Pump or Bailer	YES _____ NO X Type _____
Steel Guard Pipe Around Casing	YES _____ NO X
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: 1520

Sample Analytes: VOCs, SVOCs, metals

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	initial	~0.35	~0.65	~1.0	~1.3						
TIME (Military)	1454	1459	1504	1509	1514						
Water Level (ft BTOC)	13.45	13.63	13.76	13.84	13.85						
pH (S.U.)	5.21	5.16	~~5.10~~ 5.13	5.13	5.13						
Sp. Cond. (mS/cm)	0.182	0.184	0.188	0.189	0.187						
Water Temp. (°C)	21.55	21.46	21.49	21.49	21.52						
Turbidity (NTUs)	22.91	54.37	14.91	4.36	0.84						
Dissolved Oxygen (mg/L)	7.92	2.31	2.24	2.26	2.34						
ORP (mV)	94.0	87.7	86.8	87.7	90.0						

COMMENTS/OBSERVATIONS

Began purging at 1450

Purging ml/min ~250

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	March 6 2014
Field Personnel	
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-20 (dup)
____ Upgradient	X Downgradient ____ Sidegradient
Weather Conditions	rain
Air Temperature	36 ° F
Total Well Depth (TWD) =	15.00 1/100 ft
Depth to Ground Water (DGW) =	11.98 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	3.02 1/100 ft
1 Casing Volume (OCV)* = LWC x	0.0408 = 0.123 gal
3 Casing Volumes =	0.36 gal = Standard Evacuation Volume
Method of Sample Evacuation	peristaltic pump
Method of Sample Collection	peristaltic pump - reverse flow
Total Volume of Water Removed	.75 gal

Casing Diameter	~~2~~ 3/4" 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	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 X
Comments/Observations	
Sample Time:	1510
Sample Analytes:	VOC's, SVOCs, metals

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	initial	.25	.50	.75							
TIME (Military)	1450	1455	1500	1505							
Water Level (ft BTOC)	12.50	12.55	12.68	12.71							
pH (S.U.)	4.18	4.19	4.15	4.07							
Sp. Cond. (mS/cm)	0.040	0.040	0.039	0.039							
Water Temp. (°C)	20.82	20.76	20.72	20.71							
Turbidity (NTUs)	0.63	2.95	2.84	1.88							
Dissolved Oxygen (mg/L)	4.55	4.43	4.41	4.44							
ORP (mV)	179.2	176.2	177.5	181.8							

COMMENTS/OBSERVATIONS

Began purging at 1445 immediately following development

Purging ml/min

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	March 11, 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-21
Upgradient / Downgradient / Sidegradient	X
Weather Conditions	Clear/Sunny
Air Temperature	79 ° F
Total Well Depth (TWD) =	33.90 1/100 ft
Depth to Ground Water (DGW) =	11.52 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	22.38 1/100 ft
1 Casing Volume (OCV)* = LWC x .163 =	3.64 gal
3 Casing Volumes =	10.94 gal = Standard Evacuation Volume
Method of Sample Evacuation	peristaltic pump
Method of Sample Collection	peristaltic pump / reverse flow
Total Volume of Water Removed	10.0 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	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 X
Comments/Observations	
Sample Time:	1840
Sample Analytes:	VOCs, SVOCs, metals

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.50	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
TIME (Military)	1528	1533	1538	1543	1548	1553	1608	1613	1628	1633	1648
Water Level (ft BTOC)	12.25	12.27	12.27	12.30	12.22	12.13	12.18	12.18	12.18	12.18	12.19
pH (S.U.)	6.55	5.51	5.15	4.88	5.05	5.14	5.10	4.93	4.90	4.87	4.78
Sp. Cond. (mS/cm)	0.085	0.071	0.068	0.067	0.068	0.070	0.070	0.061	0.058	0.057	0.057
Water Temp. (°C)	21.85	21.41	21.28	21.19	21.47	21.58	21.50	21.48	21.44	21.39	21.35
Turbidity (NTUs) Gray Cloudy	5030	4746	509.9	546.9	798.6	827.3	808.4	512.9	351.6	257.5	251.1
Dissolved Oxygen (mg/L)	0.45	0.40	0.41	0.37	0.33	0.41	0.31	0.30	0.25	0.26	0.36
ORP (mV)	87.7	94.5	91.8	96.7	65.1	45.6	39.8	45.5	46.2	46.1	62.6

COMMENTS/OBSERVATIONS

Began purging at 1525

Purging ml/min 250

PID at well head 3.3 ppm breathing zone 0.0 ppm

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-21

Date (mo/day/yr)	March 11, 2014
Field Personnel	Randy Morgan
Comments/Observations:	

FIELD ANALYSES

VOLUME PURGED (gallons)	5.50	6.0	6.5	7.0	7.5	8.0	8.40	8.80	9.20	9.60	1000
TIME (Military)	1658	1708	1718	1725	1738	1748	1758	1808	1818	1828	1838
Water Level (ft BTOC)	12.19	12.19	12.18	12.18	12.20	12.20	12.10	12.09	12.09	12.08	12.08
pH (S.U.)	4.81	4.74	4.73	4.73	4.78	4.83	4.85	4.83	4.77	4.68	4.68
Sp. Cond. (mS/cm)	0.055	0.055	0.055	0.056	0.058	0.058	0.058	0.058	0.058	0.058	0.056
Water Temp. (°C)	21.39	21.38	21.28	21.23	21.23	21.36	21.40	21.35	21.23	21.11	21.09
Turbidity (NTUs)	234.1	227.4	220.1	218.4	214.0	222.4	224.3	218.0	218.2	206.2	205.6
Dissolved Oxygen (mg/L)	0.23	0.23	0.23	0.26	0.25	0.23	0.25	0.25	0.27	0.26	0.026
ORP (mV)	54.6	57.0	59.6	63.6	73.6	70.8	72.6	75.9	80.2	86.8	87.2

COMMENTS/OBSERVATIONS Color = grey-cloudy

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)											
ORP (mV)											

COMMENTS/OBSERVATIONS

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	3-12-14
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-21D
Upgradient / Downgradient / Sidegradient	X (Downgradient)
Weather Conditions	Overcast / light rain
Air Temperature	53 ° F
Total Well Depth (TWD) =	~~50.00~~ 52.74 1/100 ft
Depth to Ground Water (DGW) =	12.72 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	40.02 1/100 ft
1 Casing Volume (OCV)* = LWC x 0.163 =	6.52 gal
3 Casing Volumes =	19.6 gal = Standard Evacuation Volume
Method of Sample Evacuation	peristaltic pump
Method of Sample Collection	peristaltic pump / reverse flow
Total Volume of Water Removed	2.40 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 ___ 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 X
Comments/Observations	
Sample Time:	0837
Sample Analytes:	VOCs / SVOCs / metals
	tubing inlet middle of screen

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	Initial	.30	0.60	~~0.90~~	1.20	~~1.50~~	~~1.80~~	2.10	2.40		
TIME (Military)	0755	0800	0805	0810	0815	0820	0825	0830	0835		
Water Level (ft BTOC)	12.73	12.72	12.73	12.73	12.73	12.73	12.73	12.73	12.73		
pH (S.U.)	8.91	8.60	8.72	8.81	8.82	8.83	8.83	8.85	8.84		
Sp. Cond. (mS/cm)	0.723	0.383	0.431	0.481	0.495	0.502	0.503	0.505	0.503		
Water Temp. (°C)	19.91	20.12	20.13	20.12	20.11	20.09	20.06	20.04	20.04		
Turbidity (NTUs)	146.5	15.82	7.21	6.12	5.35	4.14	4.70	5.43	4.60		
Dissolved Oxygen (mg/L)	1.85	0.88	0.76	0.83	0.83	0.82	0.98	1.03	1.05		
ORP (mV)	716.0	725.0	726.0	726.3	726.1	725.6	724.6	722.9	721.7		

COMMENTS/OBSERVATIONS

Began purging at 0752

Purging ml/min 250 / min

PID reading at well head 0.0 ppm

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	March 12 2014
Field Personnel	Randy Morgan
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	~~MW-23D~~ MW-22D
____ Upgradient	X Downgradient ____ Sidegradient
Weather Conditions	overcast
Air Temperature	65 ° F
Total Well Depth (TWD) =	~~48.35~~ 1/100 ft
Depth to Ground Water (DGW) =	12.84 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	____ 1/100 ft
1 Casing Volume (OCV)* = LWC x .163 =	____ gal
3 Casing Volumes =	____ gal = Standard Evacuation Volume
Method of Sample Evacuation	peristaltic pump
Method of Sample Collection	peristaltic pump-reverse flow
Total Volume of Water Removed	5.40 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	____ 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 X
Comments/Observations	
Sample Time:	1432
Sample Analytes:	VOCs

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	initial	.30	.60	.90	1.20	1.50	1.80	2.10	2.40	2.70	3.0
TIME (Military)	1300	1305	1310	1315	1320	1325	1330	1335	1340	1345	1350
Water Level (ft BTOC)	12.16	12.15	12.15	12.15	12.15	12.15	12.15	12.15	12.15	12.15	12.15
pH (S.U.)	12.01	12.01	11.98	11.91	11.84	11.78	11.72	11.66	11.62	11.54	11.49
Sp. Cond. (mS/cm)	2.531	2.351	2.196	1.925	1.693	1.504	1.365	1.233	1.146	1.085	1.030
Water Temp. (°C)	18.89	18.95	18.96	18.98	18.95	18.93	18.91	18.92	18.92	18.91	18.91
Turbidity (NTUs)	41.52	36.56	30.07	27.71	22.46	17.49	15.77	14.31	11.81	9.54	8.59
Dissolved Oxygen (mg/L)	7.44	7.08	6.81	6.54	6.17	5.95	5.74	5.63	5.35	5.30	5.25
ORP (mV)	355.6	365.9	370.1	373.8	376.0	377.3	378.5	380.6	381.3	382.9	384.6

COMMENTS/OBSERVATIONS

Began purging at 1255

Purging ml/min 250 min

PID 4.1 at well head 0.0 at breathing zone

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	MW-230 MW-220

Date (mo/day/yr)	March 12, 2014
Field Personnel	Randy Metzger
Comments/Observations:	

FIELD ANALYSES

VOLUME PURGED (gallons)	3.30	3.60	3.90	4.20	4.50	4.80	5.10	5.40			
TIME (Military)	1355	1400	1405	1410	1415	1420	1425	1430			
Water Level (ft BTOC)	12.15	12.15	12.15	12.15	12.15	12.15	12.15	12.15			
pH (S.U.)	11.40	11.33	11.44	11.28	11.32	11.24	11.21	11.22			
Sp. Cond. (mS/cm)	0.841	0.795	0.765	0.726	0.713	0.698	0.687	0.670			
Water Temp. (°C)	18.95	19.01	19.03	19.03	19.08	19.12	19.10	19.11			
Turbidity (NTUs)	7.87	6.75	5.70	4.94	5.01	5.09	5.12	5.31			
Dissolved Oxygen (mg/L)	5.05	5.06	5.06	4.88	5.02	4.90	4.82	4.85			
ORP (mV)	388.7	388.7	387.0	390.4	390.2	392.7	394.0	394.2			

COMMENTS/OBSERVATIONS

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)											
ORP (mV)											

COMMENTS/OBSERVATIONS

AECOM

FIELD DATA INFORMATION LOG FOR GROUNDWATER SAMPLING

Date (mo/day/yr)	March 12 2012
Field Personnel	Randy Monyo
Site Name	UTC Delavan Spray Technologies Site
AECOM Job #	60314964
Sample ID*	~~MW-22D~~ MW-23D
Upgradient / Downgradient / Sidegradient	X Downgradient
Weather Conditions	overcast
Air Temperature	73 ° F
Total Well Depth (TWD) =	~~58.50~~ 1/100 ft
Depth to Ground Water (DGW) =	~~43.85~~ 1/100 ft
Length of Water Column (LWC) = TWD - DGW =	1/100 ft
1 Casing Volume (OCV)* = LWC x 1.63 =	gal
3 Casing Volumes =	gal = Standard Evacuation Volume
Method of Sample Evacuation	peristaltic pump
Method of Sample Collection	peristaltic pump reverse flow
Total Volume of Water Removed	3.0 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	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 X
Comments/Observations	
Sample Time:	1637
Sample Analytes:	VOC's

* - One casing volume (gallons) for a 2 inch well is 0.163 X LWC; for a 4 inch well is 0.652 X LWC and for a 6 inch well is 1.468 X LWC. Volume (in gallons) = $\pi r^2 h$ (7.48), where r is the radius (ft) and h is the height (ft).

FIELD ANALYSES

VOLUME PURGED (gallons)	initial	30	.60	.90	1.20	1.50	1.80	2.10	2.40	2.70	3.0
TIME (Military)	1545	1550	1555	1600	1605	1610	1615	1620	1625	1630	1635
Water Level (ft BTOC)	13.85	13.88	13.88	13.88	13.88	13.88	13.88	13.88	13.88	13.88	13.88
pH (S.U.)	10.10	9.78	9.34	9.37	9.16	8.98	8.87	8.56	8.39	8.43	8.50
Sp. Cond. (mS/cm)	0.472	0.434	0.389	0.386	0.377	0.372	0.365	0.365	0.365	0.363	0.365
Water Temp. (°C)	21.07	21.06	21.06	21.21	21.23	21.29	21.23	21.17	21.08	21.15	21.22
Turbidity (NTUs)	34.54	6.35	4.22	4.58	5.37	5.18	3.16	2.28	2.00	2.26	2.91
Dissolved Oxygen (mg/L)	4.38	3.84	3.21	3.18	2.94	2.65	2.65	2.43	2.28	2.30	2.27
ORP (mV)	280.8	277.3	272.5	269.2	267.5	265.4	263	261.7	264	263.7	258.9

COMMENTS/OBSERVATIONS

Began purging at 1540

Purging ml/min 250 min

PID 1.8 at well head breathing zone 0.0 ppm

IDW Management Forms

IDW MANAGEMENT FORM

PROJECT: No. 60314694

SITE NAME: UTC Delavan Spray Technologies Site

LOCATION: Bamberg, SC

CONTAINER NUMBER	MEDIA DESCRIPTION	MEDIA ORIGIN	DATE FILLED	DATE SAMPLED	DATE DISPOSED	COMMENTS
Soil 1	Soil, auger cuttings	Mon. Well MW-21D	2/24/14	3/12/14		IDW-7
Soil 2	Soil, auger cuttings	Mon. Well MW-21D	2/24/14			IDW-7
Soil 3	Soil, auger cuttings	Mon. Well MW-21D	2/25/14			IDW-7
Soil 4	Soil, auger cuttings	Mon Well MW-21D	2/25/14			IDW-7
Soil 5	Soil, auger cuttings	Mon. Well MW-21	2/25/14			IDW-5
Soil 6	Soil, auger cuttings	Mon. Well MW-21	2/25/14 2/26/14			IDW-5
Soil 7	Soil, auger cuttings	Mon. Well MW-22D	2/26/14			IDW-9
Soil 8	Soil, auger cuttings	Mon Well MW-22D	2/26/14 2/27/14			IDW-9
Soil 9	Soil, auger cuttings	Mon Well MW-22D	2/27/14			IDW-8
Soil 10	Soil, auger cuttings	Mon Well MW-23D	2/27/14			IDW-8
Soil 11	Soil, auger cuttings	Mon Well MW-23D	2/27/14			IDW-8
Soil 12	Soil, auger cuttings	Mon Well MW-22D	2/27/14			IDW-9
Soil 13	Soil, auger cuttings	Mon Well MW-23D	2/28/14			IDW-8
Soil 14	Soil, auger cuttings	Mon Well MW-23D	2/28/14			IDW-8
Soil 15	Soil, auger cuttings	Mon Well MW-18	3/3/14			IDW-6
Soil 16	Soil, auger cuttings	Mon Wells MW-18 and 17	3/3/14 and 3/4/14			IDW-6
Soil 17	Soil, auger cuttings	Mon Well MW-17	3/4/14	↓		IDW-6

IDW MANAGEMENT FORM

PROJECT: No: 60314694

SITE NAME: UTC Delaware Spray Technologies Site

LOCATION: Bamberg, SC

CONTAINER NUMBER	MEDIA DESCRIPTION	MEDIA ORIGIN	DATE FILLED	DATE SAMPLED	DATE DISPOSED	COMMENTS
Soil 18	Soil, auger cuttings	MW-17	3/4/14	3/12/14		IDW-6
Soil 19	Drilling Mud/Drill Cuttings	MW-21D	3/4/14	3/13/14		IDW-9
Soil 20	Drilling Mud/Drill Cuttings	MW-21D	3/4/14			
Soil 21	" "	MW-23D	3/6/14			
Soil 22	" "	MW-23D	3/6/14			
Soil 23	" "	MW-23D	3/6/14			
Soil 24	" "	MW-23D	3/6/14			
Soil 25	" "	MW-22D	3/7/14			
Soil 26	" "	MW-22D	3/7/14			
Soil 27	" "	MW-22D	3/7/14	↓		↓
Water 1A	Development Water	MW-23D	3/7/14	3/13/14		IDW-4
Water 2A	" "	MW-23D	3/7/14			IDW-4
Water 3A	Decon Water	Drilling tool decontamination	2/24/14 to 3/7/14			IDW-1
Water 4A	" "	" " "	"			
Water 5A	" "	" " "	"			
Water 6A	" "	" " "	"			
Water 7A	" "	" " "	"	↓		↓
Solid 1	Plastic from Decon Pad	" " "	"	NA		

IDW MANAGEMENT FORM

PROJECT: UTC Delavan Spray Technologies Site RI

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	
Geoprobe ①	soil cuttings	geoprobe soil cuttings	2-26-14 3-2-14	3/2/14		DPT-49-57; DPT-28 to 33, 34-36	IDW-5
	↓	↓		↓		B6-1 thru 5, DPT 46-48	
Geoprobe ②			3-2-14 thru			DPT-37 ~~thru 47~~ 38, 39, 41	IDW-5
Geoprobe ③	↓	↓	3-3-14-	↓		DPT-40, 42, 43, 44 MW-17 soil	IDW-5
Water ①	Purge water	MW purge water	2-24-14 - 3/5/14	3/13/14		MW-14, 14D, 15, 15D, 15D1, MW-1, -3, -3B, -3D1, 5, 7, 10, 10D	IDW-1
	Deion water	~~DPT~~ deion water		↓		DPT-46 thru 48, 49 thru 57, DPT 28-33, DPT-34-36, B6-1-5	IDW-1
Water ②	Deion water	↓	2/28/14			DPT-40, 42, 43, 44, 37 thru 40,	IDW-1
	Purge water	MW purge water		↓		MW-~~2, 3, 3D~~, -9, 9D, 19, 20, 11C, 11CD	IDW-1
Concrete ①	concrete cores	concrete cores from	2/28/14 - 3/1/14	NA			
		inside borings		NA			
Water ③	development water	MW-21	3/4/14	3/13/14		Development water from MW-21	IDW-3
Water ④	development water	MW-17	3/10/14			Development water from MW-17	IDW-4
Water ⑤	development water	MW-17 + MW-18	3-10-14			development water from MW-17 & 18	IDW-4
Water ⑥	development water	MW-18	3-10-14			development water from MW-18	IDW-4
Water ⑦	well purge water	various	3-11-14			MW-8, 11, 12D, ~~13~~ 21, 21D, 6, 13D, 23D, ~~14~~ 22D	
Water ⑧	well development water	MW-21D	3-11-14			development water from MW-21D	IDW-3
Water ⑨	well development water	MW-22D	3-11-14	↓		development water from MW-22D	IDW-4

APPENDIX C

SUB-SLAB VAPOR SAMPLING PROCEDURE

Sub-Slab Vapor Sampling Procedure

This procedure outlines the necessary components and processes for performing a Sub-Slab Soil Gas survey.

Caution: This procedure requires the use of a high pressure Helium tank. Use adequate precautions when the protective cap has been removed from the cylinder to prevent toppling, rolling or other sudden movement that may cause the valve to break off the cylinder. Sudden pressure loss in the tank will cause the tank to become a missile resulting in possible physical Injury or Death.

1) Prepare Boring

a) Drill or Core Thru the Concrete or Asphalt Slab with at least a 1" bit and rotary hammer.

b) Boring should be continued nearly to the depth for point placement.

2) Prepare and Install Soil Gas Points

a) Assemble Points, Screens, and Umbrellas.

b) Assemble drive shoe onto drive pipe and attached notched drive Anvil to the other end. Tighten both snugly; failure to tighten these before driving the points will shear the pipe threads.

c) Precut a section of ¼" Teflon tubing and attach it to the Sampling point. Be sure that it is forced all the way up to the umbrella.

d) Pass the other end of the tube thru the drive Shoe and out the top of the drive Anvil thru the side notch.

e) Secure the Sampling point into the drive Shoe by folding the sides of the umbrella up and into the Shoe. The sides or edges of the umbrella should face the top of the well during installation.

f) Place and/or drive the assembly down the well to desired depth using the slide hammer. Again, be sure that the drive adapter and all threaded connections are tight first.

3) Finish well construction

a) Extract well point drive pipe from well while keeping slight downward pressure on the tubing. Use vise grips and High Lift jack if needed.

b) Pour Filter Sand into the well until just above sample zone.

c) Complete the well with Bentonite to within 2" of the top surface of the slab. Use a rod or similar to compact and remove air pockets from the Bentonite.

Sampling Procedure

1) **Assemble Hardware**

   a) Connect the ¼" Teflon well point tube to the inside of the shroud fitting "Sample out". Tighten fitting using two wrenches, one on the outside body of the bulkhead and the other on the fitting nut inside.

   b) Place the shroud over the well point with the Stainless Steel Monitor out tube into the Well recess and on the Bentonite surface.

   c) Place weights on the top of the shroud to hold the bottom seal airtight against the slab. Rocks, Bricks, etc.

2) **Connect Helium tank**

   a) Remove the protective cap from the tank and attach the pressure regulator. As already mentioned CAUTION should be taken in handling this tank.

   b) Lay the tank on its side once the regulator is attached and brace it in place.

   c) Check the Regulator output valve; rotate it counterclockwise until you don't feel any mechanical load on the valve stem.

   d) Attach the ¼" POLY Tube to the output of the regulator and the "Helium Input" on the shroud. Snug fitting with wrench and retain cap nearby.

3) **Monitor out**

   a) Connect the 3/8" silicon tube to the "Monitor Out" connection and snug fitting with wrench, retain cap nearby.

4) **Sampling Canister (Summa) setup**

   a) Assemble the sampling tee onto the top fitting of the Summa canister and snug fitting with wrench.

   b) Attach the ¼" Teflon line from the shroud "Sample Out" port to the tee on top of the Summa canister. Snug fittings with wrench.

   c) Attach stopcock and syringe to the other side or the tee and snug the fittings by hand.

5) **Helium preparation**

   a) Turn on the Helium detector and run for 10m to 15 minutes to warm up.

   b) Insert Helium detector probe into the Monitor out line about 2".

c) Begin to flood the shroud with Helium by slowly turning the Helium tank valve open and observe the high pressure gauge on the regulator. Once it has gone to a few thousand PSI continue to turn the valve open several more turns.

d) Next, begin slowly turning the regulator valve clockwise until you just feel mechanical load on the valve stem. Continue turning the valve just until you hear gas moving and see the low pressure gauge needle just move. (Note: that there is no back pressure in the output line so the gauge will not move very much at all perhaps the width of a piece of paper).

e) Observe the Helium detector for a response. The Helium concentration should be 80% or more for this test.

f) Once you have reached a stable 80% reading turn off the Helium at the regulator valve then close the Helium tank valve.

g) Now remove the monitor out tubing from the shroud and replace the cap on the fitting and snug with wrench.

h) Next, remove the Helium input tubing and replace the cap on the fitting, snug with wrench.

6) Sampling Process

a) Purge the well point tubing and tee of ambient air, one volume. With the syringe secured to the stopcock, open it and draw the plunger out on the syringe to draw air from the well point tubing. Close the stopcock remove syringe and exhaust the contents. Repeat until one volume has been exhausted.

b) Draw two to three more volumes and save these into the Tedlar bag.

c) Assess the Tedlar bag for Helium content. The Helium detector should read No More than 10% concentration in the bag. If readings are higher the Well seal needs to be repaired and then reevaluate with Helium again.

d) Once the 10% level has been achieved check that the stopcock on the tee is closed.

e) The shroud should not be moved or relocated after this until the sampling is complete.

f) The Summa canister valve can now be opened and sampling can begin.

APPENDIX D

SUMMARY OF WELL SURVEY

Tables

Table D-1
2010 Water Supply Well Inventory
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

WSW ID	Tax Parcel ID	Well Address	Owner Information	Well Use	Municipal Water Status
Frazier Well	0072-08-02-1	527 Log Branch Road Bamberg, SC 29003	Lorrine Frazier 623 Calhoun Street Bamberg, SC 29003 (803)-245-4364	Inactive	Available. Water Account Inactive
Thomas Well	0072-08-02-16	589 Log Branch Road Bamberg, SC 29003	Robert A. Thomas 1450 Capernaum Road Bamberg, SC 29003 Phone Number Unknown	Abandoned 11/13/2007	Connected to Municipal Water
John Kinsey Well	0073-80	4336 Main Highway Bamberg, SC 29003	John T. Kinsey 336 Calhoun Street Bamberg, SC 29003 (803) 245-2745	Abandoned in (or around) 2008	Connected to Municipal Water
D. Hyatt Well	0073-00-00-029	4824 Main Highway Bamberg, SC 29003	Donald R. Hyatt 4824 Main Highway Bamberg, SC 29003 (803) 245-0234 or (803) 707-0540	Active w/ Filter Equipment Installed	*Available. Not Connected to Municipal Water
B. Hyatt Well No. 1	0073-00-00-078	4834 Main Highway Bamberg, SC 29003	William H. Hyatt 4834 Main Highway Bamberg, SC 29003 (803) 245-0914 or (803) 682-0060	Active w/ Filter Equipment Installed	*Available. Not Connected to Municipal Water
B. Hyatt Well No. 2	0073-00-00-078	4834 Main Highway Bamberg, SC 29003	William H. Hyatt 4834 Main Highway Bamberg, SC 29003 (803) 245-0914 or (803) 682-0060	Active w/ Filter Equipment Installed	*Available. Not Connected to Municipal Water
L. Dyches Well No. 1	0073-00-00-027	174 Water Oak Court Bamberg, SC 29003	Louise C. Dyches 174 Water Oak Court Bamberg, SC 29003 (803) 245-3474	Active w/ Filter Equipment Installed	*Available. Not Connected to Municipal Water
L. Dyches Well No. 2	0073-00-00-027	139 Water Oak Court Bamberg, SC 29003	Louise C. Dyches 174 Water Oak Court Bamberg, SC 29003 (803) 245-3474	Active w/ Filter Equipment Installed	*Available. Not Connected to Municipal Water
E. Davis Well No. 1	0073-00-00-020	79 Water Oak Court Bamberg, SC 29003	Estelle Davis 79 Water Oak Court Bamberg, SC 29003 (803) 707-0112	Active w/ Filter Equipment Installed	*Available. Not Connected to Municipal Water
J. Nichols Well	0073-00-00-035	64 Water Oak Court Bamberg, SC 29003	John Nichols 64 Water Oak Court Bamberg, SC 29003 (803) 245-2785	Active w/ Filter Equipment Installed	*Available. Not Connected to Municipal Water

Notes:
H&H - Hart & Hickman
1. Taken from Table 6 of the Remedial Investigation Work Plan (H&H, 2013).
2. Water supply wells are shown on Figure D-1.
3. Survey was conducted by H&H in December 2010.
4. Information obtained from personal interviews, Bamberg County Tax Assessor, and City of Bamberg Public Works.
5. *Municipal water is available in the site area; however, municipal sewer service is also required when connecting to the municipal water source. No sewer service lines are present in the site area other than a force main.

Table D-2
Summary of 2014 Windshield Well Survey
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Map ID	Description from Windshield Well Survey
1	4937 Main Hwy
2	Before substation on Capernaum Rd
3	Across from #105 on Log Branch Rd; Property looks abandoned
4	#179; near the intersection of Brickle St and Presbyterian St
5	On Carlisle St next to #1425
6	On Carlisle St across from #1467
7	Just before #504 Broxton Bridge Rd
8	#651 at the corner of Broxton Bridge Rd and Cry Baby Rd
9	Cry Baby Rd - tan brick house just before creek crosses road
10	Road branches off to the south off of Drive In C

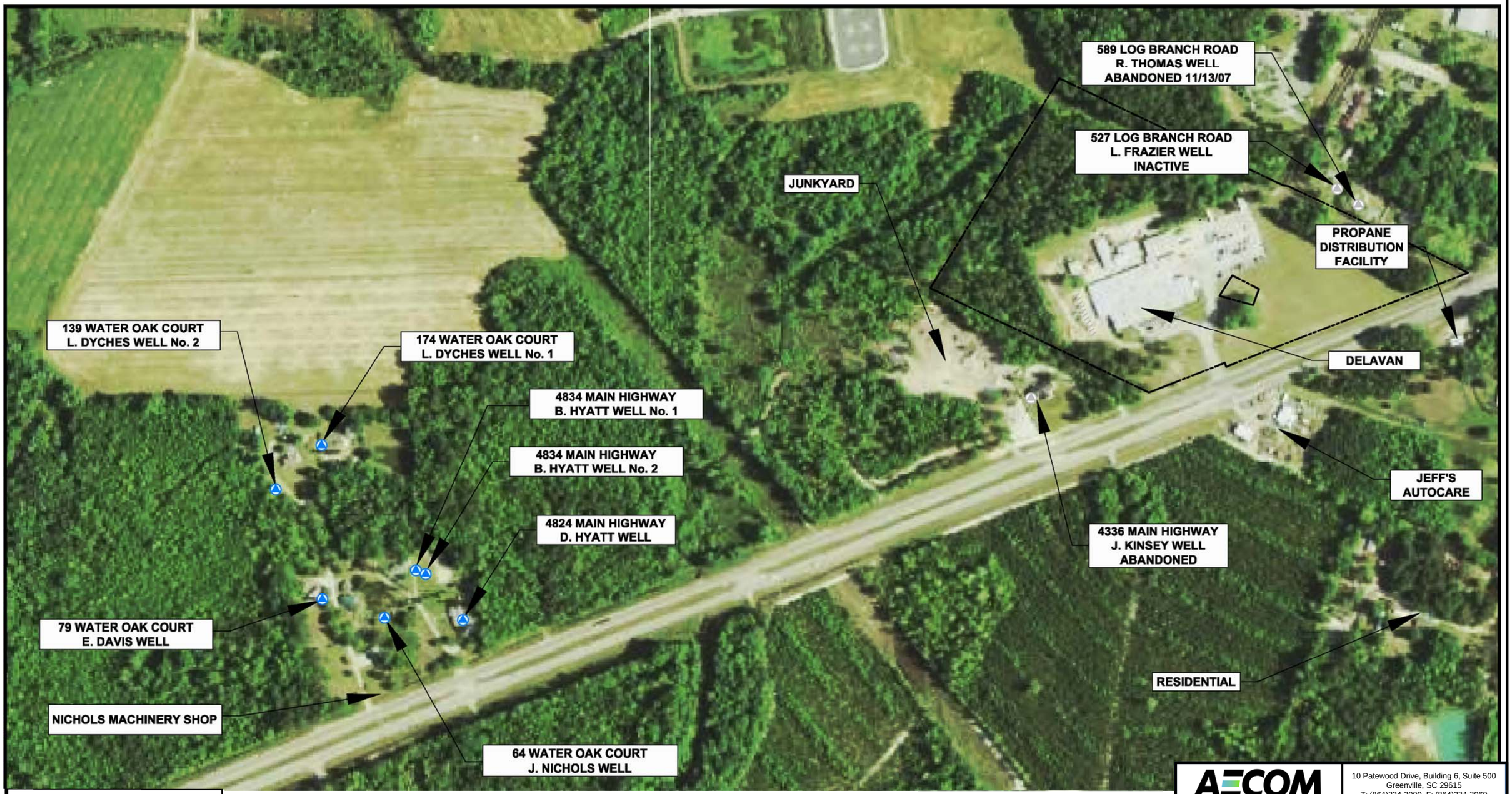
Notes:
SCDNR - South Carolina Department of Natural Resources
1. Locations on Figure D-2 are approximate.
2. Locations have not been confirmed as water supply wells. Wells were located by visual inspection during windshield well survey. Locations were identified as containing possible well structures but are not found in the SCDNR database.

Table D-3
Summary of SCDNR Well Records for Survey Area
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

ID	Latitude	Longitude	Ground Elevation (feet msl)	Owner Name	Owner's Well ID	USE	Depth Drilled (ft bgs)	Depth Completed (ft bgs)	Casing Diameter (inches)	Screen Diameter (inches)	Top of Screen Depth (ft bgs)	Bottom of Screen Depth (ft bgs)	Year Completed	Well Yield (gpm)	Well Yield Year	Driller	Remarks
BAM-6	331745	810215	170	Town of Bamberg	Well 3A	Abandoned		584	10	8	553	575	1932	100	1946	Connally	Flowing well (1980).
BAM-7	331743	810215	170	Town of Bamberg		Abandoned		401	6			399	1903	100	1946	Argo	Flowing well (1980).
BAM-8	331715	810223	150	Bamberg Textile Mill		Industrial		550	8			550	1908				Flowing well (1946). Recased in 1973 with 4" PVC 0-40 ft.
BAM-15	331743	810213	160	Town of Bamberg	Well 4	Standby		200	10		100	200	1950	100		Connally	
BAM-16	331745	810214	160	Town of Bamberg	Well 1	Abandoned	210	165	8		39	165	1963	200		Martin	
BAM-17	331745	810214	160	Town of Bamberg	Well 2	Standby		160	8		55	156	1963	200	1973	Martin	Well reworked in 9/1973 by Virginia Well Co.
BAM-21	331745	810214	160	Town of Bamberg	Well 3	Standby		169	8		160	169	1970	375		Virginia Well Co.	
BAM-24	331719	810227	147	Town of Bamberg	Well 6	Unused	556	364	12		140	356	1975	500	1975	Virginia Well Co.	Flowing well (1975).
BAM-27	331718	810227	147	Town of Bamberg	Well 7	Standby	1020	550	12		448	539	1978	1000	1978	Virginia Well Co.	Flowing well (1978). Samples at SCGS.
BAM-31	331748	810212	160	Town of Bamberg	Well 5	Standby	176	172	8		67	167	1973	465	1999	Virginia Well Co.	
BAM-83	331718	810235	150	Town of Bamberg	Well 9	Public Supply	1310	1030	14		350	1020	2000	2150	2000	Integrity	Drilled into bedrock.
BAM-105	331730	810145		Job Corps		Domestic	80	80	8		40	60	1994	50	1994	Martin	

Notes:
ft bgs - feet below ground surface
gpm - gallons per minute
SCDNR - South Carolina Department of Natural Resources
1. Data obtained from the SCDNR website http://www.dnr.sc.gov/water/hydro/WellRecords/Wells_main.htm.
2. Latitude and longitude referenced to North American Datum 1927 (NAD27).

Figures



LEGEND

- SUBJECT PROPERTY BOUNDARY
- WATER SUPPLY WELL
- ABANDONED/INACTIVE WATER SUPPLY WELL

Note:
Taken from Figure 3 of the Remedial Investigation Work Plan (Hart & Hickman, 2013).

N

APPROXIMATE
300 600
SCALE IN FEET

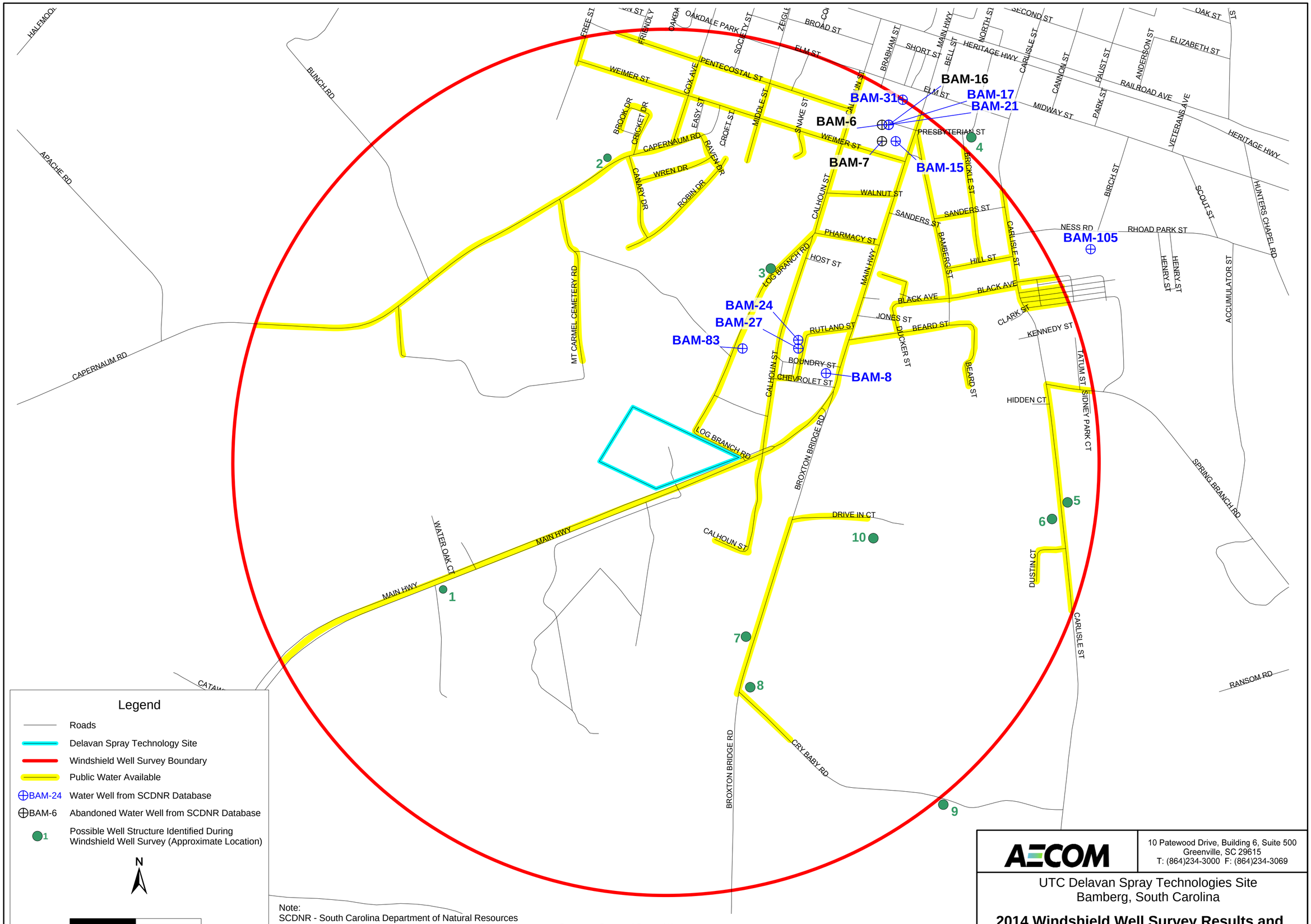
AECOM
10 Patewood Drive, Building 6, Suite 500
Greenville, SC 29615
T: (864)234-3000 F: (864)234-3069

UTC Delavan Spray Technologies Site
Bamberg, South Carolina

December 2010 Well Survey Results

PROJECT NO.	PREPARED BY:.	DATE.	
60314964	LJA	June 2014	**Figure D-1**

L:\projects\60314964\500-Deliverables\506 1st Draft RI Report\Appendices\FD-1_H&H Well Survey Results.pptx



Legend

- Roads
- Delavan Spray Technology Site
- Windshield Well Survey Boundary
- Public Water Available
- BAM-24 — Water Well from SCDNR Database
- BAM-6 — Abandoned Water Well from SCDNR Database
- 1 — Possible Well Structure Identified During Windshield Well Survey (Approximate Location)

N

0 2000 4000

Feet

Note:
SCDNR - South Carolina Department of Natural Resources

1. Information regarding public water availability was provided by the Bamberg Board of Public Works.
2. Windshield well survey results are based solely on visual inspection and identification of possible well structures. None of the possible well locations were included in the SCDNR well records. Locations have not been confirmed as water wells.
3. SCDNR Well Records were obtained from the database on the SCDNR website http://www.dnr.sc.gov/water/hydro/WellRecords/Wells_main.htm.

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

2014 Windshield Well Survey Results and SCDNR Well Records Within Survey Boundary

PROJECT NO.	DRAWN BY:	DATE:	
60314964	LJA	July 2014	Figure D-2

L:/work/60314964/400-Technical/Surfer/Well Survey_DNR Data.srf

APPENDIX E

ANALYTICAL DATA
(Attached on Compact Disk)

Laboratory Reports – Accutest Southeast

Southeast
ACCUTEST LABORATORIES

03/21/14

Technical Report for

United Technologies Corporation

AECOMSCG: Delavan Spray Technologies; Bamberg, SC

60314964

Accutest Job Number: FA12814

Sampling Dates: 02/25/14 - 02/26/14

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: **129**

NELAP ACCREDITED TNI LABORATORY

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

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: 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 (04226CA), TX (T104704404), PA (68-03573), VA (460177), AK, AR, GA, KY, MA, NV, OK, UT, WA

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Accutest Laboratories

Sample Summary

United Technologies Corporation

Job No: FA12814

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA12814-1	02/25/14	16:00	LA	02/27/14	SO	Soil	DPT-45 (2-4)
FA12814-2	02/25/14	16:00	LA	02/27/14	SO	Soil	DPT-45 (2-4)-A
FA12814-3	02/26/14	14:10	LA	02/27/14	SO	Soil	DPT-53 (8-10)
FA12814-4	02/26/14	14:30	LA	02/27/14	SO	Soil	DPT-52 (8-10)
FA12814-5	02/26/14	14:30	LA	02/27/14	SO	Soil	DPT-52 (8-10)-A
FA12814-6	02/26/14	15:15	LA	02/27/14	SO	Soil	DPT-50 (4-6)
FA12814-7	02/26/14	15:00	LA	02/27/14	SO	Soil	DPT-49 (6-8)
FA12814-8	02/26/14	15:50	LA	02/27/14	SO	Soil	DPT-51 (7-9)
FA12814-9	02/26/14	16:10	LA	02/27/14	SO	Soil	DPT-57 (6-8)
FA12814-10	02/26/14	16:25	LA	02/27/14	SO	Soil	DPT-56 (2-4)
FA12814-11	02/26/14	16:40	LA	02/27/14	SO	Soil	DPT-54 (8-10)
FA12814-11D	02/26/14	16:40	LA	02/27/14	SO	Soil Dup/MSD	DPT-54 (8-10)
FA12814-11S	02/26/14	16:40	LA	02/27/14	SO	Soil Matrix Spike	DPT-54 (8-10)

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

Sample Summary
(continued)

United Technologies Corporation

Job No: FA12814

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA12814-12	02/26/14	17:20	LA	02/27/14	SO	Soil	DPT-55 (3-5)

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

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: United Technologies Corporation **Job No:** FA12814

Site: AECOMSCG: Delavan Spray Technologies; Bamberg, SC **Report Date** 3/21/2014 9:37:30 AM

12 Samples were collected between 02/25/2014 and 02/26/2014 and were received at Accutest SE on 02/27/2014 properly preserved, at 3.8 Deg. C and intact. These Samples received an Accutest job number of FA12814. 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: SO **Batch ID:** VC3894

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12814-11MS, FA12814-11MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Chloroethane are outside control limits. Blank Spike recovery is biased high. Analyte is non-detect in associated samples; therefore data integrity is not compromised.

Matrix Spike Recovery(s) for 1,1-Dichloroethylene, Bromoform, Carbon disulfide, Carbon tetrachloride, Tetrachloroethylene, Trichloroethylene are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Tetrachloroethylene, Trichloroethylene are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Hexanone, 4-Methyl-2-pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Carbon disulfide, Chloroethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Methyl ethyl ketone, Methylene chloride, Tetrachloroethylene, Trichloroethylene are outside control limits for sample FA12814-11MSD. Probable cause is due to sample non-homogeneity.

FA12814-1: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12814-2: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12814-3: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12814-4: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12814-6: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12814-1 for Chloroethane: Associated BS recovery outside control limits.

FA12814-2 for Chloroethane: Associated BS recovery outside control limits.

FA12814-3 for Chloroethane: Associated BS recovery outside control limits.

FA12814-4 for Chloroethane: Associated BS recovery outside control limits.

FA12814-5 for Chloroethane: Associated BS recovery outside control limits.

FA12814-6 for Chloroethane: Associated BS recovery outside control limits.

FA12814-11 for Chloroethane: Associated BS recovery outside control limits.

FA12814-12 for Chloroethane: Associated BS recovery outside control limits.

Matrix: SO **Batch ID:** VC3895

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12814-3MS, FA12814-3MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Chloroethane are outside control limits. Blank Spike recovery is biased high. Analyte is non-detect in associated samples; therefore data integrity is not compromised.

Matrix Spike Duplicate Recovery(s) for 1,1-Dichloroethylene, Carbon disulfide, Tetrachloroethylene are outside control limits. Probable cause is due to matrix interference.

FA12814-3: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12814-4: Pre-weighed vials were altered in the field; sample weights are estimated.

Volatiles by GCMS By Method SW846 8260B

Matrix: SO **Batch ID:** VC3895

FA12814-6: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12814-7: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12814-9: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12814-10: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12814-7 for Chloroethane: Associated BS recovery outside control limits.

FA12814-8 for Chloroethane: Associated BS recovery outside control limits.

FA12814-8 for Methylene chloride: Suspected laboratory contaminant.

FA12814-9 for Chloroethane: Associated BS recovery outside control limits.

FA12814-10 for Chloroethane: Associated BS recovery outside control limits.

Extractables by GCMS By Method SW846 8270D

Matrix: SO **Batch ID:** OP50657

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) FA12814-11MS, FA12814-11MSD were used as the QC samples indicated.

Matrix Spike Duplicate 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.

Metals By Method SW846 6010C

Matrix: SO **Batch ID:** MP26900

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) FA12814-11DUP, FA12814-11MS, FA12814-11MSD, FA12814-11PS, FA12814-11SDL were used as the QC samples for metals.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for Arsenic, Antimony, Chromium, Selenium are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

RPD(s) for Duplicate for Arsenic, Copper, Silver are outside control limits for sample MP26900-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for MSD for Antimony, Chromium, Selenium are outside control limits for sample MP26900-S2. High RPD due to possible sample non-homogeneity.

RPD(s) for Serial Dilution for Arsenic, Beryllium, Nickel, Selenium, Silver, Zinc are outside control limits for sample MP26900-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP26900-SD1 for Chromium: Serial dilution indicates possible matrix interference.

MP26900-SD1 for Copper: Serial dilution indicates possible matrix interference.

FA12814-6 for Thallium: Elevated reporting limit(s) due to matrix interference.

FA12814-12 for Antimony: Elevated reporting limit(s) due to matrix interference.

FA12814-12 for Arsenic: Elevated reporting limit(s) due to matrix interference.

FA12814-12 for Beryllium: Elevated reporting limit(s) due to matrix interference.

FA12814-12 for Cadmium: Elevated reporting limit(s) due to matrix interference.

FA12814-12 for Chromium: Elevated reporting limit(s) due to matrix interference.

FA12814-12 for Copper: Elevated reporting limit(s) due to matrix interference.

FA12814-12 for Lead: Elevated reporting limit(s) due to matrix interference.

FA12814-12 for Nickel: Elevated reporting limit(s) due to matrix interference.

FA12814-12 for Selenium: Elevated reporting limit(s) due to matrix interference.

FA12814-12 for Silver: Elevated reporting limit(s) due to matrix interference.

FA12814-12 for Thallium: Elevated reporting limit(s) due to matrix interference.

FA12814-12 for Zinc: Elevated reporting limit(s) due to matrix interference.

Metals By Method SW846 7471B

Matrix: SO **Batch ID:** MP26913

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) FA12814-11DUP, FA12814-11MS, FA12814-11MSD, FA12814-11SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Mercury are outside control limits for sample MP26913-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Wet Chemistry By Method SM19 2540G

Matrix: SO **Batch ID:** GN60366

Sample(s) FA12814-12DUP was used as the QC samples for Solids, Percent.

Matrix: SO **Batch ID:** GN60374

Sample(s) FA12814-11DUP was used as the QC samples for Solids, Percent.

Matrix: SO **Batch ID:** GN60377

Sample(s) FA12814-1DUP was used as the QC samples for Solids, Percent.

Matrix: SO **Batch ID:** GN60388

Sample(s) FA12814-6DUP, FA12814-9DUP were used as the QC samples for Solids, Percent.

Wet Chemistry By Method SW846 3060A/7196A

Matrix: SO **Batch ID:** GN60625

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12814-11DUP, FA12814-11MS were used as the QC samples for Chromium, Hexavalent.

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:

_____

Lovelie Metzgar, QA Officer (signature on file)

Date: March 21, 2014

Summary of Hits

Job Number: FA12814
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 02/25/14 thru 02/26/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA12814-1	**DPT-45 (2-4)**					
No hits reported in this sample.						
FA12814-2	**DPT-45 (2-4)-A**					
No hits reported in this sample.						
FA12814-3	**DPT-53 (8-10)**					
cis-1,2-Dichloroethylene [a]		12.0	3.5	0.69	ug/kg	SW846 8260B
Tetrachloroethylene [a]		938	210	53	ug/kg	SW846 8260B
Trichloroethylene [a]		243	210	43	ug/kg	SW846 8260B
Arsenic		0.52	0.49	0.098	mg/kg	SW846 6010C
Beryllium		0.030 J	0.25	0.025	mg/kg	SW846 6010C
Chromium		7.7	0.49	0.049	mg/kg	SW846 6010C
Copper		1.1 J	1.2	0.049	mg/kg	SW846 6010C
Lead		3.4	0.98	0.079	mg/kg	SW846 6010C
Mercury		0.0067 J	0.043	0.0043	mg/kg	SW846 7471B
Nickel		0.51 J	2.0	0.025	mg/kg	SW846 6010C
Zinc		1.0	0.98	0.15	mg/kg	SW846 6010C
FA12814-4	**DPT-52 (8-10)**					
cis-1,2-Dichloroethylene [a]		8.8	3.0	0.59	ug/kg	SW846 8260B
Tetrachloroethylene [a]		5920	1000	250	ug/kg	SW846 8260B
Trichloroethylene [a]		1070	200	41	ug/kg	SW846 8260B
Arsenic		0.68	0.39	0.078	mg/kg	SW846 6010C
Beryllium		0.031 J	0.20	0.020	mg/kg	SW846 6010C
Chromium		6.7	0.39	0.039	mg/kg	SW846 6010C
Copper		1.0	0.98	0.039	mg/kg	SW846 6010C
Lead		3.6	0.78	0.063	mg/kg	SW846 6010C
Nickel		0.45 J	1.6	0.020	mg/kg	SW846 6010C
Selenium		0.16 J	0.78	0.12	mg/kg	SW846 6010C
Zinc		0.55 J	0.78	0.12	mg/kg	SW846 6010C
FA12814-5	**DPT-52 (8-10)-A**					
cis-1,2-Dichloroethylene		7.5	2.9	0.59	ug/kg	SW846 8260B
Tetrachloroethylene		6400	230	58	ug/kg	SW846 8260B
Trichloroethylene		682	230	47	ug/kg	SW846 8260B
Arsenic		0.43	0.38	0.077	mg/kg	SW846 6010C
Beryllium		0.031 J	0.19	0.019	mg/kg	SW846 6010C
Chromium		5.7	0.38	0.038	mg/kg	SW846 6010C
Copper		0.92 J	0.96	0.038	mg/kg	SW846 6010C

Summary of Hits

Job Number: FA12814
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 02/25/14 thru 02/26/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Lead		3.4	0.77	0.061	mg/kg	SW846 6010C
Mercury		0.0090 J	0.045	0.0045	mg/kg	SW846 7471B
Nickel		0.41 J	1.5	0.019	mg/kg	SW846 6010C
Selenium		0.12 J	0.77	0.12	mg/kg	SW846 6010C
Zinc		0.55 J	0.77	0.12	mg/kg	SW846 6010C
FA12814-6	**DPT-50 (4-6)**					
Tetrachloroethylene [a]		1580000	77000	19000	ug/kg	SW846 8260B
Trichloroethylene [a]		18.6	3.1	0.63	ug/kg	SW846 8260B
bis(2-Ethylhexyl)phthalate		245 J	390	39	ug/kg	SW846 8270D
Arsenic		1.8	0.54	0.11	mg/kg	SW846 6010C
Beryllium		0.064 J	0.27	0.027	mg/kg	SW846 6010C
Chromium		19.6	0.54	0.054	mg/kg	SW846 6010C
Copper		3.9	1.3	0.054	mg/kg	SW846 6010C
Lead		5.9	1.1	0.086	mg/kg	SW846 6010C
Mercury		0.050	0.047	0.0047	mg/kg	SW846 7471B
Nickel		1.1 J	2.1	0.027	mg/kg	SW846 6010C
Selenium		0.52 J	1.1	0.16	mg/kg	SW846 6010C
Silver		0.091 J	0.54	0.035	mg/kg	SW846 6010C
Zinc		1.9	1.1	0.16	mg/kg	SW846 6010C
Chromium, Hexavalent		1.7 J	2.3	1.0	mg/kg	SW846 3060A/7196A
FA12814-7	**DPT-49 (6-8)**					
Acetone [a]		11.4 J	36	11	ug/kg	SW846 8260B
cis-1,2-Dichloroethylene [a]		2.8 J	3.6	0.71	ug/kg	SW846 8260B
Tetrachloroethylene [a]		1200	210	52	ug/kg	SW846 8260B
Trichloroethylene [a]		12.8	3.6	0.73	ug/kg	SW846 8260B
Arsenic		0.48	0.48	0.096	mg/kg	SW846 6010C
Beryllium		0.039 J	0.24	0.024	mg/kg	SW846 6010C
Chromium		8.3	0.48	0.048	mg/kg	SW846 6010C
Copper		1.7	1.2	0.048	mg/kg	SW846 6010C
Lead		4.4	0.96	0.077	mg/kg	SW846 6010C
Mercury		0.020 J	0.044	0.0044	mg/kg	SW846 7471B
Nickel		0.73 J	1.9	0.024	mg/kg	SW846 6010C
Zinc		0.98	0.96	0.14	mg/kg	SW846 6010C
FA12814-8	**DPT-51 (7-9)**					
cis-1,2-Dichloroethylene		159 J	200	41	ug/kg	SW846 8260B
Methylene chloride [b]		167 J	410	160	ug/kg	SW846 8260B
Tetrachloroethylene		36100	20000	5100	ug/kg	SW846 8260B
Trichloroethylene		5960	200	42	ug/kg	SW846 8260B
bis(2-Ethylhexyl)phthalate		357 J	390	39	ug/kg	SW846 8270D

Summary of Hits

Job Number: FA12814
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 02/25/14 thru 02/26/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
2-Methylnaphthalene		920	190	19	ug/kg	SW846 8270D
Phenanthrene		241	190	19	ug/kg	SW846 8270D
Arsenic		0.29 J	0.56	0.11	mg/kg	SW846 6010C
Beryllium		0.033 J	0.28	0.028	mg/kg	SW846 6010C
Cadmium		0.067 J	0.22	0.028	mg/kg	SW846 6010C
Chromium		7.8	0.56	0.056	mg/kg	SW846 6010C
Copper		3.3	1.4	0.056	mg/kg	SW846 6010C
Lead		5.0	1.1	0.089	mg/kg	SW846 6010C
Mercury		0.035 J	0.048	0.0048	mg/kg	SW846 7471B
Nickel		1.6 J	2.2	0.028	mg/kg	SW846 6010C
Zinc		22.6	1.1	0.17	mg/kg	SW846 6010C
FA12814-9	**DPT-57 (6-8)**					
cis-1,2-Dichloroethylene [a]		1.8 J	3.7	0.74	ug/kg	SW846 8260B
Tetrachloroethylene [a]		87.7	3.7	0.94	ug/kg	SW846 8260B
Trichloroethylene [a]		8.3	3.7	0.76	ug/kg	SW846 8260B
Arsenic		0.45 J	0.48	0.097	mg/kg	SW846 6010C
Beryllium		0.034 J	0.24	0.024	mg/kg	SW846 6010C
Chromium		8.7	0.48	0.048	mg/kg	SW846 6010C
Copper		1.4	1.2	0.048	mg/kg	SW846 6010C
Lead		4.0	0.97	0.077	mg/kg	SW846 6010C
Mercury		0.0074 J	0.045	0.0045	mg/kg	SW846 7471B
Nickel		0.61 J	1.9	0.024	mg/kg	SW846 6010C
Selenium		0.17 J	0.97	0.15	mg/kg	SW846 6010C
Zinc		0.62 J	0.97	0.15	mg/kg	SW846 6010C
FA12814-10	**DPT-56 (2-4)**					
Tetrachloroethylene [a]		4.1	3.2	0.80	ug/kg	SW846 8260B
Arsenic		1.2	0.42	0.083	mg/kg	SW846 6010C
Beryllium		0.092 J	0.21	0.021	mg/kg	SW846 6010C
Cadmium		0.025 J	0.17	0.021	mg/kg	SW846 6010C
Chromium		11.2	0.42	0.042	mg/kg	SW846 6010C
Copper		1.8	1.0	0.042	mg/kg	SW846 6010C
Lead		5.0	0.83	0.067	mg/kg	SW846 6010C
Mercury		0.043 J	0.044	0.0044	mg/kg	SW846 7471B
Nickel		1.1 J	1.7	0.021	mg/kg	SW846 6010C
Selenium		0.22 J	0.83	0.12	mg/kg	SW846 6010C
Zinc		0.95	0.83	0.12	mg/kg	SW846 6010C
Chromium, Hexavalent		2.4	2.3	0.97	mg/kg	SW846 3060A/7196A
FA12814-11	**DPT-54 (8-10)**					
cis-1,2-Dichloroethylene		2.4 J	4.6	0.93	ug/kg	SW846 8260B

Summary of Hits

Job Number: FA12814
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 02/25/14 thru 02/26/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Tetrachloroethylene		53.7	4.6	1.2	ug/kg	SW846 8260B
Trichloroethylene		23.0	4.6	0.95	ug/kg	SW846 8260B
Arsenic		1.7	0.50	0.099	mg/kg	SW846 6010C
Beryllium		0.065 J	0.25	0.025	mg/kg	SW846 6010C
Chromium		12.9	0.50	0.050	mg/kg	SW846 6010C
Copper		3.7	1.2	0.050	mg/kg	SW846 6010C
Lead		4.9	0.99	0.080	mg/kg	SW846 6010C
Mercury		0.032 J	0.046	0.0046	mg/kg	SW846 7471B
Nickel		1.1 J	2.0	0.025	mg/kg	SW846 6010C
Selenium		0.36 J	0.99	0.15	mg/kg	SW846 6010C
Silver		0.060 J	0.50	0.032	mg/kg	SW846 6010C
Zinc		1.6	0.99	0.15	mg/kg	SW846 6010C
Chromium, Hexavalent		1.4 J	2.3	0.99	mg/kg	SW846 3060A/7196A
FA12814-12	**DPT-55 (3-5)**					
Acetone		10.5 J	35	10	ug/kg	SW846 8260B
Tetrachloroethylene		6.9	3.5	0.88	ug/kg	SW846 8260B
Arsenic [c]		0.94 J	1.0	0.40	mg/kg	SW846 6010C
Beryllium [c]		0.14 J	0.51	0.10	mg/kg	SW846 6010C
Cadmium [c]		0.20 J	0.40	0.10	mg/kg	SW846 6010C
Chromium [c]		6.7	1.0	0.20	mg/kg	SW846 6010C
Copper [c]		1.6 J	2.5	0.20	mg/kg	SW846 6010C
Lead [c]		3.4	2.0	0.32	mg/kg	SW846 6010C
Mercury		0.028 J	0.043	0.0043	mg/kg	SW846 7471B
Nickel [c]		2.7 J	4.0	0.10	mg/kg	SW846 6010C
Zinc [c]		2.5	2.0	0.60	mg/kg	SW846 6010C

(a) Pre-weighed vials were altered in the field; sample weights are estimated.
(b) Suspected laboratory contaminant.
(c) Elevated reporting limit(s) due to matrix interference.

Southeast ACCUTEST LABORATORIES

4

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: DPT-45 (2-4)
Lab Sample ID: FA12814-1 **Date Sampled:** 02/25/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8260B **Percent Solids:** 88.1
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C097388.D	1	02/27/14	AH	n/a	n/a	VC3894
Run #2							

	Initial Weight
Run #1	8.57 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	33	9.9	ug/kg	
71-43-2	Benzene	ND	3.3	0.66	ug/kg	
75-27-4	Bromodichloromethane	ND	3.3	0.66	ug/kg	
75-25-2	Bromoform	ND	3.3	0.72	ug/kg	
108-90-7	Chlorobenzene	ND	3.3	0.66	ug/kg	
75-00-3	Chloroethane [b]	ND	3.3	1.5	ug/kg	
67-66-3	Chloroform	ND	3.3	0.75	ug/kg	
75-15-0	Carbon disulfide	ND	3.3	0.66	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.3	0.92	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.3	0.66	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.3	0.66	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.3	0.66	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.3	0.66	ug/kg	
124-48-1	Dibromochloromethane	ND	3.3	0.66	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.3	0.66	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.3	0.66	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.3	0.89	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.3	0.66	ug/kg	
100-41-4	Ethylbenzene	ND	3.3	0.66	ug/kg	
591-78-6	2-Hexanone	ND	17	3.2	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	17	3.3	ug/kg	
74-83-9	Methyl bromide	ND	3.3	1.2	ug/kg	
74-87-3	Methyl chloride	ND	3.3	1.3	ug/kg	
75-09-2	Methylene chloride	ND	6.6	2.6	ug/kg	
78-93-3	Methyl ethyl ketone	ND	17	5.0	ug/kg	
100-42-5	Styrene	ND	3.3	0.66	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.3	0.66	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.3	0.93	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.3	1.1	ug/kg	
127-18-4	Tetrachloroethylene	ND	3.3	0.83	ug/kg	
108-88-3	Toluene	ND	3.3	0.66	ug/kg	
79-01-6	Trichloroethylene	ND	3.3	0.68	ug/kg	

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:	DPT-45 (2-4)		
Lab Sample ID:	FA12814-1	**Date Sampled:**	02/25/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8260B	**Percent Solids:**	88.1
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.3	0.68	ug/kg	
1330-20-7	Xylene (total)	ND	9.9	1.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	118%		75-124%
2037-26-5	Toluene-D8	115%		75-126%
460-00-4	4-Bromofluorobenzene	115%		71-133%
17060-07-0	1,2-Dichloroethane-D4	118%		72-135%

(a) Pre-weighed vials were altered in the field; sample weights are estimated.
(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: DPT-45 (2-4)-A
Lab Sample ID: FA12814-2 **Date Sampled:** 02/25/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8260B **Percent Solids:** 86.2
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C097389.D	1	02/27/14	AH	n/a	n/a	VC3894
Run #2							

	Initial Weight
Run #1	9.07 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	32	9.6	ug/kg	
71-43-2	Benzene	ND	3.2	0.64	ug/kg	
75-27-4	Bromodichloromethane	ND	3.2	0.64	ug/kg	
75-25-2	Bromoform	ND	3.2	0.69	ug/kg	
108-90-7	Chlorobenzene	ND	3.2	0.64	ug/kg	
75-00-3	Chloroethane [b]	ND	3.2	1.4	ug/kg	
67-66-3	Chloroform	ND	3.2	0.72	ug/kg	
75-15-0	Carbon disulfide	ND	3.2	0.64	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.2	0.89	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.2	0.64	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.2	0.64	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.2	0.64	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.2	0.64	ug/kg	
124-48-1	Dibromochloromethane	ND	3.2	0.64	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.2	0.64	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.2	0.64	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.2	0.86	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.2	0.64	ug/kg	
100-41-4	Ethylbenzene	ND	3.2	0.64	ug/kg	
591-78-6	2-Hexanone	ND	16	3.1	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	16	3.2	ug/kg	
74-83-9	Methyl bromide	ND	3.2	1.2	ug/kg	
74-87-3	Methyl chloride	ND	3.2	1.3	ug/kg	
75-09-2	Methylene chloride	ND	6.4	2.6	ug/kg	
78-93-3	Methyl ethyl ketone	ND	16	4.8	ug/kg	
100-42-5	Styrene	ND	3.2	0.64	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.2	0.64	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.2	0.90	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.2	1.0	ug/kg	
127-18-4	Tetrachloroethylene	ND	3.2	0.81	ug/kg	
108-88-3	Toluene	ND	3.2	0.64	ug/kg	
79-01-6	Trichloroethylene	ND	3.2	0.65	ug/kg	

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:	DPT-45 (2-4)-A		
Lab Sample ID:	FA12814-2	**Date Sampled:**	02/25/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8260B	**Percent Solids:**	86.2
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.2	0.65	ug/kg	
1330-20-7	Xylene (total)	ND	9.6	1.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	119%		75-124%
2037-26-5	Toluene-D8	116%		75-126%
460-00-4	4-Bromofluorobenzene	121%		71-133%
17060-07-0	1,2-Dichloroethane-D4	122%		72-135%

(a) Pre-weighed vials were altered in the field; sample weights are estimated.
(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: DPT-53 (8-10)
Lab Sample ID: FA12814-3 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8260B **Percent Solids:** 86.8
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C097390.D	1	02/27/14	AH	n/a	n/a	VC3894
Run #2 [a]	C097411.D	1	02/28/14	AH	n/a	n/a	VC3895

	Initial Weight	Methanol Aliquot
Run #1	8.30 g	
Run #2	8.42 g	100 ul

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	35	10	ug/kg	
71-43-2	Benzene	ND	3.5	0.69	ug/kg	
75-27-4	Bromodichloromethane	ND	3.5	0.69	ug/kg	
75-25-2	Bromoform	ND	3.5	0.75	ug/kg	
108-90-7	Chlorobenzene	ND	3.5	0.69	ug/kg	
75-00-3	Chloroethane [b]	ND	3.5	1.6	ug/kg	
67-66-3	Chloroform	ND	3.5	0.78	ug/kg	
75-15-0	Carbon disulfide	ND	3.5	0.69	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.5	0.96	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.5	0.69	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.5	0.69	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.5	0.69	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.5	0.69	ug/kg	
124-48-1	Dibromochloromethane	ND	3.5	0.69	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	12.0	3.5	0.69	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.5	0.69	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.5	0.93	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.5	0.69	ug/kg	
100-41-4	Ethylbenzene	ND	3.5	0.69	ug/kg	
591-78-6	2-Hexanone	ND	17	3.4	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	17	3.5	ug/kg	
74-83-9	Methyl bromide	ND	3.5	1.3	ug/kg	
74-87-3	Methyl chloride	ND	3.5	1.4	ug/kg	
75-09-2	Methylene chloride	ND	6.9	2.8	ug/kg	
78-93-3	Methyl ethyl ketone	ND	17	5.2	ug/kg	
100-42-5	Styrene	ND	3.5	0.69	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.5	0.69	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.5	0.98	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.5	1.1	ug/kg	
127-18-4	Tetrachloroethylene	938 [c]	210	53	ug/kg	
108-88-3	Toluene	ND	3.5	0.69	ug/kg	
79-01-6	Trichloroethylene	243 [c]	210	43	ug/kg	

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:	DPT-53 (8-10)		
Lab Sample ID:	FA12814-3	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8260B	**Percent Solids:**	86.8
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.5	0.71	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	117%	105%	75-124%
2037-26-5	Toluene-D8	106%	107%	75-126%
460-00-4	4-Bromofluorobenzene	106%	102%	71-133%
17060-07-0	1,2-Dichloroethane-D4	122%	108%	72-135%

(a) Pre-weighed vials were altered in the field; sample weights are estimated.
(b) Associated BS recovery outside control limits.
(c) Result is from Run# 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: DPT-53 (8-10)
Lab Sample ID: FA12814-3 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 86.8
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0677171.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	970	190	ug/kg	
95-57-8	2-Chlorophenol	ND	190	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	20	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	21	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	970	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	390	78	ug/kg	
95-48-7	2-Methylphenol	ND	190	19	ug/kg	
	3&4-Methylphenol	ND	190	39	ug/kg	
88-75-5	2-Nitrophenol	ND	190	19	ug/kg	
100-02-7	4-Nitrophenol	ND	970	160	ug/kg	
87-86-5	Pentachlorophenol	ND	970	160	ug/kg	
108-95-2	Phenol	ND	190	19	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	19	ug/kg	
83-32-9	Acenaphthene	ND	190	25	ug/kg	
208-96-8	Acenaphthylene	ND	190	19	ug/kg	
120-12-7	Anthracene	ND	190	19	ug/kg	
56-55-3	Benzo(a)anthracene	ND	190	19	ug/kg	
50-32-8	Benzo(a)pyrene	ND	190	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	21	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	190	39	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	19	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	23	ug/kg	
106-47-8	4-Chloroaniline	ND	190	19	ug/kg	
86-74-8	Carbazole	ND	190	19	ug/kg	
218-01-9	Chrysene	ND	190	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	19	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	19	ug/kg	

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: DPT-53 (8-10)
Lab Sample ID: FA12814-3 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 86.8
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	190	20	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	29	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	22	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	21	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	19	ug/kg	
132-64-9	Dibenzofuran	ND	190	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	390	39	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	190	39	ug/kg	
84-66-2	Diethyl phthalate	ND	390	39	ug/kg	
131-11-3	Dimethyl phthalate	ND	190	39	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	390	39	ug/kg	
206-44-0	Fluoranthene	ND	190	19	ug/kg	
86-73-7	Fluorene	ND	190	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	19	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	19	ug/kg	
78-59-1	Isophorone	ND	190	19	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	19	ug/kg	
88-74-4	2-Nitroaniline	ND	190	39	ug/kg	
99-09-2	3-Nitroaniline	ND	190	39	ug/kg	
100-01-6	4-Nitroaniline	ND	190	39	ug/kg	
91-20-3	Naphthalene	ND	190	19	ug/kg	
98-95-3	Nitrobenzene	ND	190	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	19	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	19	ug/kg	
85-01-8	Phenanthrene	ND	190	19	ug/kg	
129-00-0	Pyrene	ND	190	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	59%		40-102%
4165-62-2	Phenol-d5	69%		41-100%
118-79-6	2,4,6-Tribromophenol	83%		42-108%

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:	DPT-53 (8-10)		
Lab Sample ID:	FA12814-3	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	86.8
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	76%		40-105%
321-60-8	2-Fluorobiphenyl	77%		43-107%
1718-51-0	Terphenyl-d14	91%		45-119%

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: DPT-53 (8-10)
Lab Sample ID: FA12814-3
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 86.8

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.098 U	0.98	0.098	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	0.52	0.49	0.098	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.030 J	0.25	0.025	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.025 U	0.20	0.025	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	7.7	0.49	0.049	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	1.1 J	1.2	0.049	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	3.4	0.98	0.079	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.0067 J	0.043	0.0043	mg/kg	1	03/06/14	03/06/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	0.51 J	2.0	0.025	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.15 U	0.98	0.15	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.032 U	0.49	0.032	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.074 U	0.49	0.074	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	1.0	0.98	0.15	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11433
(2) Instrument QC Batch: MA11436
(3) Prep QC Batch: MP26900
(4) Prep QC Batch: MP26913

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: DPT-53 (8-10)
Lab Sample ID: FA12814-3
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 86.8

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.98 U	2.3	0.98	mg/kg	1	03/14/14 10:45	FN	SW846 3060A/7196A
Solids, Percent	86.8			%	1	02/27/14 16:11	LE	SM19 2540G

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: DPT-52 (8-10)
Lab Sample ID: FA12814-4 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8260B **Percent Solids:** 87.3
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C097391.D	1	02/27/14	AH	n/a	n/a	VC3894
Run #2 [a]	C097428.D	1	02/28/14	AH	n/a	n/a	VC3895
Run #3 [a]	C097416.D	1	02/28/14	AH	n/a	n/a	VC3895

	Initial Weight	Methanol Aliquot
Run #1	9.65 g	
Run #2	8.78 g	20.0 ul
Run #3	8.78 g	100 ul

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	30	8.9	ug/kg	
71-43-2	Benzene	ND	3.0	0.59	ug/kg	
75-27-4	Bromodichloromethane	ND	3.0	0.59	ug/kg	
75-25-2	Bromoform	ND	3.0	0.64	ug/kg	
108-90-7	Chlorobenzene	ND	3.0	0.59	ug/kg	
75-00-3	Chloroethane [b]	ND	3.0	1.3	ug/kg	
67-66-3	Chloroform	ND	3.0	0.67	ug/kg	
75-15-0	Carbon disulfide	ND	3.0	0.59	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.0	0.82	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.0	0.59	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.0	0.59	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.0	0.59	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.0	0.59	ug/kg	
124-48-1	Dibromochloromethane	ND	3.0	0.59	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	8.8	3.0	0.59	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.0	0.59	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.0	0.80	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.0	0.59	ug/kg	
100-41-4	Ethylbenzene	ND	3.0	0.59	ug/kg	
591-78-6	2-Hexanone	ND	15	2.9	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	15	3.0	ug/kg	
74-83-9	Methyl bromide	ND	3.0	1.1	ug/kg	
74-87-3	Methyl chloride	ND	3.0	1.2	ug/kg	
75-09-2	Methylene chloride	ND	5.9	2.4	ug/kg	
78-93-3	Methyl ethyl ketone	ND	15	4.4	ug/kg	
100-42-5	Styrene	ND	3.0	0.59	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.0	0.59	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.0	0.84	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.0	0.96	ug/kg	
127-18-4	Tetrachloroethylene	5920 [c]	1000	250	ug/kg	

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:	DPT-52 (8-10)		
Lab Sample ID:	FA12814-4	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8260B	**Percent Solids:**	87.3
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-88-3	Toluene	ND	3.0	0.59	ug/kg	
79-01-6	Trichloroethylene	1070 [d]	200	41	ug/kg	
75-01-4	Vinyl chloride	ND	3.0	0.61	ug/kg	
1330-20-7	Xylene (total)	ND	8.9	1.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	119%	111%	112%	75-124%
2037-26-5	Toluene-D8	102%	108%	110%	75-126%
460-00-4	4-Bromofluorobenzene	105%	108%	105%	71-133%
17060-07-0	1,2-Dichloroethane-D4	126%	112%	113%	72-135%

(a) Pre-weighed vials were altered in the field; sample weights are estimated.
(b) Associated BS recovery outside control limits.
(c) Result is from Run# 2
(d) Result is from Run# 3

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: DPT-52 (8-10)
Lab Sample ID: FA12814-4 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 87.3
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0677172.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	950	190	ug/kg	
95-57-8	2-Chlorophenol	ND	190	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	20	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	21	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	950	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	380	76	ug/kg	
95-48-7	2-Methylphenol	ND	190	19	ug/kg	
	3&4-Methylphenol	ND	190	38	ug/kg	
88-75-5	2-Nitrophenol	ND	190	19	ug/kg	
100-02-7	4-Nitrophenol	ND	950	150	ug/kg	
87-86-5	Pentachlorophenol	ND	950	150	ug/kg	
108-95-2	Phenol	ND	190	19	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	24	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	19	ug/kg	
83-32-9	Acenaphthene	ND	190	24	ug/kg	
208-96-8	Acenaphthylene	ND	190	19	ug/kg	
120-12-7	Anthracene	ND	190	19	ug/kg	
56-55-3	Benzo(a)anthracene	ND	190	19	ug/kg	
50-32-8	Benzo(a)pyrene	ND	190	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	21	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	190	38	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	19	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	22	ug/kg	
106-47-8	4-Chloroaniline	ND	190	19	ug/kg	
86-74-8	Carbazole	ND	190	19	ug/kg	
218-01-9	Chrysene	ND	190	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	19	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	19	ug/kg	

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: DPT-52 (8-10)
Lab Sample ID: FA12814-4 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 87.3
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	190	20	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	28	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	21	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	21	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	19	ug/kg	
132-64-9	Dibenzofuran	ND	190	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	380	38	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	190	38	ug/kg	
84-66-2	Diethyl phthalate	ND	380	38	ug/kg	
131-11-3	Dimethyl phthalate	ND	190	38	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	380	38	ug/kg	
206-44-0	Fluoranthene	ND	190	19	ug/kg	
86-73-7	Fluorene	ND	190	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	19	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	19	ug/kg	
78-59-1	Isophorone	ND	190	19	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	19	ug/kg	
88-74-4	2-Nitroaniline	ND	190	38	ug/kg	
99-09-2	3-Nitroaniline	ND	190	38	ug/kg	
100-01-6	4-Nitroaniline	ND	190	38	ug/kg	
91-20-3	Naphthalene	ND	190	19	ug/kg	
98-95-3	Nitrobenzene	ND	190	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	19	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	19	ug/kg	
85-01-8	Phenanthrene	ND	190	19	ug/kg	
129-00-0	Pyrene	ND	190	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	72%		40-102%
4165-62-2	Phenol-d5	80%		41-100%
118-79-6	2,4,6-Tribromophenol	94%		42-108%

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:	DPT-52 (8-10)		
Lab Sample ID:	FA12814-4	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	87.3
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	87%		40-105%
321-60-8	2-Fluorobiphenyl	84%		43-107%
1718-51-0	Terphenyl-d14	104%		45-119%

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: DPT-52 (8-10)
Lab Sample ID: FA12814-4
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 87.3

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.078 U	0.78	0.078	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	0.68	0.39	0.078	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.031 J	0.20	0.020	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.020 U	0.16	0.020	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	6.7	0.39	0.039	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	1.0	0.98	0.039	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	3.6	0.78	0.063	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.0045 U	0.045	0.0045	mg/kg	1	03/06/14	03/06/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	0.45 J	1.6	0.020	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.16 J	0.78	0.12	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.025 U	0.39	0.025	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.059 U	0.39	0.059	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	0.55 J	0.78	0.12	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11433
(2) Instrument QC Batch: MA11436
(3) Prep QC Batch: MP26900
(4) Prep QC Batch: MP26913

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: DPT-52 (8-10)
Lab Sample ID: FA12814-4
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 87.3

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.98 U	2.3	0.98	mg/kg	1	03/14/14 10:45	FN	SW846 3060A/7196A
Solids, Percent	87.3			%	1	02/28/14 15:11	LE	SM19 2540G

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:	DPT-52 (8-10)-A		
Lab Sample ID:	FA12814-5	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8260B	**Percent Solids:**	88.7
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C097392.D	1	02/27/14	AH	n/a	n/a	VC3894
Run #2	C097418.D	1	02/28/14	AH	n/a	n/a	VC3895

	Initial Weight	Methanol Aliquot
Run #1	9.58 g	
Run #2	7.09 g	100 ul

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	29	8.8	ug/kg	
71-43-2	Benzene	ND	2.9	0.59	ug/kg	
75-27-4	Bromodichloromethane	ND	2.9	0.59	ug/kg	
75-25-2	Bromoform	ND	2.9	0.64	ug/kg	
108-90-7	Chlorobenzene	ND	2.9	0.59	ug/kg	
75-00-3	Chloroethane [a]	ND	2.9	1.3	ug/kg	
67-66-3	Chloroform	ND	2.9	0.66	ug/kg	
75-15-0	Carbon disulfide	ND	2.9	0.59	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.9	0.82	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2.9	0.59	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	2.9	0.59	ug/kg	
107-06-2	1,2-Dichloroethane	ND	2.9	0.59	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.9	0.59	ug/kg	
124-48-1	Dibromochloromethane	ND	2.9	0.59	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	7.5	2.9	0.59	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.9	0.59	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	2.9	0.79	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.9	0.59	ug/kg	
100-41-4	Ethylbenzene	ND	2.9	0.59	ug/kg	
591-78-6	2-Hexanone	ND	15	2.9	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	15	2.9	ug/kg	
74-83-9	Methyl bromide	ND	2.9	1.1	ug/kg	
74-87-3	Methyl chloride	ND	2.9	1.2	ug/kg	
75-09-2	Methylene chloride	ND	5.9	2.4	ug/kg	
78-93-3	Methyl ethyl ketone	ND	15	4.4	ug/kg	
100-42-5	Styrene	ND	2.9	0.59	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.9	0.59	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.9	0.83	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.9	0.95	ug/kg	
127-18-4	Tetrachloroethylene	6400 [b]	230	58	ug/kg	
108-88-3	Toluene	ND	2.9	0.59	ug/kg	
79-01-6	Trichloroethylene	682 [b]	230	47	ug/kg	

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:	DPT-52 (8-10)-A		
Lab Sample ID:	FA12814-5	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8260B	**Percent Solids:**	88.7
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	2.9	0.60	ug/kg	
1330-20-7	Xylene (total)	ND	8.8	1.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	117%	108%	75-124%
2037-26-5	Toluene-D8	102%	108%	75-126%
460-00-4	4-Bromofluorobenzene	105%	104%	71-133%
17060-07-0	1,2-Dichloroethane-D4	120%	109%	72-135%

(a) Associated BS recovery outside control limits.
(b) Result is from Run# 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: DPT-52 (8-10)-A
Lab Sample ID: FA12814-5 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 88.7
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0677173.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	930	190	ug/kg	
95-57-8	2-Chlorophenol	ND	190	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	19	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	20	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	930	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	370	74	ug/kg	
95-48-7	2-Methylphenol	ND	190	19	ug/kg	
	3&4-Methylphenol	ND	190	37	ug/kg	
88-75-5	2-Nitrophenol	ND	190	19	ug/kg	
100-02-7	4-Nitrophenol	ND	930	150	ug/kg	
87-86-5	Pentachlorophenol	ND	930	150	ug/kg	
108-95-2	Phenol	ND	190	19	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	24	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	19	ug/kg	
83-32-9	Acenaphthene	ND	190	23	ug/kg	
208-96-8	Acenaphthylene	ND	190	19	ug/kg	
120-12-7	Anthracene	ND	190	19	ug/kg	
56-55-3	Benzo(a)anthracene	ND	190	19	ug/kg	
50-32-8	Benzo(a)pyrene	ND	190	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	190	37	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	19	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	22	ug/kg	
106-47-8	4-Chloroaniline	ND	190	19	ug/kg	
86-74-8	Carbazole	ND	190	19	ug/kg	
218-01-9	Chrysene	ND	190	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	19	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	19	ug/kg	

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: DPT-52 (8-10)-A
Lab Sample ID: FA12814-5 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 88.7
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	190	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	28	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	21	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	19	ug/kg	
132-64-9	Dibenzofuran	ND	190	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	370	37	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	190	37	ug/kg	
84-66-2	Diethyl phthalate	ND	370	37	ug/kg	
131-11-3	Dimethyl phthalate	ND	190	37	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	370	37	ug/kg	
206-44-0	Fluoranthene	ND	190	19	ug/kg	
86-73-7	Fluorene	ND	190	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	19	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	19	ug/kg	
78-59-1	Isophorone	ND	190	19	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	19	ug/kg	
88-74-4	2-Nitroaniline	ND	190	37	ug/kg	
99-09-2	3-Nitroaniline	ND	190	37	ug/kg	
100-01-6	4-Nitroaniline	ND	190	37	ug/kg	
91-20-3	Naphthalene	ND	190	19	ug/kg	
98-95-3	Nitrobenzene	ND	190	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	19	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	19	ug/kg	
85-01-8	Phenanthrene	ND	190	19	ug/kg	
129-00-0	Pyrene	ND	190	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	62%		40-102%
4165-62-2	Phenol-d5	69%		41-100%
118-79-6	2,4,6-Tribromophenol	75%		42-108%

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:	DPT-52 (8-10)-A		
Lab Sample ID:	FA12814-5	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	88.7
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	75%		40-105%
321-60-8	2-Fluorobiphenyl	73%		43-107%
1718-51-0	Terphenyl-d14	85%		45-119%

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: DPT-52 (8-10)-A
Lab Sample ID: FA12814-5
Matrix: SO - Soil
Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 88.7
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.077 U	0.77	0.077	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	0.43	0.38	0.077	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.031 J	0.19	0.019	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.019 U	0.15	0.019	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	5.7	0.38	0.038	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	0.92 J	0.96	0.038	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	3.4	0.77	0.061	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.0090 J	0.045	0.0045	mg/kg	1	03/06/14	03/06/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	0.41 J	1.5	0.019	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.12 J	0.77	0.12	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.025 U	0.38	0.025	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.058 U	0.38	0.058	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	0.55 J	0.77	0.12	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11433
(2) Instrument QC Batch: MA11436
(3) Prep QC Batch: MP26900
(4) Prep QC Batch: MP26913

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: DPT-52 (8-10)-A
Lab Sample ID: FA12814-5
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 88.7

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.97 U	2.3	0.97	mg/kg	1	03/14/14 10:45	FN	SW846 3060A/7196A
Solids, Percent	88.7			%	1	02/27/14 14:03	LE	SM19 2540G

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: DPT-50 (4-6)
Lab Sample ID: FA12814-6
Matrix: SO - Soil
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 85.4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C097393.D	1	02/27/14	AH	n/a	n/a	VC3894
Run #2 [a]	C097425.D	10	02/28/14	AH	n/a	n/a	VC3895
Run #3 [a]	C097420.D	10	02/28/14	AH	n/a	n/a	VC3895

	Initial Weight	Methanol Aliquot
Run #1	9.43 g	
Run #2	9.77 g	2.5 ul
Run #3	9.77 g	10.0 ul

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	31	9.3	ug/kg	
71-43-2	Benzene	ND	3.1	0.62	ug/kg	
75-27-4	Bromodichloromethane	ND	3.1	0.62	ug/kg	
75-25-2	Bromoform	ND	3.1	0.67	ug/kg	
108-90-7	Chlorobenzene	ND	3.1	0.62	ug/kg	
75-00-3	Chloroethane [b]	ND	3.1	1.4	ug/kg	
67-66-3	Chloroform	ND	3.1	0.70	ug/kg	
75-15-0	Carbon disulfide	ND	3.1	0.62	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.1	0.86	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.1	0.62	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.1	0.62	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.1	0.62	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.1	0.62	ug/kg	
124-48-1	Dibromochloromethane	ND	3.1	0.62	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.1	0.62	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.1	0.62	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.1	0.83	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.1	0.62	ug/kg	
100-41-4	Ethylbenzene	ND	3.1	0.62	ug/kg	
591-78-6	2-Hexanone	ND	16	3.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	16	3.1	ug/kg	
74-83-9	Methyl bromide	ND	3.1	1.2	ug/kg	
74-87-3	Methyl chloride	ND	3.1	1.2	ug/kg	
75-09-2	Methylene chloride	ND	6.2	2.5	ug/kg	
78-93-3	Methyl ethyl ketone	ND	16	4.7	ug/kg	
100-42-5	Styrene	ND	3.1	0.62	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.1	0.62	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.1	0.88	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.1	1.0	ug/kg	
127-18-4	Tetrachloroethylene	1580000 [c]	77000	19000	ug/kg	

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:	DPT-50 (4-6)		
Lab Sample ID:	FA12814-6	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8260B	**Percent Solids:**	85.4
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-88-3	Toluene	ND	3.1	0.62	ug/kg	
79-01-6	Trichloroethylene	18.6	3.1	0.63	ug/kg	
75-01-4	Vinyl chloride	ND	3.1	0.63	ug/kg	
1330-20-7	Xylene (total)	ND	9.3	1.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	112%	109%	112%	75-124%
2037-26-5	Toluene-D8	98%	106%	109%	75-126%
460-00-4	4-Bromofluorobenzene	102%	104%	102%	71-133%
17060-07-0	1,2-Dichloroethane-D4	120%	107%	111%	72-135%

(a) Pre-weighed vials were altered in the field; sample weights are estimated.
(b) Associated BS recovery outside control limits.
(c) Result is from Run# 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: DPT-50 (4-6)
Lab Sample ID: FA12814-6 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 85.4
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0677174.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	970	190	ug/kg	
95-57-8	2-Chlorophenol	ND	190	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	20	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	21	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	970	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	390	78	ug/kg	
95-48-7	2-Methylphenol	ND	190	19	ug/kg	
	3&4-Methylphenol	ND	190	39	ug/kg	
88-75-5	2-Nitrophenol	ND	190	19	ug/kg	
100-02-7	4-Nitrophenol	ND	970	160	ug/kg	
87-86-5	Pentachlorophenol	ND	970	160	ug/kg	
108-95-2	Phenol	ND	190	19	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	19	ug/kg	
83-32-9	Acenaphthene	ND	190	25	ug/kg	
208-96-8	Acenaphthylene	ND	190	19	ug/kg	
120-12-7	Anthracene	ND	190	19	ug/kg	
56-55-3	Benzo(a)anthracene	ND	190	19	ug/kg	
50-32-8	Benzo(a)pyrene	ND	190	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	21	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	190	39	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	19	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	23	ug/kg	
106-47-8	4-Chloroaniline	ND	190	19	ug/kg	
86-74-8	Carbazole	ND	190	19	ug/kg	
218-01-9	Chrysene	ND	190	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	19	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	19	ug/kg	

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: DPT-50 (4-6)
Lab Sample ID: FA12814-6 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 85.4
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	190	20	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	29	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	22	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	21	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	19	ug/kg	
132-64-9	Dibenzofuran	ND	190	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	390	39	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	190	39	ug/kg	
84-66-2	Diethyl phthalate	ND	390	39	ug/kg	
131-11-3	Dimethyl phthalate	ND	190	39	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	245	390	39	ug/kg	J
206-44-0	Fluoranthene	ND	190	19	ug/kg	
86-73-7	Fluorene	ND	190	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	19	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	19	ug/kg	
78-59-1	Isophorone	ND	190	19	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	19	ug/kg	
88-74-4	2-Nitroaniline	ND	190	39	ug/kg	
99-09-2	3-Nitroaniline	ND	190	39	ug/kg	
100-01-6	4-Nitroaniline	ND	190	39	ug/kg	
91-20-3	Naphthalene	ND	190	19	ug/kg	
98-95-3	Nitrobenzene	ND	190	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	19	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	19	ug/kg	
85-01-8	Phenanthrene	ND	190	19	ug/kg	
129-00-0	Pyrene	ND	190	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	74%		40-102%
4165-62-2	Phenol-d5	79%		41-100%
118-79-6	2,4,6-Tribromophenol	90%		42-108%

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:	DPT-50 (4-6)		
Lab Sample ID:	FA12814-6	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	85.4
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	86%		40-105%
321-60-8	2-Fluorobiphenyl	77%		43-107%
1718-51-0	Terphenyl-d14	94%		45-119%

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: DPT-50 (4-6)
Lab Sample ID: FA12814-6
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 85.4

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.11 U	1.1	0.11	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	1.8	0.54	0.11	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.064 J	0.27	0.027	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.027 U	0.21	0.027	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	19.6	0.54	0.054	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	3.9	1.3	0.054	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	5.9	1.1	0.086	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.050	0.047	0.0047	mg/kg	1	03/06/14	03/06/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	1.1 J	2.1	0.027	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.52 J	1.1	0.16	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.091 J	0.54	0.035	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium [a]	1.6 U	4.4	1.6	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	1.9	1.1	0.16	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11433
(2) Instrument QC Batch: MA11436
(3) Prep QC Batch: MP26900
(4) Prep QC Batch: MP26913

(a) Elevated reporting limit(s) 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: DPT-50 (4-6)
Lab Sample ID: FA12814-6
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 85.4

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	1.7 J	2.3	1.0	mg/kg	1	03/14/14 10:45	FN	SW846 3060A/7196A
Solids, Percent	85.4			%	1	02/28/14 15:11	LE	SM19 2540G

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: DPT-49 (6-8)
Lab Sample ID: FA12814-7
Matrix: SO - Soil
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 88.0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C097412.D	1	02/28/14	AH	n/a	n/a	VC3895
Run #2 [a]	C097422.D	1	02/28/14	AH	n/a	n/a	VC3895

	Initial Weight	Methanol Aliquot
Run #1	7.95 g	
Run #2	8.25 g	100 ul

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	11.4	36	11	ug/kg	J
71-43-2	Benzene	ND	3.6	0.71	ug/kg	
75-27-4	Bromodichloromethane	ND	3.6	0.71	ug/kg	
75-25-2	Bromoform	ND	3.6	0.77	ug/kg	
108-90-7	Chlorobenzene	ND	3.6	0.71	ug/kg	
75-00-3	Chloroethane [b]	ND	3.6	1.6	ug/kg	
67-66-3	Chloroform	ND	3.6	0.81	ug/kg	
75-15-0	Carbon disulfide	ND	3.6	0.71	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.6	0.99	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.6	0.71	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.6	0.71	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.6	0.71	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.6	0.71	ug/kg	
124-48-1	Dibromochloromethane	ND	3.6	0.71	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	2.8	3.6	0.71	ug/kg	J
10061-01-5	cis-1,3-Dichloropropene	ND	3.6	0.71	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.6	0.96	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.6	0.71	ug/kg	
100-41-4	Ethylbenzene	ND	3.6	0.71	ug/kg	
591-78-6	2-Hexanone	ND	18	3.5	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	18	3.6	ug/kg	
74-83-9	Methyl bromide	ND	3.6	1.3	ug/kg	
74-87-3	Methyl chloride	ND	3.6	1.4	ug/kg	
75-09-2	Methylene chloride	ND	7.1	2.9	ug/kg	
78-93-3	Methyl ethyl ketone	ND	18	5.4	ug/kg	
100-42-5	Styrene	ND	3.6	0.71	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.6	0.71	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.6	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.6	1.2	ug/kg	
127-18-4	Tetrachloroethylene	1200 [c]	210	52	ug/kg	
108-88-3	Toluene	ND	3.6	0.71	ug/kg	
79-01-6	Trichloroethylene	12.8	3.6	0.73	ug/kg	

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:	DPT-49 (6-8)		
Lab Sample ID:	FA12814-7	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8260B	**Percent Solids:**	88.0
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.6	0.73	ug/kg	
1330-20-7	Xylene (total)	ND	11	1.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%	107%	75-124%
2037-26-5	Toluene-D8	108%	109%	75-126%
460-00-4	4-Bromofluorobenzene	104%	101%	71-133%
17060-07-0	1,2-Dichloroethane-D4	122%	106%	72-135%

(a) Pre-weighed vials were altered in the field; sample weights are estimated.
(b) Associated BS recovery outside control limits.
(c) Result is from Run# 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: DPT-49 (6-8)
Lab Sample ID: FA12814-7 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 88.0
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0677175.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	930	190	ug/kg	
95-57-8	2-Chlorophenol	ND	190	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	19	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	21	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	930	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	370	75	ug/kg	
95-48-7	2-Methylphenol	ND	190	19	ug/kg	
	3&4-Methylphenol	ND	190	37	ug/kg	
88-75-5	2-Nitrophenol	ND	190	19	ug/kg	
100-02-7	4-Nitrophenol	ND	930	150	ug/kg	
87-86-5	Pentachlorophenol	ND	930	150	ug/kg	
108-95-2	Phenol	ND	190	19	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	24	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	19	ug/kg	
83-32-9	Acenaphthene	ND	190	24	ug/kg	
208-96-8	Acenaphthylene	ND	190	19	ug/kg	
120-12-7	Anthracene	ND	190	19	ug/kg	
56-55-3	Benzo(a)anthracene	ND	190	19	ug/kg	
50-32-8	Benzo(a)pyrene	ND	190	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	190	37	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	19	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	22	ug/kg	
106-47-8	4-Chloroaniline	ND	190	19	ug/kg	
86-74-8	Carbazole	ND	190	19	ug/kg	
218-01-9	Chrysene	ND	190	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	19	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	19	ug/kg	

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: DPT-49 (6-8)
Lab Sample ID: FA12814-7 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 88.0
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	190	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	28	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	21	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	19	ug/kg	
132-64-9	Dibenzofuran	ND	190	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	370	37	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	190	37	ug/kg	
84-66-2	Diethyl phthalate	ND	370	37	ug/kg	
131-11-3	Dimethyl phthalate	ND	190	37	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	370	37	ug/kg	
206-44-0	Fluoranthene	ND	190	19	ug/kg	
86-73-7	Fluorene	ND	190	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	19	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	19	ug/kg	
78-59-1	Isophorone	ND	190	19	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	19	ug/kg	
88-74-4	2-Nitroaniline	ND	190	37	ug/kg	
99-09-2	3-Nitroaniline	ND	190	37	ug/kg	
100-01-6	4-Nitroaniline	ND	190	37	ug/kg	
91-20-3	Naphthalene	ND	190	19	ug/kg	
98-95-3	Nitrobenzene	ND	190	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	19	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	19	ug/kg	
85-01-8	Phenanthrene	ND	190	19	ug/kg	
129-00-0	Pyrene	ND	190	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	61%		40-102%
4165-62-2	Phenol-d5	70%		41-100%
118-79-6	2,4,6-Tribromophenol	85%		42-108%

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:	DPT-49 (6-8)		
Lab Sample ID:	FA12814-7	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	88.0
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	78%		40-105%
321-60-8	2-Fluorobiphenyl	80%		43-107%
1718-51-0	Terphenyl-d14	102%		45-119%

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: DPT-49 (6-8)
Lab Sample ID: FA12814-7
Matrix: SO - Soil
Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 88.0
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.096 U	0.96	0.096	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	0.48	0.48	0.096	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.039 J	0.24	0.024	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.024 U	0.19	0.024	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	8.3	0.48	0.048	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	1.7	1.2	0.048	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	4.4	0.96	0.077	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.020 J	0.044	0.0044	mg/kg	1	03/06/14	03/06/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	0.73 J	1.9	0.024	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.14 U	0.96	0.14	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.031 U	0.48	0.031	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.072 U	0.48	0.072	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	0.98	0.96	0.14	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11433
(2) Instrument QC Batch: MA11436
(3) Prep QC Batch: MP26900
(4) Prep QC Batch: MP26913

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: DPT-49 (6-8)
Lab Sample ID: FA12814-7
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 88.0

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.98 U	2.3	0.98	mg/kg	1	03/14/14 10:45	FN	SW846 3060A/7196A
Solids, Percent	88			%	1	02/27/14 16:11	LE	SM19 2540G

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: DPT-51 (7-9)
Lab Sample ID: FA12814-8
Matrix: SO - Soil
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 84.8

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C097423.D	1	02/28/14	AH	n/a	n/a	VC3895
Run #2	C097424.D	10	02/28/14	AH	n/a	n/a	VC3895

	Initial Weight	Methanol Aliquot
Run #1	9.29 g	100 ul
Run #2	9.29 g	10.0 ul

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	2000	610	ug/kg	
71-43-2	Benzene	ND	200	41	ug/kg	
75-27-4	Bromodichloromethane	ND	200	41	ug/kg	
75-25-2	Bromoform	ND	200	44	ug/kg	
108-90-7	Chlorobenzene	ND	200	41	ug/kg	
75-00-3	Chloroethane [a]	ND	200	92	ug/kg	
67-66-3	Chloroform	ND	200	46	ug/kg	
75-15-0	Carbon disulfide	ND	200	41	ug/kg	
56-23-5	Carbon tetrachloride	ND	200	57	ug/kg	
75-34-3	1,1-Dichloroethane	ND	200	41	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	200	41	ug/kg	
107-06-2	1,2-Dichloroethane	ND	200	41	ug/kg	
78-87-5	1,2-Dichloropropane	ND	200	41	ug/kg	
124-48-1	Dibromochloromethane	ND	200	41	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	159	200	41	ug/kg	J
10061-01-5	cis-1,3-Dichloropropene	ND	200	41	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	200	55	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	200	41	ug/kg	
100-41-4	Ethylbenzene	ND	200	41	ug/kg	
591-78-6	2-Hexanone	ND	1000	200	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	1000	200	ug/kg	
74-83-9	Methyl bromide	ND	200	76	ug/kg	
74-87-3	Methyl chloride	ND	200	81	ug/kg	
75-09-2	Methylene chloride [b]	167	410	160	ug/kg	J
78-93-3	Methyl ethyl ketone	ND	1000	300	ug/kg	
100-42-5	Styrene	ND	200	41	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	200	41	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	200	57	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	200	66	ug/kg	
127-18-4	Tetrachloroethylene	36100 [c]	20000	5100	ug/kg	
108-88-3	Toluene	ND	200	41	ug/kg	
79-01-6	Trichloroethylene	5960	200	42	ug/kg	

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:	DPT-51 (7-9)		
Lab Sample ID:	FA12814-8	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8260B	**Percent Solids:**	84.8
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	42	ug/kg	
1330-20-7	Xylene (total)	ND	610	110	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%	111%	75-124%
2037-26-5	Toluene-D8	117%	107%	75-126%
460-00-4	4-Bromofluorobenzene	103%	106%	71-133%
17060-07-0	1,2-Dichloroethane-D4	110%	108%	72-135%

(a) Associated BS recovery outside control limits.
(b) Suspected laboratory contaminant.
(c) Result is from Run# 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: DPT-51 (7-9)
Lab Sample ID: FA12814-8 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 84.8
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0677176.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	970	190	ug/kg	
95-57-8	2-Chlorophenol	ND	190	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	20	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	21	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	970	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	390	78	ug/kg	
95-48-7	2-Methylphenol	ND	190	19	ug/kg	
	3&4-Methylphenol	ND	190	39	ug/kg	
88-75-5	2-Nitrophenol	ND	190	19	ug/kg	
100-02-7	4-Nitrophenol	ND	970	160	ug/kg	
87-86-5	Pentachlorophenol	ND	970	160	ug/kg	
108-95-2	Phenol	ND	190	19	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	19	ug/kg	
83-32-9	Acenaphthene	ND	190	25	ug/kg	
208-96-8	Acenaphthylene	ND	190	19	ug/kg	
120-12-7	Anthracene	ND	190	19	ug/kg	
56-55-3	Benzo(a)anthracene	ND	190	19	ug/kg	
50-32-8	Benzo(a)pyrene	ND	190	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	21	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	190	39	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	19	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	23	ug/kg	
106-47-8	4-Chloroaniline	ND	190	19	ug/kg	
86-74-8	Carbazole	ND	190	19	ug/kg	
218-01-9	Chrysene	ND	190	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	19	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	19	ug/kg	

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: DPT-51 (7-9)
Lab Sample ID: FA12814-8 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 84.8
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	190	20	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	29	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	22	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	21	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	19	ug/kg	
132-64-9	Dibenzofuran	ND	190	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	390	39	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	190	39	ug/kg	
84-66-2	Diethyl phthalate	ND	390	39	ug/kg	
131-11-3	Dimethyl phthalate	ND	190	39	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	357	390	39	ug/kg	J
206-44-0	Fluoranthene	ND	190	19	ug/kg	
86-73-7	Fluorene	ND	190	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	19	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	19	ug/kg	
78-59-1	Isophorone	ND	190	19	ug/kg	
91-57-6	2-Methylnaphthalene	920	190	19	ug/kg	
88-74-4	2-Nitroaniline	ND	190	39	ug/kg	
99-09-2	3-Nitroaniline	ND	190	39	ug/kg	
100-01-6	4-Nitroaniline	ND	190	39	ug/kg	
91-20-3	Naphthalene	ND	190	19	ug/kg	
98-95-3	Nitrobenzene	ND	190	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	19	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	19	ug/kg	
85-01-8	Phenanthrene	241	190	19	ug/kg	
129-00-0	Pyrene	ND	190	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	72%		40-102%
4165-62-2	Phenol-d5	79%		41-100%
118-79-6	2,4,6-Tribromophenol	86%		42-108%

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:	DPT-51 (7-9)		
Lab Sample ID:	FA12814-8	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	84.8
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	80%		40-105%
321-60-8	2-Fluorobiphenyl	75%		43-107%
1718-51-0	Terphenyl-d14	97%		45-119%

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: DPT-51 (7-9)
Lab Sample ID: FA12814-8
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 84.8

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.11 U	1.1	0.11	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	0.29 J	0.56	0.11	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.033 J	0.28	0.028	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.067 J	0.22	0.028	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	7.8	0.56	0.056	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	3.3	1.4	0.056	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	5.0	1.1	0.089	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.035 J	0.048	0.0048	mg/kg	1	03/06/14	03/06/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	1.6 J	2.2	0.028	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.17 U	1.1	0.17	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.036 U	0.56	0.036	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.083 U	0.56	0.083	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	22.6	1.1	0.17	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11433
(2) Instrument QC Batch: MA11436
(3) Prep QC Batch: MP26900
(4) Prep QC Batch: MP26913

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: DPT-51 (7-9)
Lab Sample ID: FA12814-8
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 84.8

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	1.0 U	2.3	1.0	mg/kg	1	03/14/14 10:45	FN	SW846 3060A/7196A
Solids, Percent	84.8			%	1	02/27/14 14:03	LE	SM19 2540G

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:	DPT-57 (6-8)		
Lab Sample ID:	FA12814-9	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8260B	**Percent Solids:**	89.1
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C097413.D	1	02/28/14	AH	n/a	n/a	VC3895
Run #2							

	Initial Weight
Run #1	7.54 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	37	11	ug/kg	
71-43-2	Benzene	ND	3.7	0.74	ug/kg	
75-27-4	Bromodichloromethane	ND	3.7	0.74	ug/kg	
75-25-2	Bromoform	ND	3.7	0.80	ug/kg	
108-90-7	Chlorobenzene	ND	3.7	0.74	ug/kg	
75-00-3	Chloroethane [b]	ND	3.7	1.7	ug/kg	
67-66-3	Chloroform	ND	3.7	0.84	ug/kg	
75-15-0	Carbon disulfide	ND	3.7	0.74	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.7	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.7	0.74	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.7	0.74	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.7	0.74	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.7	0.74	ug/kg	
124-48-1	Dibromochloromethane	ND	3.7	0.74	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	1.8	3.7	0.74	ug/kg	J
10061-01-5	cis-1,3-Dichloropropene	ND	3.7	0.74	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.7	1.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.7	0.74	ug/kg	
100-41-4	Ethylbenzene	ND	3.7	0.74	ug/kg	
591-78-6	2-Hexanone	ND	19	3.6	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	19	3.7	ug/kg	
74-83-9	Methyl bromide	ND	3.7	1.4	ug/kg	
74-87-3	Methyl chloride	ND	3.7	1.5	ug/kg	
75-09-2	Methylene chloride	ND	7.4	3.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	19	5.6	ug/kg	
100-42-5	Styrene	ND	3.7	0.74	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.7	0.74	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.7	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.7	1.2	ug/kg	
127-18-4	Tetrachloroethylene	87.7	3.7	0.94	ug/kg	
108-88-3	Toluene	ND	3.7	0.74	ug/kg	
79-01-6	Trichloroethylene	8.3	3.7	0.76	ug/kg	

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:	DPT-57 (6-8)		
Lab Sample ID:	FA12814-9	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8260B	**Percent Solids:**	89.1
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.7	0.76	ug/kg	
1330-20-7	Xylene (total)	ND	11	2.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		75-124%
2037-26-5	Toluene-D8	109%		75-126%
460-00-4	4-Bromofluorobenzene	106%		71-133%
17060-07-0	1,2-Dichloroethane-D4	114%		72-135%

(a) Pre-weighed vials were altered in the field; sample weights are estimated.
(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:	DPT-57 (6-8)		
Lab Sample ID:	FA12814-9	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	89.1
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0677177.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	930	190	ug/kg	
95-57-8	2-Chlorophenol	ND	190	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	19	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	20	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	930	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	370	74	ug/kg	
95-48-7	2-Methylphenol	ND	190	19	ug/kg	
	3&4-Methylphenol	ND	190	37	ug/kg	
88-75-5	2-Nitrophenol	ND	190	19	ug/kg	
100-02-7	4-Nitrophenol	ND	930	150	ug/kg	
87-86-5	Pentachlorophenol	ND	930	150	ug/kg	
108-95-2	Phenol	ND	190	19	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	24	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	19	ug/kg	
83-32-9	Acenaphthene	ND	190	23	ug/kg	
208-96-8	Acenaphthylene	ND	190	19	ug/kg	
120-12-7	Anthracene	ND	190	19	ug/kg	
56-55-3	Benzo(a)anthracene	ND	190	19	ug/kg	
50-32-8	Benzo(a)pyrene	ND	190	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	190	37	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	19	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	22	ug/kg	
106-47-8	4-Chloroaniline	ND	190	19	ug/kg	
86-74-8	Carbazole	ND	190	19	ug/kg	
218-01-9	Chrysene	ND	190	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	19	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	19	ug/kg	

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: DPT-57 (6-8)
Lab Sample ID: FA12814-9 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 89.1
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	190	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	28	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	21	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	19	ug/kg	
132-64-9	Dibenzofuran	ND	190	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	370	37	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	190	37	ug/kg	
84-66-2	Diethyl phthalate	ND	370	37	ug/kg	
131-11-3	Dimethyl phthalate	ND	190	37	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	370	37	ug/kg	
206-44-0	Fluoranthene	ND	190	19	ug/kg	
86-73-7	Fluorene	ND	190	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	19	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	19	ug/kg	
78-59-1	Isophorone	ND	190	19	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	19	ug/kg	
88-74-4	2-Nitroaniline	ND	190	37	ug/kg	
99-09-2	3-Nitroaniline	ND	190	37	ug/kg	
100-01-6	4-Nitroaniline	ND	190	37	ug/kg	
91-20-3	Naphthalene	ND	190	19	ug/kg	
98-95-3	Nitrobenzene	ND	190	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	19	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	19	ug/kg	
85-01-8	Phenanthrene	ND	190	19	ug/kg	
129-00-0	Pyrene	ND	190	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	53%		40-102%
4165-62-2	Phenol-d5	62%		41-100%
118-79-6	2,4,6-Tribromophenol	70%		42-108%

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:	DPT-57 (6-8)		
Lab Sample ID:	FA12814-9	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	89.1
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	67%		40-105%
321-60-8	2-Fluorobiphenyl	59%		43-107%
1718-51-0	Terphenyl-d14	83%		45-119%

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: DPT-57 (6-8)
Lab Sample ID: FA12814-9
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 89.1

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.097 U	0.97	0.097	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	0.45 J	0.48	0.097	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.034 J	0.24	0.024	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.024 U	0.19	0.024	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	8.7	0.48	0.048	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	1.4	1.2	0.048	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	4.0	0.97	0.077	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.0074 J	0.045	0.0045	mg/kg	1	03/06/14	03/06/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	0.61 J	1.9	0.024	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.17 J	0.97	0.15	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.031 U	0.48	0.031	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.073 U	0.48	0.073	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	0.62 J	0.97	0.15	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11433
(2) Instrument QC Batch: MA11436
(3) Prep QC Batch: MP26900
(4) Prep QC Batch: MP26913

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: DPT-57 (6-8)
Lab Sample ID: FA12814-9
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 89.1

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.96 U	2.2	0.96	mg/kg	1	03/14/14 10:45	FN	SW846 3060A/7196A
Solids, Percent	89.1			%	1	02/28/14 15:11	LE	SM19 2540G

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:	DPT-56 (2-4)		
Lab Sample ID:	FA12814-10	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8260B	**Percent Solids:**	88.3
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	C097414.D	1	02/28/14	AH	n/a	n/a	VC3895
Run #2							

	Initial Weight
Run #1	8.96 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	32	9.5	ug/kg	
71-43-2	Benzene	ND	3.2	0.63	ug/kg	
75-27-4	Bromodichloromethane	ND	3.2	0.63	ug/kg	
75-25-2	Bromoform	ND	3.2	0.68	ug/kg	
108-90-7	Chlorobenzene	ND	3.2	0.63	ug/kg	
75-00-3	Chloroethane [b]	ND	3.2	1.4	ug/kg	
67-66-3	Chloroform	ND	3.2	0.71	ug/kg	
75-15-0	Carbon disulfide	ND	3.2	0.63	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.2	0.88	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.2	0.63	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.2	0.63	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.2	0.63	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.2	0.63	ug/kg	
124-48-1	Dibromochloromethane	ND	3.2	0.63	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.2	0.63	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.2	0.63	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.2	0.85	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.2	0.63	ug/kg	
100-41-4	Ethylbenzene	ND	3.2	0.63	ug/kg	
591-78-6	2-Hexanone	ND	16	3.1	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	16	3.2	ug/kg	
74-83-9	Methyl bromide	ND	3.2	1.2	ug/kg	
74-87-3	Methyl chloride	ND	3.2	1.3	ug/kg	
75-09-2	Methylene chloride	ND	6.3	2.5	ug/kg	
78-93-3	Methyl ethyl ketone	ND	16	4.7	ug/kg	
100-42-5	Styrene	ND	3.2	0.63	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.2	0.63	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.2	0.89	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.2	1.0	ug/kg	
127-18-4	Tetrachloroethylene	4.1	3.2	0.80	ug/kg	
108-88-3	Toluene	ND	3.2	0.63	ug/kg	
79-01-6	Trichloroethylene	ND	3.2	0.64	ug/kg	

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:	DPT-56 (2-4)		
Lab Sample ID:	FA12814-10	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8260B	**Percent Solids:**	88.3
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.2	0.64	ug/kg	
1330-20-7	Xylene (total)	ND	9.5	1.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		75-124%
2037-26-5	Toluene-D8	108%		75-126%
460-00-4	4-Bromofluorobenzene	105%		71-133%
17060-07-0	1,2-Dichloroethane-D4	117%		72-135%

(a) Pre-weighed vials were altered in the field; sample weights are estimated.
(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: DPT-56 (2-4)
Lab Sample ID: FA12814-10 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 88.3
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0677178.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	950	190	ug/kg	
95-57-8	2-Chlorophenol	ND	190	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	20	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	21	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	950	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	380	76	ug/kg	
95-48-7	2-Methylphenol	ND	190	19	ug/kg	
	3&4-Methylphenol	ND	190	38	ug/kg	
88-75-5	2-Nitrophenol	ND	190	19	ug/kg	
100-02-7	4-Nitrophenol	ND	950	150	ug/kg	
87-86-5	Pentachlorophenol	ND	950	150	ug/kg	
108-95-2	Phenol	ND	190	19	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	19	ug/kg	
83-32-9	Acenaphthene	ND	190	24	ug/kg	
208-96-8	Acenaphthylene	ND	190	19	ug/kg	
120-12-7	Anthracene	ND	190	19	ug/kg	
56-55-3	Benzo(a)anthracene	ND	190	19	ug/kg	
50-32-8	Benzo(a)pyrene	ND	190	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	21	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	190	38	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	19	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	23	ug/kg	
106-47-8	4-Chloroaniline	ND	190	19	ug/kg	
86-74-8	Carbazole	ND	190	19	ug/kg	
218-01-9	Chrysene	ND	190	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	19	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	19	ug/kg	

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: DPT-56 (2-4)
Lab Sample ID: FA12814-10 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 88.3
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	190	20	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	28	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	22	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	21	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	19	ug/kg	
132-64-9	Dibenzofuran	ND	190	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	380	38	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	190	38	ug/kg	
84-66-2	Diethyl phthalate	ND	380	38	ug/kg	
131-11-3	Dimethyl phthalate	ND	190	38	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	380	38	ug/kg	
206-44-0	Fluoranthene	ND	190	19	ug/kg	
86-73-7	Fluorene	ND	190	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	19	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	19	ug/kg	
78-59-1	Isophorone	ND	190	19	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	19	ug/kg	
88-74-4	2-Nitroaniline	ND	190	38	ug/kg	
99-09-2	3-Nitroaniline	ND	190	38	ug/kg	
100-01-6	4-Nitroaniline	ND	190	38	ug/kg	
91-20-3	Naphthalene	ND	190	19	ug/kg	
98-95-3	Nitrobenzene	ND	190	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	19	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	19	ug/kg	
85-01-8	Phenanthrene	ND	190	19	ug/kg	
129-00-0	Pyrene	ND	190	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	56%		40-102%
4165-62-2	Phenol-d5	66%		41-100%
118-79-6	2,4,6-Tribromophenol	76%		42-108%

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:	DPT-56 (2-4)		
Lab Sample ID:	FA12814-10	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	88.3
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	72%		40-105%
321-60-8	2-Fluorobiphenyl	70%		43-107%
1718-51-0	Terphenyl-d14	93%		45-119%

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: DPT-56 (2-4)
Lab Sample ID: FA12814-10
Matrix: SO - Soil
Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 88.3
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.083 U	0.83	0.083	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	1.2	0.42	0.083	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.092 J	0.21	0.021	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.025 J	0.17	0.021	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	11.2	0.42	0.042	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	1.8	1.0	0.042	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	5.0	0.83	0.067	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.043 J	0.044	0.0044	mg/kg	1	03/06/14	03/06/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	1.1 J	1.7	0.021	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.22 J	0.83	0.12	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.027 U	0.42	0.027	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.062 U	0.42	0.062	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	0.95	0.83	0.12	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11433
(2) Instrument QC Batch: MA11436
(3) Prep QC Batch: MP26900
(4) Prep QC Batch: MP26913

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: DPT-56 (2-4)
Lab Sample ID: FA12814-10
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 88.3

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	2.4	2.3	0.97	mg/kg	1	03/14/14 10:45	FN	SW846 3060A/7196A
Solids, Percent	88.3			%	1	02/28/14 15:11	LE	SM19 2540G

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: DPT-54 (8-10)
Lab Sample ID: FA12814-11 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8260B **Percent Solids:** 85.9
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C097403.D	1	02/27/14	AH	n/a	n/a	VC3894
Run #2							

	Initial Weight
Run #1	6.27 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	46	14	ug/kg	
71-43-2	Benzene	ND	4.6	0.93	ug/kg	
75-27-4	Bromodichloromethane	ND	4.6	0.93	ug/kg	
75-25-2	Bromoform	ND	4.6	1.0	ug/kg	
108-90-7	Chlorobenzene	ND	4.6	0.93	ug/kg	
75-00-3	Chloroethane [a]	ND	4.6	2.1	ug/kg	
67-66-3	Chloroform	ND	4.6	1.0	ug/kg	
75-15-0	Carbon disulfide	ND	4.6	0.93	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.6	1.3	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.6	0.93	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	4.6	0.93	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.6	0.93	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.6	0.93	ug/kg	
124-48-1	Dibromochloromethane	ND	4.6	0.93	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	2.4	4.6	0.93	ug/kg	J
10061-01-5	cis-1,3-Dichloropropene	ND	4.6	0.93	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	4.6	1.2	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.6	0.93	ug/kg	
100-41-4	Ethylbenzene	ND	4.6	0.93	ug/kg	
591-78-6	2-Hexanone	ND	23	4.5	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	23	4.6	ug/kg	
74-83-9	Methyl bromide	ND	4.6	1.7	ug/kg	
74-87-3	Methyl chloride	ND	4.6	1.9	ug/kg	
75-09-2	Methylene chloride	ND	9.3	3.7	ug/kg	
78-93-3	Methyl ethyl ketone	ND	23	7.0	ug/kg	
100-42-5	Styrene	ND	4.6	0.93	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.6	0.93	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.6	1.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.6	1.5	ug/kg	
127-18-4	Tetrachloroethylene	53.7	4.6	1.2	ug/kg	
108-88-3	Toluene	ND	4.6	0.93	ug/kg	
79-01-6	Trichloroethylene	23.0	4.6	0.95	ug/kg	

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:	DPT-54 (8-10)		
Lab Sample ID:	FA12814-11	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8260B	**Percent Solids:**	85.9
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	4.6	0.95	ug/kg	
1330-20-7	Xylene (total)	ND	14	2.5	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		75-124%
2037-26-5	Toluene-D8	109%		75-126%
460-00-4	4-Bromofluorobenzene	107%		71-133%
17060-07-0	1,2-Dichloroethane-D4	108%		72-135%

(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: DPT-54 (8-10)
Lab Sample ID: FA12814-11 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 85.9
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0677179.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	980	200	ug/kg	
95-57-8	2-Chlorophenol	ND	200	20	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	200	20	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	200	20	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	200	22	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	980	200	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	390	78	ug/kg	
95-48-7	2-Methylphenol	ND	200	20	ug/kg	
	3&4-Methylphenol	ND	200	39	ug/kg	
88-75-5	2-Nitrophenol	ND	200	20	ug/kg	
100-02-7	4-Nitrophenol	ND	980	160	ug/kg	
87-86-5	Pentachlorophenol	ND	980	160	ug/kg	
108-95-2	Phenol	ND	200	20	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	200	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	200	20	ug/kg	
83-32-9	Acenaphthene	ND	200	25	ug/kg	
208-96-8	Acenaphthylene	ND	200	20	ug/kg	
120-12-7	Anthracene	ND	200	20	ug/kg	
56-55-3	Benzo(a)anthracene	ND	200	20	ug/kg	
50-32-8	Benzo(a)pyrene	ND	200	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	200	20	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	200	20	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	200	21	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	200	20	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	200	39	ug/kg	
100-51-6	Benzyl Alcohol	ND	200	20	ug/kg	
91-58-7	2-Chloronaphthalene	ND	200	23	ug/kg	
106-47-8	4-Chloroaniline	ND	200	20	ug/kg	
86-74-8	Carbazole	ND	200	20	ug/kg	
218-01-9	Chrysene	ND	200	20	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	200	20	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	200	20	ug/kg	

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: DPT-54 (8-10)
Lab Sample ID: FA12814-11 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 85.9
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	200	20	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	200	29	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	200	20	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	200	20	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	200	20	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	200	22	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	200	21	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	200	20	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	200	20	ug/kg	
132-64-9	Dibenzofuran	ND	200	20	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	390	39	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	200	39	ug/kg	
84-66-2	Diethyl phthalate	ND	390	39	ug/kg	
131-11-3	Dimethyl phthalate	ND	200	39	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	390	39	ug/kg	
206-44-0	Fluoranthene	ND	200	20	ug/kg	
86-73-7	Fluorene	ND	200	20	ug/kg	
118-74-1	Hexachlorobenzene	ND	200	20	ug/kg	
87-68-3	Hexachlorobutadiene	ND	200	20	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	200	20	ug/kg	
67-72-1	Hexachloroethane	ND	200	20	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	200	20	ug/kg	
78-59-1	Isophorone	ND	200	20	ug/kg	
91-57-6	2-Methylnaphthalene	ND	200	20	ug/kg	
88-74-4	2-Nitroaniline	ND	200	39	ug/kg	
99-09-2	3-Nitroaniline	ND	200	39	ug/kg	
100-01-6	4-Nitroaniline	ND	200	39	ug/kg	
91-20-3	Naphthalene	ND	200	20	ug/kg	
98-95-3	Nitrobenzene	ND	200	20	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	200	20	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	200	20	ug/kg	
85-01-8	Phenanthrene	ND	200	20	ug/kg	
129-00-0	Pyrene	ND	200	20	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	200	20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	61%		40-102%
4165-62-2	Phenol-d5	69%		41-100%
118-79-6	2,4,6-Tribromophenol	77%		42-108%

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:	DPT-54 (8-10)		
Lab Sample ID:	FA12814-11	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	85.9
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	76%		40-105%
321-60-8	2-Fluorobiphenyl	71%		43-107%
1718-51-0	Terphenyl-d14	90%		45-119%

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: DPT-54 (8-10)
Lab Sample ID: FA12814-11
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 85.9

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.099 U	0.99	0.099	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	1.7	0.50	0.099	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.065 J	0.25	0.025	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.025 U	0.20	0.025	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	12.9	0.50	0.050	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	3.7	1.2	0.050	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	4.9	0.99	0.080	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.032 J	0.046	0.0046	mg/kg	1	03/06/14	03/06/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	1.1 J	2.0	0.025	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.36 J	0.99	0.15	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.060 J	0.50	0.032	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.075 U	0.50	0.075	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	1.6	0.99	0.15	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11433
(2) Instrument QC Batch: MA11436
(3) Prep QC Batch: MP26900
(4) Prep QC Batch: MP26913

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: DPT-54 (8-10)
Lab Sample ID: FA12814-11
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 85.9

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	1.4 J	2.3	0.99	mg/kg	1	03/14/14 10:45	FN	SW846 3060A/7196A
Solids, Percent	85.9			%	1	02/27/14 16:11	LE	SM19 2540G

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: DPT-55 (3-5)
Lab Sample ID: FA12814-12
Matrix: SO - Soil
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 90.8

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C097404.D	1	02/27/14	AH	n/a	n/a	VC3894
Run #2							

	Initial Weight
Run #1	7.89 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	10.5	35	10	ug/kg	J
71-43-2	Benzene	ND	3.5	0.70	ug/kg	
75-27-4	Bromodichloromethane	ND	3.5	0.70	ug/kg	
75-25-2	Bromoform	ND	3.5	0.75	ug/kg	
108-90-7	Chlorobenzene	ND	3.5	0.70	ug/kg	
75-00-3	Chloroethane [a]	ND	3.5	1.6	ug/kg	
67-66-3	Chloroform	ND	3.5	0.79	ug/kg	
75-15-0	Carbon disulfide	ND	3.5	0.70	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.5	0.97	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.5	0.70	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.5	0.70	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.5	0.70	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.5	0.70	ug/kg	
124-48-1	Dibromochloromethane	ND	3.5	0.70	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.5	0.70	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.5	0.70	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.5	0.94	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.5	0.70	ug/kg	
100-41-4	Ethylbenzene	ND	3.5	0.70	ug/kg	
591-78-6	2-Hexanone	ND	17	3.4	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	17	3.5	ug/kg	
74-83-9	Methyl bromide	ND	3.5	1.3	ug/kg	
74-87-3	Methyl chloride	ND	3.5	1.4	ug/kg	
75-09-2	Methylene chloride	ND	7.0	2.8	ug/kg	
78-93-3	Methyl ethyl ketone	ND	17	5.2	ug/kg	
100-42-5	Styrene	ND	3.5	0.70	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.5	0.70	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.5	0.98	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.5	1.1	ug/kg	
127-18-4	Tetrachloroethylene	6.9	3.5	0.88	ug/kg	
108-88-3	Toluene	ND	3.5	0.70	ug/kg	
79-01-6	Trichloroethylene	ND	3.5	0.71	ug/kg	

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:	DPT-55 (3-5)		
Lab Sample ID:	FA12814-12	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8260B	**Percent Solids:**	90.8
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.5	0.71	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		75-124%
2037-26-5	Toluene-D8	109%		75-126%
460-00-4	4-Bromofluorobenzene	105%		71-133%
17060-07-0	1,2-Dichloroethane-D4	117%		72-135%

(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: DPT-55 (3-5)
Lab Sample ID: FA12814-12 **Date Sampled:** 02/26/14
Matrix: SO - Soil **Date Received:** 02/27/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 90.8
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0677182.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415
Run #2							

	Initial Weight	Final Volume
Run #1	29.8 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	920	180	ug/kg	
95-57-8	2-Chlorophenol	ND	180	18	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	18	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	19	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	180	20	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	920	180	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	370	74	ug/kg	
95-48-7	2-Methylphenol	ND	180	18	ug/kg	
	3&4-Methylphenol	ND	180	37	ug/kg	
88-75-5	2-Nitrophenol	ND	180	18	ug/kg	
100-02-7	4-Nitrophenol	ND	920	150	ug/kg	
87-86-5	Pentachlorophenol	ND	920	150	ug/kg	
108-95-2	Phenol	ND	180	18	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	24	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	18	ug/kg	
83-32-9	Acenaphthene	ND	180	23	ug/kg	
208-96-8	Acenaphthylene	ND	180	18	ug/kg	
120-12-7	Anthracene	ND	180	18	ug/kg	
56-55-3	Benzo(a)anthracene	ND	180	18	ug/kg	
50-32-8	Benzo(a)pyrene	ND	180	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	180	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	180	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	180	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	180	18	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	180	37	ug/kg	
100-51-6	Benzyl Alcohol	ND	180	18	ug/kg	
91-58-7	2-Chloronaphthalene	ND	180	22	ug/kg	
106-47-8	4-Chloroaniline	ND	180	18	ug/kg	
86-74-8	Carbazole	ND	180	18	ug/kg	
218-01-9	Chrysene	ND	180	18	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	180	18	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	180	18	ug/kg	

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:	DPT-55 (3-5)		
Lab Sample ID:	FA12814-12	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	90.8
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	180	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	180	28	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	180	18	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	180	18	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	180	18	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	180	21	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	180	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	180	18	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	180	18	ug/kg	
132-64-9	Dibenzofuran	ND	180	18	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	370	37	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	180	37	ug/kg	
84-66-2	Diethyl phthalate	ND	370	37	ug/kg	
131-11-3	Dimethyl phthalate	ND	180	37	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	370	37	ug/kg	
206-44-0	Fluoranthene	ND	180	18	ug/kg	
86-73-7	Fluorene	ND	180	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	180	18	ug/kg	
87-68-3	Hexachlorobutadiene	ND	180	18	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	180	18	ug/kg	
67-72-1	Hexachloroethane	ND	180	18	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	180	18	ug/kg	
78-59-1	Isophorone	ND	180	18	ug/kg	
91-57-6	2-Methylnaphthalene	ND	180	18	ug/kg	
88-74-4	2-Nitroaniline	ND	180	37	ug/kg	
99-09-2	3-Nitroaniline	ND	180	37	ug/kg	
100-01-6	4-Nitroaniline	ND	180	37	ug/kg	
91-20-3	Naphthalene	ND	180	18	ug/kg	
98-95-3	Nitrobenzene	ND	180	18	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	180	18	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	18	ug/kg	
85-01-8	Phenanthrene	ND	180	18	ug/kg	
129-00-0	Pyrene	ND	180	18	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	180	18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	62%		40-102%
4165-62-2	Phenol-d5	69%		41-100%
118-79-6	2,4,6-Tribromophenol	75%		42-108%

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:	DPT-55 (3-5)		
Lab Sample ID:	FA12814-12	**Date Sampled:**	02/26/14
Matrix:	SO - Soil	**Date Received:**	02/27/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	90.8
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	76%		40-105%
321-60-8	2-Fluorobiphenyl	71%		43-107%
1718-51-0	Terphenyl-d14	89%		45-119%

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: DPT-55 (3-5)
Lab Sample ID: FA12814-12
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 90.8

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	0.40 U	2.0	0.40	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic [a]	0.94 J	1.0	0.40	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium [a]	0.14 J	0.51	0.10	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium [a]	0.20 J	0.40	0.10	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium [a]	6.7	1.0	0.20	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper [a]	1.6 J	2.5	0.20	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead [a]	3.4	2.0	0.32	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.028 J	0.043	0.0043	mg/kg	1	03/06/14	03/06/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel [a]	2.7 J	4.0	0.10	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium [a]	0.60 U	2.0	0.60	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver [a]	0.13 U	1.0	0.13	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium [a]	0.30 U	1.0	0.30	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc [a]	2.5	2.0	0.60	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11435
(2) Instrument QC Batch: MA11436
(3) Prep QC Batch: MP26900
(4) Prep QC Batch: MP26913

(a) Elevated reporting limit(s) 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: DPT-55 (3-5)
Lab Sample ID: FA12814-12
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: 90.8

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.94 U	2.2	0.94	mg/kg	1	03/14/14 10:45	FN	SW846 3060A/7196A
Solids, Percent	90.8			%	1	02/27/14 14:03	LE	SM19 2540G

RL = Reporting Limit
MDL = Method Detection Limit

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

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA 12814

AECOM — Chain of Custody and Analytical Request

Page 1 of 1
Project Number: ~~60209713~~ 60314
Chain of Custody Number [1]: 622514-1
LIMS Number:

Project Name / Location: UTC Delavan Spray Technologies St RI / Bamberg, SC
Client Name: UTC
Collected by: LAlexander
Project Manager: Walter Gerald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.)	TCL VOCs (8260B)	Moisture	TCL SVOCs (8270C)	PCBs (8082)	TAL Metals (6010B)	Hex. Chromium (7196A)	COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
DPT-45(2-4)	25-FEB-2014	1600	X	X		2-4 Ft	3	1					S 1	2,3
DPT-45(2-4)-a	25-FEB-2014	1600	X	X		2-4 Ft	3	1					S 2	
DPT-53(8-10)	26-FEB-2014	1410	X	X		8-10	X		X	X	X		S 3	
DPT-52(8-10)		1430	X	X		8-10	X		X	X	X		S 4	
DPT-52(8-10)-a		1430	X	X		8-10	X		X	X	X		S 5	
DPT-50(4-6)		1515	X	X		4-6	X		X	X	X		S 6	
DPT-49(6-8)		1500	X	X		6-8	X		X	X	X		S 7	
DPT-51(7-9)		1550	X	X		7-9	X		X	X	X		S 8	
DPT-57(6-8)		1610	X	X		6-8	X		X	X	X		S 9	
DPT-56(2-4)		1625	X	X		2-4	X		X	X	X		S 10	
DPT-54(8-10)		1640	X	X		8-10	X		X	X	X		S 11	
DPT-54(8-10)-ms/msd		1640	X	X		8-10	X		X	X	X		S 11	
DPT-55(3-5)		1720	X	X		3-5	X		X	X	X		S 12	
Temp blank						LAlexander 02/26/14								

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	LAlexander (AECOM)	2/26/14	1815	FX		09:30
2.	FX			J. Cooper (ACCUTEST)	2.27.14	
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:
Method of Shipment: FEDEX
Analytical Lab: Accutest
Lab Recipient:
Shipped: X
Airbill #: 8047 3475 6246
Location: Orlando, FL
Date:
Time:
8047 3475 6257

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

* TCL VOCs - ~~Preserved - 7 day holding time~~ # 3 VOAs & 1 jar for moisture – VOCs one aqueous & other is composite if no other jars, SVOCs, metals & hex chrom in 1 jar

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

3.8

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

5.1 5

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA 12 814 CLIENT: AECOM PROJECT: UTC DELAWAN

DATE/TIME RECEIVED: 2-27-14 09:30 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

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

AIRBILL NUMBERS: 8017 3475 6257

COOLER INFORMATION

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

TRIP BLANK INFORMATION

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

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.1
- [ ] OBSERVED TEMPS: 4.2
- [ ] CORRECTED TEMPS: 3.8

SAMPLE INFORMATION

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

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

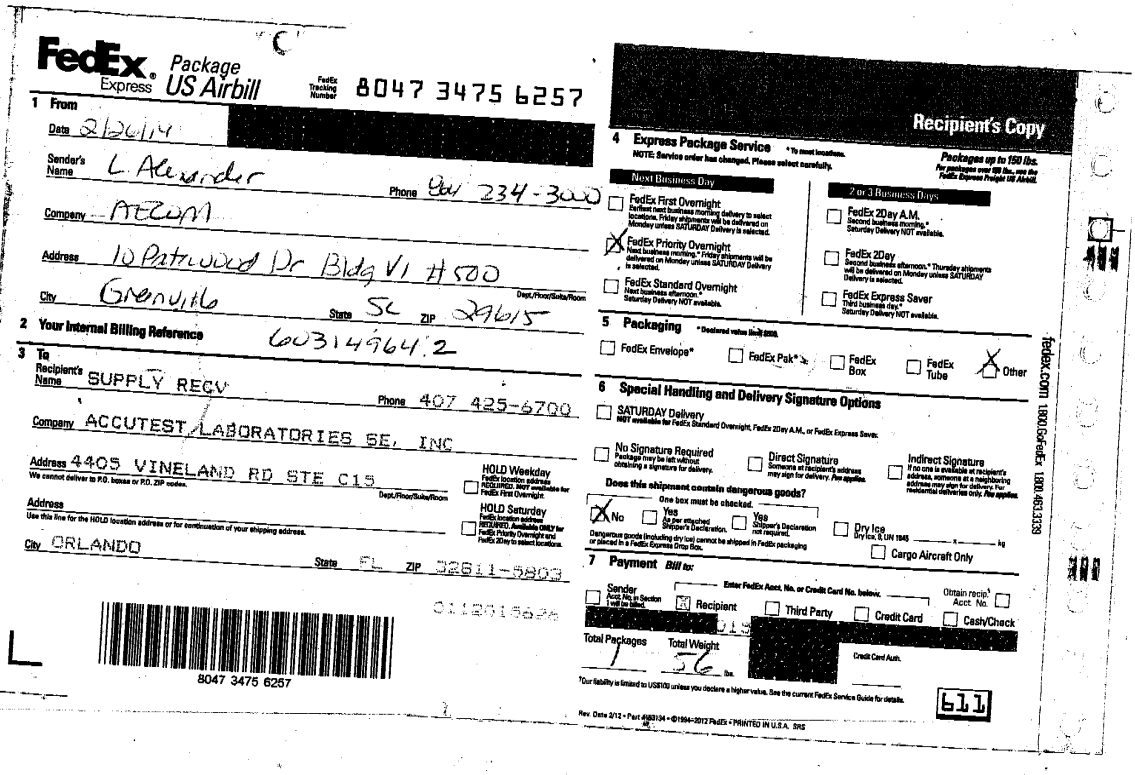
SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE 2-27-14 REVIEWER SIGNATURE/DATE 02/27/14

NF 12/10

receipt confirmation 122910.xls

FA12814: Chain of Custody
Page 2 of 3



FedEx Express Package US Airbill

FedEx Tracking Number 8047 3475 6257

1 From
Date 2/26/14
Sender's Name L Alexander Phone 904 234-3000
Company AECOM
Address 10 Patriot Pond Dr Bldg VI #500
City Greenville State SC ZIP 29615
Dept./Floor/Suite/Room

2 Your Internal Billing Reference 60314964.2

3 To
Recipient's Name SUPPLY RECV Phone 407 425-6700
Company ACCUTEST LABORATORIES SE, INC
Address 4405 VINELAND RD STE C15
We cannot deliver to P.O. boxes or P.O. ZIP codes.
Dept./Floor/Suite/Room
Address
Use this line for the HOLD location address or for continuation of your shipping address.
City ORLANDO State FL ZIP 32811-5803

HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.
HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

8047 3475 6257

Recipient's Copy

4 Express Package Service
NOTE: Service order has changed. Please select carefully.
Packages up to 150 lbs.
For packages over 150 lbs., use the FedEx Express Freight 150 Assist.

Next Business Day
- FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days
- FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.
- FedEx Envelope*
- FedEx Pak*
- FedEx Box
- FedEx Tube
- [X] Other

6 Special Handling and Delivery Signature Options
- SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.
- No Signature Required — Package may be left without obtaining a signature for delivery.
- Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?
One box must be checked.
- [X] No
- Yes — As per attached Shipper's Declaration.
- Yes — Shipper's Declaration not required.
- Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.
- Cargo Aircraft Only

7 Payment Bill to:
- Sender — Acct. No. in Section 4 will be billed.
- [X] Recipient
- Third Party
- Credit Card
- Cash/Check

Enter FedEx Acct. No. or Credit Card No. below.
Obtain recip.† Acct. No.
Total Packages 1
Total Weight 56 lbs.
Credit Card Auth.
†Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.
611

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fedex.com 1.800.GoFedEx 1.800.463.3339

FA12814: Chain of Custody
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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: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC3894-MB	C097387.D	1	02/27/14	AH	n/a	n/a	VC3894

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

FA12814-1, FA12814-2, FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-11, FA12814-12

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	15	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.1	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.3	ug/kg	
67-66-3	Chloroform	ND	5.0	1.1	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	1.0	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.4	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.3	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	
591-78-6	2-Hexanone	ND	25	4.9	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	5.0	ug/kg	
74-83-9	Methyl bromide	ND	5.0	1.9	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.0	ug/kg	
75-09-2	Methylene chloride	ND	10	4.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.4	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.6	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/kg	
108-88-3	Toluene	ND	5.0	1.0	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.7	ug/kg	

Method Blank Summary

Job Number: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC3894-MB	C097387.D	1	02/27/14	AH	n/a	n/a	VC3894

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

FA12814-1, FA12814-2, FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-11, FA12814-12

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	115%	75-124%
2037-26-5	Toluene-D8	107%	75-126%
460-00-4	4-Bromofluorobenzene	105%	71-133%
17060-07-0	1,2-Dichloroethane-D4	115%	72-135%

Method Blank Summary

Job Number: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC3895-MB	C097410.D	1	02/28/14	AH	n/a	n/a	VC3895

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

FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	15	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.1	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.3	ug/kg	
67-66-3	Chloroform	ND	5.0	1.1	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	1.0	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.4	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.3	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	
591-78-6	2-Hexanone	ND	25	4.9	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	5.0	ug/kg	
74-83-9	Methyl bromide	ND	5.0	1.9	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.0	ug/kg	
75-09-2	Methylene chloride	ND	10	4.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.4	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.6	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/kg	
108-88-3	Toluene	ND	5.0	1.0	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.7	ug/kg	

Method Blank Summary

Job Number: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC3895-MB	C097410.D	1	02/28/14	AH	n/a	n/a	VC3895

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

FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	112%	75-124%
2037-26-5	Toluene-D8	109%	75-126%
460-00-4	4-Bromofluorobenzene	104%	71-133%
17060-07-0	1,2-Dichloroethane-D4	113%	72-135%

Blank Spike Summary

Job Number: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC3894-BS	C097386.D	1	02/27/14	AH	n/a	n/a	VC3894

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

FA12814-1, FA12814-2, FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-11, FA12814-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	297	119	61-152
71-43-2	Benzene	50	55.3	111	76-126
75-27-4	Bromodichloromethane	50	59.1	118	74-130
75-25-2	Bromoform	50	55.4	111	76-127
108-90-7	Chlorobenzene	50	56.9	114	81-129
75-00-3	Chloroethane	50	67.7	135*	68-133
67-66-3	Chloroform	50	54.9	110	72-123
75-15-0	Carbon disulfide	50	48.3	97	72-122
56-23-5	Carbon tetrachloride	50	53.8	108	78-133
75-34-3	1,1-Dichloroethane	50	54.6	109	73-125
75-35-4	1,1-Dichloroethylene	50	56.0	112	81-136
107-06-2	1,2-Dichloroethane	50	60.2	120	74-128
78-87-5	1,2-Dichloropropane	50	56.5	113	74-125
124-48-1	Dibromochloromethane	50	57.0	114	76-127
156-59-2	cis-1,2-Dichloroethylene	50	53.3	107	74-126
10061-01-5	cis-1,3-Dichloropropene	50	55.4	111	80-123
156-60-5	trans-1,2-Dichloroethylene	50	53.3	107	70-127
10061-02-6	trans-1,3-Dichloropropene	50	61.5	123	75-131
100-41-4	Ethylbenzene	50	54.6	109	77-123
591-78-6	2-Hexanone	250	298	119	72-133
108-10-1	4-Methyl-2-pentanone	250	296	118	76-132
74-83-9	Methyl bromide	50	56.5	113	65-139
74-87-3	Methyl chloride	50	55.0	110	71-144
75-09-2	Methylene chloride	50	62.1	124	74-137
78-93-3	Methyl ethyl ketone	250	283	113	75-137
100-42-5	Styrene	50	55.7	111	78-125
71-55-6	1,1,1-Trichloroethane	50	53.3	107	70-129
79-34-5	1,1,2,2-Tetrachloroethane	50	56.3	113	71-126
79-00-5	1,1,2-Trichloroethane	50	55.5	111	74-124
127-18-4	Tetrachloroethylene	50	50.4	101	79-130
108-88-3	Toluene	50	54.4	109	76-124
79-01-6	Trichloroethylene	50	53.9	108	75-128
75-01-4	Vinyl chloride	50	55.3	111	76-141
1330-20-7	Xylene (total)	150	167	111	80-129

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC3894-BS	C097386.D	1	02/27/14	AH	n/a	n/a	VC3894

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

FA12814-1, FA12814-2, FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-11, FA12814-12

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	106%	75-124%
2037-26-5	Toluene-D8	111%	75-126%
460-00-4	4-Bromofluorobenzene	107%	71-133%
17060-07-0	1,2-Dichloroethane-D4	114%	72-135%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC3895-BS	C097409.D	1	02/28/14	AH	n/a	n/a	VC3895

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

FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	257	103	61-152
71-43-2	Benzene	50	58.7	117	76-126
75-27-4	Bromodichloromethane	50	59.7	119	74-130
75-25-2	Bromoform	50	48.7	97	76-127
108-90-7	Chlorobenzene	50	58.6	117	81-129
75-00-3	Chloroethane	50	67.3	135*	68-133
67-66-3	Chloroform	50	56.2	112	72-123
75-15-0	Carbon disulfide	50	48.8	98	72-122
56-23-5	Carbon tetrachloride	50	54.1	108	78-133
75-34-3	1,1-Dichloroethane	50	56.0	112	73-125
75-35-4	1,1-Dichloroethylene	50	55.6	111	81-136
107-06-2	1,2-Dichloroethane	50	58.9	118	74-128
78-87-5	1,2-Dichloropropane	50	58.6	117	74-125
124-48-1	Dibromochloromethane	50	56.0	112	76-127
156-59-2	cis-1,2-Dichloroethylene	50	55.9	112	74-126
10061-01-5	cis-1,3-Dichloropropene	50	57.7	115	80-123
156-60-5	trans-1,2-Dichloroethylene	50	54.0	108	70-127
10061-02-6	trans-1,3-Dichloropropene	50	61.1	122	75-131
100-41-4	Ethylbenzene	50	58.0	116	77-123
591-78-6	2-Hexanone	250	260	104	72-133
108-10-1	4-Methyl-2-pentanone	250	267	107	76-132
74-83-9	Methyl bromide	50	56.0	112	65-139
74-87-3	Methyl chloride	50	57.3	115	71-144
75-09-2	Methylene chloride	50	56.0	112	74-137
78-93-3	Methyl ethyl ketone	250	262	105	75-137
100-42-5	Styrene	50	58.8	118	78-125
71-55-6	1,1,1-Trichloroethane	50	55.7	111	70-129
79-34-5	1,1,2,2-Tetrachloroethane	50	53.2	106	71-126
79-00-5	1,1,2-Trichloroethane	50	55.4	111	74-124
127-18-4	Tetrachloroethylene	50	51.5	103	79-130
108-88-3	Toluene	50	57.8	116	76-124
79-01-6	Trichloroethylene	50	55.9	112	75-128
75-01-4	Vinyl chloride	50	58.0	116	76-141
1330-20-7	Xylene (total)	150	179	119	80-129

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC3895-BS	C097409.D	1	02/28/14	AH	n/a	n/a	VC3895

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

FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	75-124%
2037-26-5	Toluene-D8	115%	75-126%
460-00-4	4-Bromofluorobenzene	108%	71-133%
17060-07-0	1,2-Dichloroethane-D4	108%	72-135%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12814-11MS	C097405.D	1	02/27/14	AH	n/a	n/a	VC3894
FA12814-11MSD	C097406.D	1	02/27/14	AH	n/a	n/a	VC3894
FA12814-11	C097403.D	1	02/27/14	AH	n/a	n/a	VC3894

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

FA12814-1, FA12814-2, FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-11, FA12814-12

CAS No.	Compound	FA12814-11 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		171	126	74	169	79	29*	61-152/27
71-43-2	Benzene	ND		34.2	29.1	85	38.6	91	28*	76-126/26
75-27-4	Bromodichloromethane	ND		34.2	28.8	84	38.4	90	29*	74-130/25
75-25-2	Bromoform	ND		34.2	24.6	72*	32.9	77	29*	76-127/26
108-90-7	Chlorobenzene	ND		34.2	28.1	82	37.2	87	28	81-129/29
75-00-3	Chloroethane	ND		34.2	32.0	94	44.2	104	32*	68-133/29
67-66-3	Chloroform	ND		34.2	29.0	85	37.7	89	26	72-123/26
75-15-0	Carbon disulfide	ND		34.2	23.5	69*	31.7	75	30*	72-122/29
56-23-5	Carbon tetrachloride	ND		34.2	26.5	77*	35.4	83	29	78-133/29
75-34-3	1,1-Dichloroethane	ND		34.2	28.9	85	37.1	87	25	73-125/27
75-35-4	1,1-Dichloroethylene	ND		34.2	26.5	77*	35.2	83	28	81-136/28
107-06-2	1,2-Dichloroethane	ND		34.2	29.9	87	39.3	92	27*	74-128/23
78-87-5	1,2-Dichloropropane	ND		34.2	29.6	87	38.5	90	26*	74-125/25
124-48-1	Dibromochloromethane	ND		34.2	27.2	80	36.0	85	28*	76-127/27
156-59-2	cis-1,2-Dichloroethylene	2.4	J	34.2	29.7	80	39.4	87	28*	74-126/26
10061-01-5	cis-1,3-Dichloropropene	ND		34.2	27.8	81	36.6	86	27*	80-123/26
156-60-5	trans-1,2-Dichloroethylene	ND		34.2	26.4	77	34.3	81	26	70-127/27
10061-02-6	trans-1,3-Dichloropropene	ND		34.2	28.3	83	37.6	88	28	75-131/28
100-41-4	Ethylbenzene	ND		34.2	27.0	79	35.7	84	28	77-123/31
591-78-6	2-Hexanone	ND		171	152	89	201	94	28*	72-133/26
108-10-1	4-Methyl-2-pentanone	ND		171	152	89	208	98	31*	76-132/26
74-83-9	Methyl bromide	ND		34.2	27.5	80	36.8	86	29	65-139/31
74-87-3	Methyl chloride	ND		34.2	28.8	84	36.2	85	23	71-144/27
75-09-2	Methylene chloride	ND		34.2	27.3	80	37.1	87	30*	74-137/28
78-93-3	Methyl ethyl ketone	ND		171	145	85	197	93	30*	75-137/25
100-42-5	Styrene	ND		34.2	27.9	82	36.0	85	25	78-125/30
71-55-6	1,1,1-Trichloroethane	ND		34.2	27.9	82	37.6	88	30*	70-129/27
79-34-5	1,1,2,2-Tetrachloroethane	ND		34.2	28.6	84	39.1	92	31*	71-126/30
79-00-5	1,1,2-Trichloroethane	ND		34.2	28.0	82	37.4	88	29*	74-124/28
127-18-4	Tetrachloroethylene	53.7		34.2	51.5	-6*	72.8	45*	34*	79-130/31
108-88-3	Toluene	ND		34.2	27.9	82	37.0	87	28	76-124/30
79-01-6	Trichloroethylene	23.0		34.2	39.1	47*	54.3	74*	33*	75-128/27
75-01-4	Vinyl chloride	ND		34.2	27.9	82	35.3	83	23	76-141/27
1330-20-7	Xylene (total)	ND		103	83.6	81	110	86	27	80-129/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12814-11MS	C097405.D	1	02/27/14	AH	n/a	n/a	VC3894
FA12814-11MSD	C097406.D	1	02/27/14	AH	n/a	n/a	VC3894
FA12814-11	C097403.D	1	02/27/14	AH	n/a	n/a	VC3894

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

FA12814-1, FA12814-2, FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-11, FA12814-12

CAS No.	Surrogate Recoveries	MS	MSD	FA12814-11	Limits
1868-53-7	Dibromofluoromethane	106%	106%	105%	75-124%
2037-26-5	Toluene-D8	112%	113%	109%	75-126%
460-00-4	4-Bromofluorobenzene	108%	108%	107%	71-133%
17060-07-0	1,2-Dichloroethane-D4	108%	107%	108%	72-135%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12814-3MS	C097426.D	1	02/28/14	AH	n/a	n/a	VC3895
FA12814-3MSD	C097427.D	1	02/28/14	AH	n/a	n/a	VC3895
FA12814-3 [a]	C097411.D	1	02/28/14	AH	n/a	n/a	VC3895

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

FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10

CAS No.	Compound	FA12814-3 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		10500	9310	89	9600	92	3	61-152/27
71-43-2	Benzene	ND		2090	2360	113	2140	102	10	76-126/26
75-27-4	Bromodichloromethane	ND		2090	2400	115	2270	109	6	74-130/25
75-25-2	Bromoform	ND		2090	2150	103	2060	99	4	76-127/26
108-90-7	Chlorobenzene	ND		2090	2410	115	2220	106	8	81-129/29
75-00-3	Chloroethane	ND		2090	2260	108	1970	94	14	68-133/29
67-66-3	Chloroform	ND		2090	2280	109	2110	101	8	72-123/26
75-15-0	Carbon disulfide	ND		2090	1580	76	1330	64*	17	72-122/29
56-23-5	Carbon tetrachloride	ND		2090	2060	99	1720	82	18	78-133/29
75-34-3	1,1-Dichloroethane	ND		2090	2220	106	2010	96	10	73-125/27
75-35-4	1,1-Dichloroethylene	ND		2090	1830	88	1550	74*	17	81-136/28
107-06-2	1,2-Dichloroethane	ND		2090	2410	115	2330	111	3	74-128/23
78-87-5	1,2-Dichloropropane	ND		2090	2350	112	2210	106	6	74-125/25
124-48-1	Dibromochloromethane	ND		2090	2350	112	2230	107	5	76-127/27
156-59-2	cis-1,2-Dichloroethylene	ND		2090	2300	110	2130	102	8	74-126/26
10061-01-5	cis-1,3-Dichloropropene	ND		2090	2330	111	2220	106	5	80-123/26
156-60-5	trans-1,2-Dichloroethylene	ND		2090	1980	95	1710	82	15	70-127/27
10061-02-6	trans-1,3-Dichloropropene	ND		2090	2530	121	2360	113	7	75-131/28
100-41-4	Ethylbenzene	ND		2090	2320	111	2030	97	13	77-123/31
591-78-6	2-Hexanone	ND		10500	11700	112	11200	107	4	72-133/26
108-10-1	4-Methyl-2-pentanone	ND		10500	11800	113	11400	109	3	76-132/26
74-83-9	Methyl bromide	ND		2090	2130	102	1900	91	11	65-139/31
74-87-3	Methyl chloride	ND		2090	2310	110	2020	97	13	71-144/27
75-09-2	Methylene chloride	244	J	2090	2110	89	2010	84	5	74-137/28
78-93-3	Methyl ethyl ketone	ND		10500	11200	107	11200	107	0	75-137/25
100-42-5	Styrene	ND		2090	2400	115	2220	106	8	78-125/30
71-55-6	1,1,1-Trichloroethane	ND		2090	2140	102	1800	86	17	70-129/27
79-34-5	1,1,2,2-Tetrachloroethane	ND		2090	2290	110	2240	107	2	71-126/30
79-00-5	1,1,2-Trichloroethane	ND		2090	2350	112	2260	108	4	74-124/28
127-18-4	Tetrachloroethylene	938		2090	2900	94	2530	76*	14	79-130/31
108-88-3	Toluene	ND		2090	2300	110	2050	98	11	76-124/30
79-01-6	Trichloroethylene	243		2090	2430	105	2150	91	12	75-128/27
75-01-4	Vinyl chloride	ND		2090	2330	111	1890	90	21	76-141/27
1330-20-7	Xylene (total)	ND		6270	7150	114	6430	103	11	80-129/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12814-3MS	C097426.D	1	02/28/14	AH	n/a	n/a	VC3895
FA12814-3MSD	C097427.D	1	02/28/14	AH	n/a	n/a	VC3895
FA12814-3 [a]	C097411.D	1	02/28/14	AH	n/a	n/a	VC3895

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

FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10

CAS No.	Surrogate Recoveries	MS	MSD	FA12814-3	Limits
1868-53-7	Dibromofluoromethane	105%	104%	105%	75-124%
2037-26-5	Toluene-D8	115%	113%	107%	75-126%
460-00-4	4-Bromofluorobenzene	107%	108%	102%	71-133%
17060-07-0	1,2-Dichloroethane-D4	109%	108%	108%	72-135%

(a) Pre-weighed vials were altered in the field; sample weights are estimated.

* = 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: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50657-MB	L0677165.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	830	170	ug/kg	
95-57-8	2-Chlorophenol	ND	170	17	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	17	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	17	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	18	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	830	170	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	67	ug/kg	
95-48-7	2-Methylphenol	ND	170	17	ug/kg	
	3&4-Methylphenol	ND	170	33	ug/kg	
88-75-5	2-Nitrophenol	ND	170	17	ug/kg	
100-02-7	4-Nitrophenol	ND	830	130	ug/kg	
87-86-5	Pentachlorophenol	ND	830	130	ug/kg	
108-95-2	Phenol	ND	170	17	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	21	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	17	ug/kg	
83-32-9	Acenaphthene	ND	170	21	ug/kg	
208-96-8	Acenaphthylene	ND	170	17	ug/kg	
120-12-7	Anthracene	ND	170	17	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	18	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	17	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	17	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	20	ug/kg	
106-47-8	4-Chloroaniline	ND	170	17	ug/kg	
86-74-8	Carbazole	ND	170	17	ug/kg	
218-01-9	Chrysene	ND	170	17	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	17	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	17	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	17	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	25	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	170	17	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	17	ug/kg	

Method Blank Summary

Job Number: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50657-MB	L0677165.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	170	17	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	19	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	18	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	170	17	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	17	ug/kg	
132-64-9	Dibenzofuran	ND	170	17	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	330	33	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	170	33	ug/kg	
84-66-2	Diethyl phthalate	ND	330	33	ug/kg	
131-11-3	Dimethyl phthalate	ND	170	33	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	33	ug/kg	
206-44-0	Fluoranthene	ND	170	17	ug/kg	
86-73-7	Fluorene	ND	170	17	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	17	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	17	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	17	ug/kg	
67-72-1	Hexachloroethane	ND	170	17	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	17	ug/kg	
78-59-1	Isophorone	ND	170	17	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	17	ug/kg	
88-74-4	2-Nitroaniline	ND	170	33	ug/kg	
99-09-2	3-Nitroaniline	ND	170	33	ug/kg	
100-01-6	4-Nitroaniline	ND	170	33	ug/kg	
91-20-3	Naphthalene	ND	170	17	ug/kg	
98-95-3	Nitrobenzene	ND	170	17	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	17	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	17	ug/kg	
85-01-8	Phenanthrene	ND	170	17	ug/kg	
129-00-0	Pyrene	ND	170	17	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	170	17	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	70%	40-102%
4165-62-2	Phenol-d5	78%	41-100%

Method Blank Summary

Job Number: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50657-MB	L0677165.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	81%	42-108%
4165-60-0	Nitrobenzene-d5	82%	40-105%
321-60-8	2-Fluorobiphenyl	79%	43-107%
1718-51-0	Terphenyl-d14	103%	45-119%

Blank Spike Summary

Job Number: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50657-BS	L0677164.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
65-85-0	Benzoic Acid	3330	2440	73	36-118
95-57-8	2-Chlorophenol	1670	1170	70	48-104
59-50-7	4-Chloro-3-methyl phenol	1670	1280	77	52-108
120-83-2	2,4-Dichlorophenol	1670	1200	72	51-105
105-67-9	2,4-Dimethylphenol	1670	1300	78	43-96
51-28-5	2,4-Dinitrophenol	3330	2480	74	40-119
534-52-1	4,6-Dinitro-o-cresol	3330	2590	78	64-121
95-48-7	2-Methylphenol	1670	1150	69	46-107
	3&4-Methylphenol	3330	2300	69	44-111
88-75-5	2-Nitrophenol	1670	1230	74	49-104
100-02-7	4-Nitrophenol	3330	2300	69	56-116
87-86-5	Pentachlorophenol	3330	2750	83	61-114
108-95-2	Phenol	1670	1160	70	45-110
95-95-4	2,4,5-Trichlorophenol	1670	1240	74	58-112
88-06-2	2,4,6-Trichlorophenol	1670	1280	77	56-109
83-32-9	Acenaphthene	1670	1330	80	56-109
208-96-8	Acenaphthylene	1670	1310	79	56-106
120-12-7	Anthracene	1670	1300	78	61-110
56-55-3	Benzo(a)anthracene	1670	1300	78	66-111
50-32-8	Benzo(a)pyrene	1670	1270	76	59-104
205-99-2	Benzo(b)fluoranthene	1670	1300	78	67-113
191-24-2	Benzo(g,h,i)perylene	1670	1310	79	67-113
207-08-9	Benzo(k)fluoranthene	1670	1350	81	67-114
101-55-3	4-Bromophenyl phenyl ether	1670	1120	67	62-110
85-68-7	Butyl benzyl phthalate	1670	1240	74	65-113
100-51-6	Benzyl Alcohol	1670	1340	80	53-108
91-58-7	2-Chloronaphthalene	1670	1240	74	53-106
106-47-8	4-Chloroaniline	1670	1080	65	30-115
86-74-8	Carbazole	1670	1310	79	60-111
218-01-9	Chrysene	1670	1350	81	65-112
111-91-1	bis(2-Chloroethoxy)methane	1670	1250	75	48-105
111-44-4	bis(2-Chloroethyl)ether	1670	1090	65	46-103
108-60-1	bis(2-Chloroisopropyl)ether	1670	1130	68	40-110
7005-72-3	4-Chlorophenyl phenyl ether	1670	1190	71	58-106
95-50-1	1,2-Dichlorobenzene	1670	1010	61	44-102
541-73-1	1,3-Dichlorobenzene	1670	995	60	42-100

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50657-BS	L0677164.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
106-46-7	1,4-Dichlorobenzene	1670	1040	62	40-106
121-14-2	2,4-Dinitrotoluene	1670	1210	73	59-109
606-20-2	2,6-Dinitrotoluene	1670	1240	74	61-107
91-94-1	3,3'-Dichlorobenzidine	1670	1130	68	36-114
53-70-3	Dibenzo(a,h)anthracene	1670	1310	79	68-115
132-64-9	Dibenzofuran	1670	1290	77	57-108
84-74-2	Di-n-butyl phthalate	1670	1200	72	63-108
117-84-0	Di-n-octyl phthalate	1670	1330	80	64-119
84-66-2	Diethyl phthalate	1670	1170	70	61-109
131-11-3	Dimethyl phthalate	1670	1160	70	59-108
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1250	75	64-115
206-44-0	Fluoranthene	1670	1310	79	60-108
86-73-7	Fluorene	1670	1340	80	58-109
118-74-1	Hexachlorobenzene	1670	1280	77	59-111
87-68-3	Hexachlorobutadiene	1670	1150	69	41-108
77-47-4	Hexachlorocyclopentadiene	1670	1090	65	49-110
67-72-1	Hexachloroethane	1670	1000	60	40-105
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1200	72	66-116
78-59-1	Isophorone	1670	1240	74	42-89
91-57-6	2-Methylnaphthalene	1670	1260	76	47-106
88-74-4	2-Nitroaniline	1670	1320	79	56-123
99-09-2	3-Nitroaniline	1670	1110	67	41-111
100-01-6	4-Nitroaniline	1670	1240	74	54-113
91-20-3	Naphthalene	1670	1260	76	44-104
98-95-3	Nitrobenzene	1670	1160	70	43-108
621-64-7	N-Nitroso-di-n-propylamine	1670	1220	73	48-108
86-30-6	N-Nitrosodiphenylamine	1670	1390	83	62-110
85-01-8	Phenanthrene	1670	1340	80	63-111
129-00-0	Pyrene	1670	1350	81	65-115
120-82-1	1,2,4-Trichlorobenzene	1670	1080	65	45-100

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	66%	40-102%
4165-62-2	Phenol-d5	73%	41-100%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50657-BS	L0677164.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

CAS No.	Surrogate Recoveries	BSP	Limits
118-79-6	2,4,6-Tribromophenol	80%	42-108%
4165-60-0	Nitrobenzene-d5	70%	40-105%
321-60-8	2-Fluorobiphenyl	75%	43-107%
1718-51-0	Terphenyl-d14	89%	45-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50657-MS	L0677180.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415
OP50657-MSD	L0677181.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415
FA12814-11	L0677179.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

CAS No.	Compound	FA12814-11 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		3920	3200	82	2870	74	11	36-118/41
95-57-8	2-Chlorophenol	ND		1960	1440	73	1240	64	15	48-104/26
59-50-7	4-Chloro-3-methyl phenol	ND		1960	1570	80	1420	73	10	52-108/21
120-83-2	2,4-Dichlorophenol	ND		1960	1360	69	1230	63	10	51-105/27
105-67-9	2,4-Dimethylphenol	ND		1960	1590	81	1460	75	9	43-96/23
51-28-5	2,4-Dinitrophenol	ND		3920	2650	68	2420	62	9	40-119/32
534-52-1	4,6-Dinitro-o-cresol	ND		3920	2840	72	2640	68	7	64-121/29
95-48-7	2-Methylphenol	ND		1960	1520	78	1300	67	16	46-107/24
	3&4-Methylphenol	ND		3920	2910	74	2530	65	14	44-111/24
88-75-5	2-Nitrophenol	ND		1960	1370	70	1280	66	7	49-104/27
100-02-7	4-Nitrophenol	ND		3920	3140	80	2850	73	10	56-116/23
87-86-5	Pentachlorophenol	ND		3920	3630	93	3400	87	7	61-114/23
108-95-2	Phenol	ND		1960	1450	74	1270	65	13	45-110/24
95-95-4	2,4,5-Trichlorophenol	ND		1960	1500	77	1330	68	12	58-112/22
88-06-2	2,4,6-Trichlorophenol	ND		1960	1560	80	1380	71	12	56-109/25
83-32-9	Acenaphthene	ND		1960	1520	78	1430	73	6	56-109/23
208-96-8	Acenaphthylene	ND		1960	1560	80	1420	73	9	56-106/23
120-12-7	Anthracene	ND		1960	1590	81	1460	75	9	61-110/21
56-55-3	Benzo(a)anthracene	ND		1960	1570	80	1460	75	7	66-111/23
50-32-8	Benzo(a)pyrene	ND		1960	1550	79	1430	73	8	59-104/23
205-99-2	Benzo(b)fluoranthene	ND		1960	1480	76	1420	73	4	67-113/24
191-24-2	Benzo(g,h,i)perylene	ND		1960	1640	84	1560	80	5	67-113/21
207-08-9	Benzo(k)fluoranthene	ND		1960	1570	80	1480	76	6	67-114/22
101-55-3	4-Bromophenyl phenyl ether	ND		1960	1280	65	1190	61*	7	62-110/21
85-68-7	Butyl benzyl phthalate	ND		1960	1500	77	1420	73	5	65-113/20
100-51-6	Benzyl Alcohol	ND		1960	1680	86	1490	77	12	53-108/24
91-58-7	2-Chloronaphthalene	ND		1960	1460	74	1280	66	13	53-106/23
106-47-8	4-Chloroaniline	ND		1960	1260	64	1100	57	14	30-115/30
86-74-8	Carbazole	ND		1960	1630	83	1510	78	8	60-111/19
218-01-9	Chrysene	ND		1960	1670	85	1540	79	8	65-112/25
111-91-1	bis(2-Chloroethoxy)methane	ND		1960	1440	73	1360	70	6	48-105/24
111-44-4	bis(2-Chloroethyl)ether	ND		1960	1380	70	1260	65	9	46-103/27
108-60-1	bis(2-Chloroisopropyl)ether	ND		1960	1530	78	1370	70	11	40-110/25
7005-72-3	4-Chlorophenyl phenyl ether	ND		1960	1430	73	1270	65	12	58-106/21
95-50-1	1,2-Dichlorobenzene	ND		1960	1270	65	1140	59	11	44-102/28
541-73-1	1,3-Dichlorobenzene	ND		1960	1250	64	1140	59	9	42-100/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50657-MS	L0677180.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415
OP50657-MSD	L0677181.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415
FA12814-11	L0677179.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

CAS No.	Compound	FA12814-11 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
106-46-7	1,4-Dichlorobenzene	ND		1960	1290	66	1170	60	10	40-106/29
121-14-2	2,4-Dinitrotoluene	ND		1960	1490	76	1380	71	8	59-109/20
606-20-2	2,6-Dinitrotoluene	ND		1960	1480	76	1390	71	6	61-107/22
91-94-1	3,3'-Dichlorobenzidine	ND		1960	1440	73	1350	69	6	36-114/28
53-70-3	Dibenzo(a,h)anthracene	ND		1960	1640	84	1530	79	7	68-115/23
132-64-9	Dibenzofuran	ND		1960	1570	80	1410	72	11	57-108/22
84-74-2	Di-n-butyl phthalate	ND		1960	1510	77	1380	71	9	63-108/19
117-84-0	Di-n-octyl phthalate	ND		1960	1500	77	1420	73	5	64-119/21
84-66-2	Diethyl phthalate	ND		1960	1420	72	1320	68	7	61-109/20
131-11-3	Dimethyl phthalate	ND		1960	1400	71	1290	66	8	59-108/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		1960	1530	78	1430	73	7	64-115/23
206-44-0	Fluoranthene	ND		1960	1600	82	1410	72	13	60-108/25
86-73-7	Fluorene	ND		1960	1580	81	1430	73	10	58-109/21
118-74-1	Hexachlorobenzene	ND		1960	1480	76	1370	70	8	59-111/21
87-68-3	Hexachlorobutadiene	ND		1960	1390	71	1280	66	8	41-108/27
77-47-4	Hexachlorocyclopentadiene	ND		1960	1080	55	992	51	8	49-110/31
67-72-1	Hexachloroethane	ND		1960	1290	66	1150	59	11	40-105/32
193-39-5	Indeno(1,2,3-cd)pyrene	ND		1960	1470	75	1430	73	3	66-116/22
78-59-1	Isophorone	ND		1960	1490	76	1370	70	8	42-89/22
91-57-6	2-Methylnaphthalene	ND		1960	1490	76	1360	70	9	47-106/27
88-74-4	2-Nitroaniline	ND		1960	1680	86	1520	78	10	56-123/24
99-09-2	3-Nitroaniline	ND		1960	1370	70	1310	67	4	41-111/25
100-01-6	4-Nitroaniline	ND		1960	1550	79	1360	70	13	54-113/22
91-20-3	Naphthalene	ND		1960	1480	76	1330	68	11	44-104/27
98-95-3	Nitrobenzene	ND		1960	1410	72	1310	67	7	43-108/25
621-64-7	N-Nitroso-di-n-propylamine	ND		1960	1640	84	1440	74	13	48-108/27
86-30-6	N-Nitrosodiphenylamine	ND		1960	1720	88	1540	79	11	62-110/21
85-01-8	Phenanthrene	ND		1960	1640	84	1500	77	9	63-111/22
129-00-0	Pyrene	ND		1960	1660	85	1490	77	11	65-115/25
120-82-1	1,2,4-Trichlorobenzene	ND		1960	1280	65	1170	60	9	45-100/26

CAS No.	Surrogate Recoveries	MS	MSD	FA12814-11	Limits
367-12-4	2-Fluorophenol	67%	61%	61%	40-102%
4165-62-2	Phenol-d5	77%	70%	69%	41-100%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12814
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50657-MS	L0677180.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415
OP50657-MSD	L0677181.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415
FA12814-11	L0677179.D	1	03/05/14	NAF	02/28/14	OP50657	SL3415

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

CAS No.	Surrogate Recoveries	MS	MSD	FA12814-11	Limits
118-79-6	2,4,6-Tribromophenol	81%	73%	77%	42-108%
4165-60-0	Nitrobenzene-d5	73%	69%	76%	40-105%
321-60-8	2-Fluorobiphenyl	76%	71%	71%	43-107%
1718-51-0	Terphenyl-d14	94%	86%	90%	45-119%

* = 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: FA12814
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26900
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/04/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.75	1.6		
Antimony	1.0	.1	.1	-0.015	<1.0
Arsenic	0.50	.1	.1	-0.070	<0.50
Barium	10	.05	.05		
Beryllium	0.25	.025	.025	0.0	<0.25
Cadmium	0.20	.025	.025	-0.0050	<0.20
Calcium	250	2.5	2.5		
Chromium	0.50	.05	.05	0.015	<0.50
Cobalt	2.5	.025	.025		
Copper	1.3	.05	.05	0.015	<1.3
Iron	15	.85	1.3		
Lead	1.0	.055	.08	0.025	<1.0
Magnesium	250	2.5	2.5		
Manganese	0.75	.025	.025		
Molybdenum	2.5	.025	.03		
Nickel	2.0	.025	.025	0.015	<2.0
Potassium	500	10	10		
Selenium	1.0	.12	.15	0.030	<1.0
Silver	0.50	.033	.033	-0.010	<0.50
Sodium	500	25	25		
Strontium	0.50	.02	.025		
Thallium	0.50	.075	.075	-0.055	<0.50
Tin	2.5	.035	.035		
Titanium	0.50	.045	.045		
Vanadium	2.5	.025	.025		
Zinc	1.0	.15	.15	0.13	<1.0

Associated samples MP26900: FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

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: FA12814
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26900
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date:			03/04/14					03/04/14	
Metal	FA12814-11 Original	DUP	RPD	QC Limits	FA12814-11 Original	MS	Spikelot MPFLICP2 % Rec		QC Limits
Aluminum									
Antimony	0.0	0.0	NC	0-20	0.0	7.7	26.9	28.6N(b)	80-120
Arsenic	1.7	1.3	26.7 (a)	0-20	1.7	83.1	108	75.5N(b)	80-120
Barium									
Beryllium	0.065	0.054	18.5	0-20	0.065	2.5	2.69	90.4	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	2.3	2.69	85.4	80-120
Calcium									
Chromium	12.9	11.3	13.2	0-20	12.9	19.3	10.8	59.4N(b)	80-120
Cobalt									
Copper	3.7	3.0	20.9 (a)	0-20	3.7	15.0	13.5	83.9	80-120
Iron									
Lead	4.9	4.3	13.0	0-20	4.9	28.6	26.9	87.9	80-120
Magnesium									
Manganese									
Molybdenum									
Nickel	1.1	1.0	9.5	0-20	1.1	24.7	26.9	87.6	80-120
Potassium									
Selenium	0.36	0.34	5.7	0-20	0.36	81.7	108	75.5N(b)	80-120
Silver	0.060	0.0	200.0(a)	0-20	0.060	2.4	2.69	86.8	80-120
Sodium									
Strontium									
Thallium	0.0	0.0	NC	0-20	0.0	95.7	108	88.8	80-120
Tin									
Titanium									
Vanadium									
Zinc	1.6	1.8	11.8	0-20	1.6	24.9	26.9	86.5	80-120

Associated samples MP26900: FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.
(b) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA12814
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26900 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/04/14

Metal	FA12814-11 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.0	5.7	26	21.9N(a)	29.9 (b)	20
Arsenic	1.7	70.1	104	65.8N(a)	17.0	20
Barium						
Beryllium	0.065	2.4	2.6	89.9	4.1	20
Cadmium	0.0	2.2	2.6	84.7	4.4	20
Calcium						
Chromium	12.9	25.9	10.4	125.1N(a	29.2 (b)	20
Cobalt						
Copper	3.7	16.9	13	101.6	11.9	20
Iron						
Lead	4.9	28.5	26	90.8	0.4	20
Magnesium						
Manganese						
Molybdenum						
Nickel	1.1	23.5	26	86.2	5.0	20
Potassium						
Selenium	0.36	63.1	104	60.4N(a)	25.7 (b)	20
Silver	0.060	2.3	2.6	86.2	4.3	20
Sodium						
Strontium						
Thallium	0.0	88.8	104	85.4	7.5	20
Tin						
Titanium						
Vanadium						
Zinc	1.6	23.5	26	84.3	5.8	20

Associated samples MP26900: FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

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) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.
(b) High RPD due to possible sample non-homogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12814
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26900
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/04/14

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum				
Antimony	25.5	25	102.0	80-120
Arsenic	97.6	100	97.6	80-120
Barium				
Beryllium	2.5	2.5	100.0	80-120
Cadmium	2.4	2.5	96.0	80-120
Calcium				
Chromium	9.9	10	99.0	80-120
Cobalt				
Copper	13.1	12.5	104.8	80-120
Iron				
Lead	23.3	25	93.2	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel	25.5	25	102.0	80-120
Potassium				
Selenium	97.3	100	97.3	80-120
Silver	2.4	2.5	96.0	80-120
Sodium				
Strontium				
Thallium	92.7	100	92.7	80-120
Tin				
Titanium				
Vanadium				
Zinc	23.9	25	95.6	80-120

Associated samples MP26900: FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12814
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26900
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/04/14

Metal	FA12814-11 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	0.00	0.00	NC	0-10
Arsenic	33.9	39.9	17.7 (a)	0-10
Barium				
Beryllium	1.30	0.00	100.0(a)	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	260	296	13.6*(b)	0-10
Cobalt				
Copper	75.2	87.5	16.4*(b)	0-10
Iron				
Lead	97.9	102	4.5	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	22.6	26.2	15.9 (a)	0-10
Potassium				
Selenium	7.20	13.6	88.9 (a)	0-10
Silver	1.20	0.00	100.0(a)	0-10
Sodium				
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium				
Zinc	32.0	40.8	27.5 (a)	0-10

Associated samples MP26900: FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

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).
(b) Serial dilution indicates possible matrix interference.

POST DIGESTATE SPIKE SUMMARY

Login Number: FA12814
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26900
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/04/14

Metal	Sample ml	Final ml	FA12814-11 Raw	FA12814-11 Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10			90.8	0.2	5	100	90.8	80-120
Arsenic	9.8	10	33.9	33.222	126	0.2	5	100	92.8	80-120
Barium										
Beryllium	9.8	10	1.3	1.274	50.5	0.2	2.5	50	98.5	80-120
Cadmium	9.8	10			46.5	0.2	2.5	50	93.0	80-120
Calcium										
Chromium	9.8	10	260.1	254.898	302.2	0.2	2.5	50	94.6	80-120
Cobalt										
Copper	9.8	10	75.2	73.696	176.7	0.2	5	100	103.0	80-120
Iron										
Lead	9.8	10	97.9	95.942	146.1	0.2	2.5	50	100.3	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel	9.8	10	22.6	22.148	117.2	0.2	5	100	95.1	80-120
Potassium										
Selenium	9.8	10	7.2	7.056	97	0.2	5	100	89.9	80-120
Silver	9.8	10	1.2	1.176	48.3	0.2	2.5	50	94.2	80-120
Sodium										
Strontium										
Thallium	9.8	10			87.5	0.2	5	100	87.5	80-120
Tin										
Titanium										
Vanadium										
Zinc	9.8	10	32	31.36	261.5	0.2	12.5	250	92.1	80-120

Associated samples MP26900: FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA12814
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26913 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/06/14

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.042	.0025	.0042	-0.0030	<0.042

Associated samples MP26913: FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

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: FA12814
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26913
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 03/06/14 03/06/14

Metal	FA12814-11 Original	DUP	RPD	QC Limits	FA12814-11 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.032	0.031	3.2	0-20	0.032	0.30	0.261	102.8	80-120

Associated samples MP26913: FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

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: FA12814
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26913 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/06/14

Metal	FA12814-11 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.032	0.33	0.273	109.2	9.5	20

Associated samples MP26913: FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12814
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26913
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 03/06/14

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.23	0.25	92.0	80-120

Associated samples MP26913: FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12814
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26913 Methods: SW846 7471B
Matrix Type: SOLID Units: ug/l

Prep Date: 03/06/14

	FA12814-11			QC
Metal	Original	SDL 1:5	%DIF	Limits
Mercury	0.345	0.00	100.0(a)	0-10

Associated samples MP26913: FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Southeast ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

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

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA12814
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
Chromium, Hexavalent	GN60625	2.0	0.0	mg/kg	20.0	19.7	98.3	75-125%

Associated Samples:
Batch GN60625: FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA12814
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
Chromium, Hexavalent	GN60625	FA12814-11	mg/kg	1.4	1.2	12.1	0-20%
Solids, Percent	GN60366	FA12814-12	%	90.8	90.9	0.1	0-5%
Solids, Percent	GN60374	FA12814-11	%	85.9	85.7	0.2	0-5%
Solids, Percent	GN60377	FA12814-1	%	88.1	89.8	1.9	0-5%
Solids, Percent	GN60388	FA12814-9	%	89.1	89	0.1	0-5%
Solids, Percent	GN60388	FA12814-6	%	85.4	85.5	0.1	0-5%

Associated Samples:
Batch GN60366: FA12814-5, FA12814-8, FA12814-12
Batch GN60374: FA12814-3, FA12814-7, FA12814-11
Batch GN60377: FA12814-1, FA12814-2
Batch GN60388: FA12814-4, FA12814-6, FA12814-9, FA12814-10
Batch GN60625: FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA12814
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
Chromium, Hexavalent	GN60625	FA12814-11	mg/kg	1.4	657.6	740	112.4	75-125%
Chromium, Hexavalent	GN60625	FA12814-11	mg/kg	1.4	23.3	27.7	113.2	75-125%

Associated Samples:
Batch GN60625: FA12814-3, FA12814-4, FA12814-5, FA12814-6, FA12814-7, FA12814-8, FA12814-9, FA12814-10, FA12814-11, FA12814-12
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Southeast
ACCUTEST LABORATORIES

03/17/14

Technical Report for

United Technologies Corporation

AECOMSCG: Delavan Spray Technologies; Bamberg, SC

60314964

Accutest Job Number: FA12815

Sampling Dates: 02/25/14 - 02/26/14

Report to:

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Total number of pages in report: **124**

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

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Heather Wandrey 407-425-6700

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Sample Summary

United Technologies Corporation

Job No: FA12815

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA12815-1	02/25/14	14:20	LA	02/27/14	AQ	Ground Water	MW-15D
FA12815-1D	02/25/14	14:20	LA	02/27/14	AQ	Water Dup/MSD	MW-15D
FA12815-1S	02/25/14	14:20	LA	02/27/14	AQ	Water Matrix Spike	MW-15D
FA12815-2	02/25/14	16:30	LA	02/27/14	AQ	Ground Water	MW-15
FA12815-3	02/25/14	17:00	LA	02/27/14	AQ	Ground Water	MW-2
FA12815-4	02/25/14	17:00	LA	02/27/14	AQ	Ground Water	MW-2-A
FA12815-5	02/25/14	15:37	LA	02/27/14	AQ	Ground Water	MW-15D1
FA12815-6	02/25/14	14:20	LA	02/27/14	AQ	Ground Water	MW-15D-C
FA12815-7	02/26/14	10:25	LA	02/27/14	AQ	Ground Water	MW-1
FA12815-8	02/26/14	10:25	LA	02/27/14	AQ	Ground Water	MW-1-A
FA12815-9	02/26/14	09:35	LA	02/27/14	AQ	Ground Water	MW-14
FA12815-10	02/26/14	10:45	LA	02/27/14	AQ	Ground Water	MW-14D
FA12815-11	02/26/14	15:30	LA	02/27/14	AQ	Ground Water	DPT-57 (6-8)-D

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: United Technologies Corporation **Job No:** FA12815

Site: AECOMSCG: Delavan Spray Technologies; Bamberg, SC **Report Date** 3/6/2014 11:05:14 AM

11 Samples were collected between 02/25/2014 and 02/26/2014 and were received at Accutest SE on 02/27/2014 properly preserved, at 3.6 Deg. C and intact. These Samples received an Accutest job number of FA12815. 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:** VB3935

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12653-3MS, FA12653-3MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Methyl bromide are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

RPD(s) for MSD for Methyl bromide are outside control limits for sample FA12653-3MSD. Probable cause is due to sample non-homogeneity.

FA12815-11: Sample was not preserved to a pH < 2.

Matrix: AQ **Batch ID:** VI322

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12886-4MS, FA12886-4MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Methyl chloride are outside control limits. Blank Spike recovery is biased high. Analyte is non-detect in associated samples; therefore data integrity is not compromised.

Matrix Spike Recovery(s) for trans-1,3-Dichloropropene are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for cis-1,3-Dichloropropene, Methyl chloride, trans-1,3-Dichloropropene are outside control limits. Probable cause is due to matrix interference.

FA12815-8: Sample was not preserved to a pH < 2.

FA12815-9: Sample was not preserved to a pH < 2.

FA12815-10: Sample was not preserved to a pH < 2.

FA12815-8 for Methyl chloride: Associated BS recovery outside control limits.

FA12815-9 for Methyl chloride: Associated BS recovery outside control limits.

FA12815-10 for Methyl chloride: Associated BS recovery outside control limits.

Matrix: AQ **Batch ID:** VI324

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12815-1MS, FA12815-1MSD were used as the QC samples indicated.

Matrix Spike Duplicate Recovery(s) for Methyl chloride are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

RPD(s) for MSD for 2-Hexanone, 4-Methyl-2-pentanone, Acetone, Methyl ethyl ketone are outside control limits for sample FA12815-1MSD. Probable cause is due to sample non-homogeneity.

FA12815-1: Sample was not preserved to a pH < 2.

Matrix: AQ **Batch ID:** VZ921

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12815-1MS was used as the QC samples indicated.

VZ921-BS: No MSD available for this run.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** VZ921

FA12815-2: Sample was not preserved to a pH < 2.

FA12815-3: Sample was not preserved to a pH < 2.

FA12815-4: Sample was not preserved to a pH < 2.

FA12815-5: Sample was not preserved to a pH < 2.

FA12815-6: Sample was not preserved to a pH < 2.

FA12815-7: Sample was not preserved to a pH < 2.

FA12815-1: Confirmation run.

FA12815-7 for Methylene chloride: Suspected laboratory contaminant.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ **Batch ID:** OP50659

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) FA12826-4MS, FA12826-4MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for 4-Bromophenyl phenyl ether, Di-n-octyl phthalate are outside control limits. Sporadic marginal failure, within limits in MS/MSD.

FA12815-7 for 4-Bromophenyl phenyl ether: Associated BS recovery outside control limits.

FA12815-7 for Di-n-octyl phthalate: Associated BS recovery outside control limits.

FA12815-8 for 4-Bromophenyl phenyl ether: Associated BS recovery outside control limits.

FA12815-8 for Di-n-octyl phthalate: Associated BS recovery outside control limits.

Matrix: AQ **Batch ID:** OP50665

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) FA12867-3AMS, FA12867-3AMSD were used as the QC samples indicated.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for 3,3'-Dichlorobenzidine, Pentachlorophenol are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

RPD(s) for MSD for 3,3'-Dichlorobenzidine are outside control limits for sample OP50665-MSD. Probable cause is due to sample non-homogeneity.

Volatiles by GC By Method RSKSOP-147/175

Matrix: AQ **Batch ID:** GFF905

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12791-1MS, FA12791-2DUP were used as the QC samples indicated.

Matrix: AQ **Batch ID:** GFF906

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12856-5DUP, FA12856-6MS were used as the QC samples indicated.

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** MP26894

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) FA12853-1DUP, FA12853-1MS, FA12853-1MSD, FA12853-1PS, FA12853-1SDL were used as the QC samples for metals.

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** MP26894

RPD(s) for Duplicate for Copper are outside control limits for sample MP26894-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Copper, Zinc are outside control limits for sample MP26894-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 7470A

Matrix: AQ **Batch ID:** MP26905

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) FA12934-1DUP, FA12934-1MS, FA12934-1MSD, FA12934-1SDL were used as the QC samples for metals.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP23547

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) FA12815-7MS, FA12815-7MSD were used as the QC samples for Chloride, Nitrogen, Nitrate, Nitrogen, Nitrite, Sulfate.

Matrix Spike Recovery(s) for Nitrogen, Nitrite, Sulfate are outside control limits. Spike recovery indicates possible matrix interference. For method performance in a clean matrix, refer to Blank Spike.

Wet Chemistry By Method SM5310 B-11/SW9060A

Matrix: AQ **Batch ID:** GP23546

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) FA12815-7DUP, FA12815-7MS were used as the QC samples for Total Organic Carbon.

Wet Chemistry By Method SW846 7196A

Matrix: AQ **Batch ID:** GN60367

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12815-11MS, FA12815-11MSD were used as the QC samples for Chromium, Hexavalent.

GN60367-S1 for Chromium, Hexavalent: Spike recovery indicates possible matrix interference.

FA12815-11: Matrix interference also supported by Total Chromium (SW-846 6010C) results being lower than Hexavalent Chromium.

Total Chromium represents absolute maximum possible concentration of all species of Chromium present in the sample, and it could be concluded that maximum possible Hexavalent Chromium result can not exceed that of Total Chromium.

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: March 6, 2014

Lovelie Metzgar, QA Officer (signature on file)

Summary of Hits

Job Number: FA12815
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 02/25/14 thru 02/26/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA12815-1	**MW-15D**					
Carbon disulfide [a]		0.24 J	2.0	0.20	ug/l	SW846 8260B
FA12815-2	**MW-15**					
No hits reported in this sample.						
FA12815-3	**MW-2**					
Tetrachloroethylene [a]		1.6	1.0	0.26	ug/l	SW846 8260B
FA12815-4	**MW-2-A**					
Tetrachloroethylene [a]		1.5	1.0	0.26	ug/l	SW846 8260B
FA12815-5	**MW-15D1**					
No hits reported in this sample.						
FA12815-6	**MW-15D-C**					
No hits reported in this sample.						
FA12815-7	**MW-1**					
cis-1,2-Dichloroethylene [a]		110	20	6.5	ug/l	SW846 8260B
Methylene chloride [b]		69.3 J	100	40	ug/l	SW846 8260B
Tetrachloroethylene [a]		1280	20	5.1	ug/l	SW846 8260B
Trichloroethylene [a]		11.5 J	20	6.0	ug/l	SW846 8260B
Methane		209	0.50	0.16	ug/l	RSKSOP-147/175
Copper		1.9 J	25	1.0	ug/l	SW846 6010C
Selenium		2.9 J	10	2.3	ug/l	SW846 6010C
Zinc		11.5 J	20	3.0	ug/l	SW846 6010C
Chloride		7.0	2.0	0.80	mg/l	EPA 300/SW846 9056A
Nitrogen, Nitrate		0.44	0.10	0.050	mg/l	EPA 300/SW846 9056A
Sulfate		4.5	2.0	0.60	mg/l	EPA 300/SW846 9056A
Total Organic Carbon		0.55 J	1.0	0.23	mg/l	SM5310 B-11/SW9060A
FA12815-8	**MW-1-A**					
cis-1,2-Dichloroethylene [a]		11.3	1.0	0.33	ug/l	SW846 8260B
Methylene chloride [a]		5.4	5.0	2.0	ug/l	SW846 8260B
Tetrachloroethylene [a]		88.5	1.0	0.26	ug/l	SW846 8260B
Trichloroethylene [a]		0.99 J	1.0	0.30	ug/l	SW846 8260B

Summary of Hits

Job Number: FA12815
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 02/25/14 thru 02/26/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Methane		222	0.50	0.16	ug/l	RSKSOP-147/175
Copper		1.5 J	25	1.0	ug/l	SW846 6010C
Selenium		3.2 J	10	2.3	ug/l	SW846 6010C
Zinc		11.0 J	20	3.0	ug/l	SW846 6010C
Chloride		7.2	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		6.7	2.0	0.60	mg/l	EPA 300/SW846 9056A
Total Organic Carbon		0.67 J	1.0	0.23	mg/l	SM5310 B-11/SW9060A
FA12815-9	**MW-14**					
No hits reported in this sample.						
FA12815-10	**MW-14D**					
1,1-Dichloroethylene [a]		1.6	1.0	0.25	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [a]		0.95 J	1.0	0.33	ug/l	SW846 8260B
Tetrachloroethylene [a]		81.5	1.0	0.26	ug/l	SW846 8260B
Trichloroethylene [a]		0.56 J	1.0	0.30	ug/l	SW846 8260B
Methane		7.6	0.50	0.16	ug/l	RSKSOP-147/175
Chloride		5.1	2.0	0.80	mg/l	EPA 300/SW846 9056A
Nitrogen, Nitrate		0.28	0.10	0.050	mg/l	EPA 300/SW846 9056A
Sulfate		2.7	2.0	0.60	mg/l	EPA 300/SW846 9056A
Total Organic Carbon		0.32 J	1.0	0.23	mg/l	SM5310 B-11/SW9060A
FA12815-11	**DPT-57 (6-8)-D**					
Copper		1.1 J	25	1.0	ug/l	SW846 6010C
Zinc		4.1 J	20	3.0	ug/l	SW846 6010C
Chromium, Hexavalent		0.019	0.010	0.0080	mg/l	SW846 7196A

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Suspected laboratory contaminant.

Southeast ACCUTEST LABORATORIES

4

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MW-15D
Lab Sample ID: FA12815-1
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/25/14
Date Received: 02/27/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I18733.D	1	03/04/14	WV	n/a	n/a	VI324
Run #2 [b]	Z23208.D	1	03/03/14	KW	n/a	n/a	VZ921

	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	0.24	2.0	0.20	ug/l	J
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:	FA12815-1	**Date Sampled:**	02/25/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	101%	79-125%
2037-26-5	Toluene-D8	96%	101%	85-112%
460-00-4	4-Bromofluorobenzene	98%	95%	83-118%

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

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:	FA12815-2	**Date Sampled:**	02/25/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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]	Z23210.D	1	03/03/14	KW	n/a	n/a	VZ921
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
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:	FA12815-2	**Date Sampled:**	02/25/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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	100%		79-125%
2037-26-5	Toluene-D8	98%		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-2		
Lab Sample ID:	FA12815-3	**Date Sampled:**	02/25/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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]	Z23211.D	1	03/03/14	KW	n/a	n/a	VZ921
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	1.6	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
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-2		
Lab Sample ID:	FA12815-3	**Date Sampled:**	02/25/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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	100%		85-112%
460-00-4	4-Bromofluorobenzene	94%		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-2-A		
Lab Sample ID:	FA12815-4	**Date Sampled:**	02/25/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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]	Z23212.D	1	03/03/14	KW	n/a	n/a	VZ921
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	1.5	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
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-2-A		
Lab Sample ID:	FA12815-4	**Date Sampled:**	02/25/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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	100%		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
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:	FA12815-5	**Date Sampled:**	02/25/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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]	Z23213.D	1	03/03/14	KW	n/a	n/a	VZ921
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
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:	FA12815-5	**Date Sampled:**	02/25/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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	100%		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-15D-C
Lab Sample ID: FA12815-6
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/25/14
Date Received: 02/27/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Z23214.D	1	03/03/14	KW	n/a	n/a	VZ921
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
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-C		
Lab Sample ID:	FA12815-6	**Date Sampled:**	02/25/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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	102%		79-125%
2037-26-5	Toluene-D8	100%		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-1		
Lab Sample ID:	FA12815-7	**Date Sampled:**	02/26/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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]	Z23215.D	20	03/03/14	KW	n/a	n/a	VZ921
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	110	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 [b]	69.3	100	40	ug/l	J
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	1280	20	5.1	ug/l	
108-88-3	Toluene	ND	20	4.0	ug/l	
79-01-6	Trichloroethylene	11.5	20	6.0	ug/l	J

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-1		
Lab Sample ID:	FA12815-7	**Date Sampled:**	02/26/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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	104%		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	96%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Suspected laboratory contaminant.

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-1
Lab Sample ID: FA12815-7 **Date Sampled:** 02/26/14
Matrix: AQ - Ground Water **Date Received:** 02/27/14
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	X033532.D	1	03/03/14	FS	02/28/14	OP50659	SX1577
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN TCL List

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 [a]	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	

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-1		
Lab Sample ID:	FA12815-7	**Date Sampled:**	02/26/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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	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	
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 [a]	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	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	36%		14-67%
4165-62-2	Phenol-d5	22%		10-50%
118-79-6	2,4,6-Tribromophenol	80%		33-118%

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-1		
Lab Sample ID:	FA12815-7	**Date Sampled:**	02/26/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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	65%		42-108%
321-60-8	2-Fluorobiphenyl	69%		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: MW-1
Lab Sample ID: FA12815-7
Matrix: AQ - Ground Water
Method: RSKSOP-147/175
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF22470.D	1	02/28/14	CP	n/a	n/a	GFF905
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	209	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
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-1
Lab Sample ID: FA12815-7
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	2.3 U	6.0	2.3	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Arsenic	2.4 U	10	2.4	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Beryllium	0.50 U	4.0	0.50	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Cadmium	0.50 U	5.0	0.50	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Chromium	2.0 U	10	2.0	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Copper	1.9 J	25	1.0	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Lead	1.1 U	5.0	1.1	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Mercury	0.030 U	0.50	0.030	ug/l	1	03/05/14	03/05/14	JL	SW846 7470A [2]	SW846 7470A [4]
Nickel	0.50 U	40	0.50	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Selenium	2.9 J	10	2.3	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Silver	0.77 U	5.0	0.77	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Thallium	2.0 U	10	2.0	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Zinc	11.5 J	20	3.0	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA11432
(2) Instrument QC Batch: MA11434
(3) Prep QC Batch: MP26894
(4) Prep QC Batch: MP26905

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
Lab Sample ID: FA12815-7
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride	7.0	2.0	0.80	mg/l	1	02/27/14 13:53	AC	EPA 300/SW846 9056A
Nitrogen, Nitrate	0.44	0.10	0.050	mg/l	1	02/27/14 13:53	AC	EPA 300/SW846 9056A
Nitrogen, Nitrite	0.050 U	0.10	0.050	mg/l	1	02/27/14 13:53	AC	EPA 300/SW846 9056A
Sulfate	4.5	2.0	0.60	mg/l	1	02/27/14 13:53	AC	EPA 300/SW846 9056A
Total Organic Carbon	0.55 J	1.0	0.23	mg/l	1	02/28/14 12:29	LE	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-A
Lab Sample ID: FA12815-8
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I18690.D	1	03/03/14	WV	n/a	n/a	VI322
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	11.3	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 [b]	ND	2.0	0.53	ug/l	
75-09-2	Methylene chloride	5.4	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	88.5	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	0.99	1.0	0.30	ug/l	J

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-1-A		
Lab Sample ID:	FA12815-8	**Date Sampled:**	02/26/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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	105%		79-125%
2037-26-5	Toluene-D8	95%		85-112%
460-00-4	4-Bromofluorobenzene	99%		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-1-A
Lab Sample ID: FA12815-8 **Date Sampled:** 02/26/14
Matrix: AQ - Ground Water **Date Received:** 02/27/14
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	X033533.D	1	03/03/14	FS	02/28/14	OP50659	SX1577
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN TCL List

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 [a]	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	

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-1-A
Lab Sample ID: FA12815-8 **Date Sampled:** 02/26/14
Matrix: AQ - Ground Water **Date Received:** 02/27/14
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	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	
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 [a]	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	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	35%		14-67%
4165-62-2	Phenol-d5	21%		10-50%
118-79-6	2,4,6-Tribromophenol	76%		33-118%

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-1-A		
Lab Sample ID:	FA12815-8	**Date Sampled:**	02/26/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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	62%		42-108%
321-60-8	2-Fluorobiphenyl	66%		40-106%
1718-51-0	Terphenyl-d14	82%		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: MW-1-A
Lab Sample ID: FA12815-8
Matrix: AQ - Ground Water
Method: RSKSOP-147/175
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF22471.D	1	02/28/14	CP	n/a	n/a	GFF905
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	222	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
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-1-A
Lab Sample ID: FA12815-8
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	2.3 U	6.0	2.3	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Arsenic	2.4 U	10	2.4	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Beryllium	0.50 U	4.0	0.50	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Cadmium	0.50 U	5.0	0.50	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Chromium	2.0 U	10	2.0	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Copper	1.5 J	25	1.0	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Lead	1.1 U	5.0	1.1	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Mercury	0.030 U	0.50	0.030	ug/l	1	03/05/14	03/05/14	JL	SW846 7470A [2]	SW846 7470A [4]
Nickel	0.50 U	40	0.50	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Selenium	3.2 J	10	2.3	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Silver	0.77 U	5.0	0.77	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Thallium	2.0 U	10	2.0	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Zinc	11.0 J	20	3.0	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA11432
(2) Instrument QC Batch: MA11434
(3) Prep QC Batch: MP26894
(4) Prep QC Batch: MP26905

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-A
Lab Sample ID: FA12815-8
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride	7.2	2.0	0.80	mg/l	1	02/27/14 14:10	AC	EPA 300/SW846 9056A
Nitrogen, Nitrate	0.45	0.10	0.050	mg/l	1	02/27/14 14:10	AC	EPA 300/SW846 9056A
Nitrogen, Nitrite	0.050 U	0.10	0.050	mg/l	1	02/27/14 14:10	AC	EPA 300/SW846 9056A
Sulfate	6.7	2.0	0.60	mg/l	1	02/27/14 14:10	AC	EPA 300/SW846 9056A
Total Organic Carbon	0.67 J	1.0	0.23	mg/l	1	02/28/14 12:44	LE	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:	FA12815-9	**Date Sampled:**	02/26/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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]	I18691.D	1	03/03/14	WV	n/a	n/a	VI322
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 [b]	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-14		
Lab Sample ID:	FA12815-9	**Date Sampled:**	02/26/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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	105%		79-125%
2037-26-5	Toluene-D8	98%		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-14D
Lab Sample ID: FA12815-10
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I18692.D	1	03/03/14	WV	n/a	n/a	VI322
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	1.6	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	0.95	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 [b]	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	81.5	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
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		
Lab Sample ID:	FA12815-10	**Date Sampled:**	02/26/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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	106%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	99%		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
Lab Sample ID: FA12815-10
Matrix: AQ - Ground Water
Method: RSKSOP-147/175
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF22499.D	1	03/03/14	CP	n/a	n/a	GFF906
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	7.6	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
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
Lab Sample ID: FA12815-10
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride	5.1	2.0	0.80	mg/l	1	02/27/14 14:27	AC	EPA 300/SW846 9056A
Nitrogen, Nitrate	0.28	0.10	0.050	mg/l	1	02/27/14 14:27	AC	EPA 300/SW846 9056A
Nitrogen, Nitrite	0.050 U	0.10	0.050	mg/l	1	02/27/14 14:27	AC	EPA 300/SW846 9056A
Sulfate	2.7	2.0	0.60	mg/l	1	02/27/14 14:27	AC	EPA 300/SW846 9056A
Total Organic Carbon	0.32 J	1.0	0.23	mg/l	1	02/28/14 13:00	LE	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:	DPT-57 (6-8)-D		
Lab Sample ID:	FA12815-11	**Date Sampled:**	02/26/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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]	B096548.D	1	03/03/14	WV	n/a	n/a	VB3935
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
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:	DPT-57 (6-8)-D		
Lab Sample ID:	FA12815-11	**Date Sampled:**	02/26/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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	97%		83-118%
17060-07-0	1,2-Dichloroethane-D4	100%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	100%		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: DPT-57 (6-8)-D
Lab Sample ID: FA12815-11 **Date Sampled:** 02/26/14
Matrix: AQ - Ground Water **Date Received:** 02/27/14
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	L0677132.D	1	03/04/14	NAF	03/03/14	OP50665	SL3413
Run #2							

	Initial Volume	Final Volume
Run #1	1020 ml	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	49	9.8	ug/l	
95-57-8	2-Chlorophenol	ND	4.9	0.51	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	0.57	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.9	0.49	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	5.3	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.8	2.0	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	0.59	ug/l	
100-02-7	4-Nitrophenol	ND	25	4.9	ug/l	
87-86-5	Pentachlorophenol	ND	25	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	0.61	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.9	0.63	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.9	0.64	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.9	0.70	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.9	0.79	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	0.66	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.9	0.80	ug/l	
100-51-6	Benzyl Alcohol	ND	4.9	0.98	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	0.71	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.9	0.54	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.9	0.68	ug/l	

ND = Not detected MDL - Method Detection Limit
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DPT-57 (6-8)-D		
Lab Sample ID:	FA12815-11	**Date Sampled:**	02/26/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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	0.57	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.9	0.53	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	0.56	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.9	0.61	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	4.9	0.88	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.9	0.80	ug/l	
132-64-9	Dibenzofuran	ND	4.9	0.52	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.9	0.98	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.9	0.98	ug/l	
84-66-2	Diethyl phthalate	ND	4.9	0.98	ug/l	
131-11-3	Dimethyl phthalate	ND	4.9	0.62	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.9	1.5	ug/l	
206-44-0	Fluoranthene	ND	4.9	0.69	ug/l	
86-73-7	Fluorene	ND	4.9	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	4.9	0.65	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.9	0.49	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	4.9	0.98	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	0.62	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	1.2	ug/l	
99-09-2	3-Nitroaniline	ND	4.9	0.60	ug/l	
100-01-6	4-Nitroaniline	ND	4.9	0.75	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	0.80	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	30%		14-67%
4165-62-2	Phenol-d5	19%		10-50%
118-79-6	2,4,6-Tribromophenol	75%		33-118%

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:	DPT-57 (6-8)-D		
Lab Sample ID:	FA12815-11	**Date Sampled:**	02/26/14
Matrix:	AQ - Ground Water	**Date Received:**	02/27/14
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	70%		42-108%
321-60-8	2-Fluorobiphenyl	63%		40-106%
1718-51-0	Terphenyl-d14	91%		39-121%

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: DPT-57 (6-8)-D
Lab Sample ID: FA12815-11
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	2.3 U	6.0	2.3	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Arsenic	2.4 U	10	2.4	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Beryllium	0.50 U	4.0	0.50	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Cadmium	0.50 U	5.0	0.50	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Chromium	2.0 U	10	2.0	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Copper	1.1 J	25	1.0	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Lead	1.1 U	5.0	1.1	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Mercury	0.030 U	0.50	0.030	ug/l	1	03/05/14	03/05/14	JL	SW846 7470A [2]	SW846 7470A [4]
Nickel	0.50 U	40	0.50	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Selenium	2.3 U	10	2.3	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Silver	0.77 U	5.0	0.77	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Thallium	2.0 U	10	2.0	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Zinc	4.1 J	20	3.0	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA11432
(2) Instrument QC Batch: MA11434
(3) Prep QC Batch: MP26894
(4) Prep QC Batch: MP26905

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: DPT-57 (6-8)-D
Lab Sample ID: FA12815-11
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/26/14
Date Received: 02/27/14
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.019	0.010	0.0080	mg/l	1	02/27/14 13:35	KC	SW846 7196A

RL = Reporting Limit
MDL = Method Detection Limit

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

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA12815

AECOM

Chain of Custody and Analytical Request

Page 1 of 1
Project Number: 60269713 60311491
Chain of Custody Number [1]: 0225M-Z
LIMS Number:

Project Name / Location: UTC Delavan Spray Technologies Site RI / Bamberg, SC
Client Name: UTC
Collected by: L Alexander & R Morgan
Project Manager: Walter Gerald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.)	TCL VOCs (8260C)	TCL SVOCs (8270D)	Priority Pollutant Metals (6010B / 7470A)	TDL (SM3510D)	NH4/Nitrate (300.0)	Sulfate (300.0)	Chloride (300.0)	Dissolved Gases - MEE (RSK 175)	Hex Chrom 7196A	COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste		Cooler ID
MW-15D	25-FEB-2014	1420		X			X									A	1	I3
MW-15D-ms	↓	↓		X			X									A	1	
MW-15D-msd				X			X									A	1	
MW-15	25-FEB-2014	1630		X			X									A	2	
MW-2		1700		X			X									A	3	
MW-2-a		1700		X			X									A	4	
MW-15DI	↓	1537		X			X									A	5	
MW-15D-c	25-FEB-2014	1420		X			X									A	6	
MW-1	26-FEB-2014	1025		X			X	X	X		X	X	X	X		A	7	
MW-1-a		1025		X			X	X	X		X	X	X	X		A	8	
MW-14		0935		X			X									A	9	
MW-14D	↓	1045		X			X				X	X	X	X		A	10	
DPT-57(6-8)-d	26-FEB-2014	1530		X			X	X	X						X	A	11	

L Alexander 2/26/14

Sample Analysis Requested

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	L Alexander (AECOM)	2/26/14	1815	FX		09:20
2.	FX			J Cooper (ADL)	2-27-14	
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:
Method of Shipment: FedEx
Analytical Lab: Accutest
Lab Recipient:
Shipped: X
Airbill #: 8047 3475 6235
Location: Orlando FL
Date: Time:
8047 3475 6257

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

TCL VOCs by 8260C – unpreserved-3VOA vials – 7 day holding time
Hex Chrom – 24hr holding time

3.6 3.8

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

FA12815: Chain of Custody
Page 1 of 3

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA 12815 CLIENT: AECOM PROJECT: LTC DELAVAN

DATE/TIME RECEIVED: 2-27-14 09:30 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 2

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

AIRBILL NUMBERS: 8047 3475 6235

COOLER INFORMATION

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

TRIP BLANK INFORMATION

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

MISC. INFORMATION

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

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.4
- [ ] OBSERVED TEMPS: 4.0 4.2
- [ ] CORRECTED TEMPS: 3.6 3.8

SAMPLE INFORMATION

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

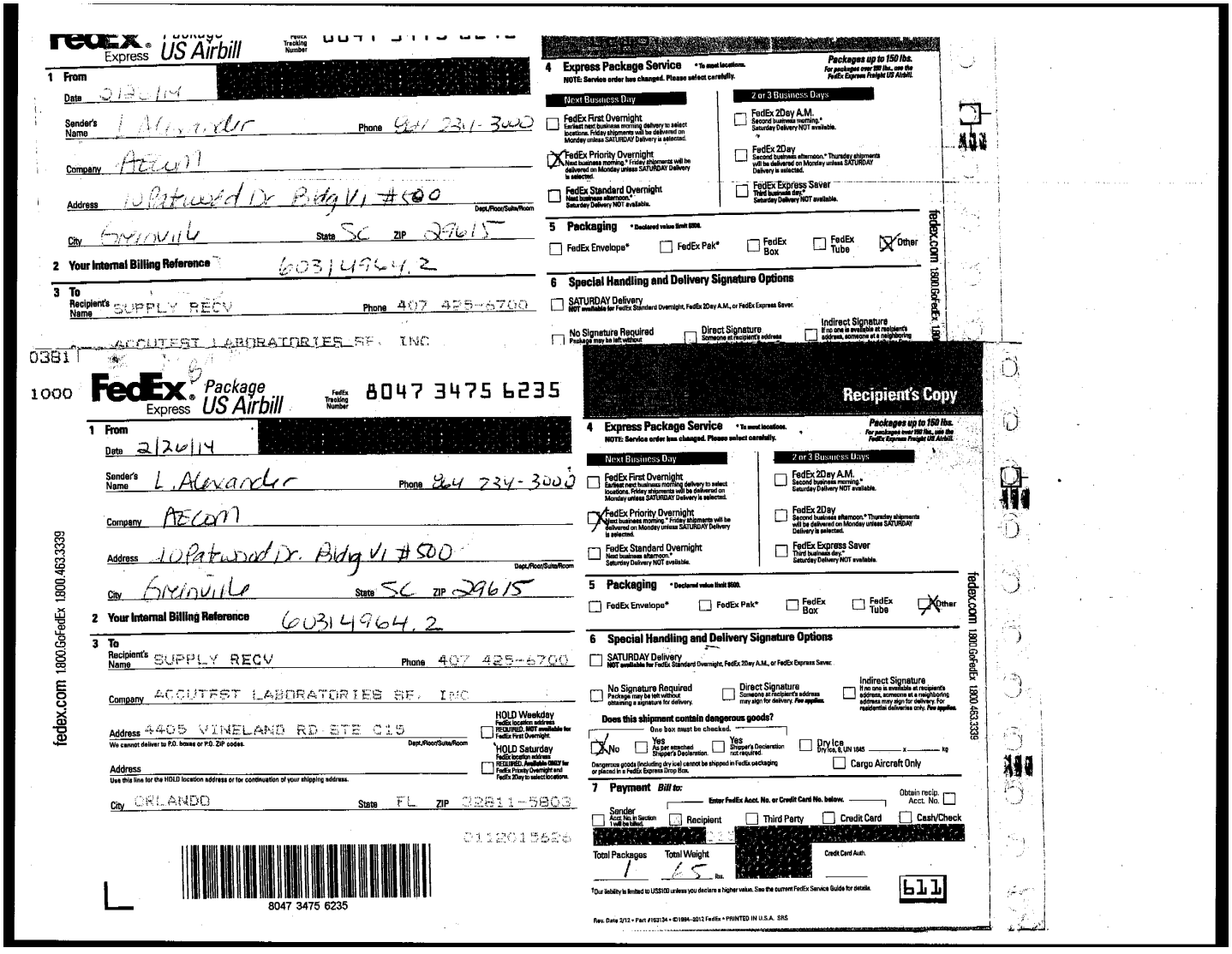
{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS: _____

TECHNICIAN SIGNATURE/DATE JC 2-27-14 REVIEWER SIGNATURE/DATE [signature] 02.27.14

NF 12/10

receipt confirmation 122910.xls



FedEx Express US Airbill — 8047 3475 6235

1 From — Date 2/26/14 — Sender's Name L. Alexander — Phone 864 234-3000 — Company AECOM — Address 10 Patewood Dr. Bldg VI #500 — City Greenville — State SC — ZIP 29615

2 Your Internal Billing Reference 60314964.2

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

4 Express Package Service — Next Business Day: FedEx First Overnight; FedEx Priority Overnight [X]; FedEx Standard Overnight. 2 or 3 Business Days: FedEx 2Day A.M.; FedEx 2Day; FedEx Express Saver

5 Packaging — FedEx Envelope*; FedEx Pak*; FedEx Box; FedEx Tube; Other [X]

6 Special Handling and Delivery Signature Options — SATURDAY Delivery; No Signature Required; Direct Signature; Indirect Signature

Does this shipment contain dangerous goods? — No [X]; Yes; Dry Ice

7 Payment Bill to: — Sender; Recipient [X]; Third Party; Credit Card; Cash/Check

Total Packages 1 — Total Weight 65 lbs. — 611

Recipient's Copy

8047 3475 6235

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: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI322-MB	I18670.D	1	03/03/14	WV	n/a	n/a	VI322

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

FA12815-8, FA12815-9, FA12815-10

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: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI322-MB	I18670.D	1	03/03/14	WV	n/a	n/a	VI322

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

FA12815-8, FA12815-9, FA12815-10

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

Method Blank Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ921-MB	Z23188.D	1	03/03/14	KW	n/a	n/a	VZ921

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

FA12815-2, FA12815-3, FA12815-4, FA12815-5, FA12815-6, FA12815-7

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: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ921-MB	Z23188.D	1	03/03/14	KW	n/a	n/a	VZ921

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

FA12815-2, FA12815-3, FA12815-4, FA12815-5, FA12815-6, FA12815-7

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

Method Blank Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB3935-MB	B096542.D	1	03/03/14	WV	n/a	n/a	VB3935

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

FA12815-11

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	0.31	1.0	0.20	ug/l	J
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: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB3935-MB	B096542.D	1	03/03/14	WV	n/a	n/a	VB3935

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

FA12815-11

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	94%	79-125%
2037-26-5	Toluene-D8	103%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

Method Blank Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI324-MB	I18724.D	1	03/04/14	WV	n/a	n/a	VI324

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

FA12815-1

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: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI324-MB	I18724.D	1	03/04/14	WV	n/a	n/a	VI324

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

FA12815-1

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

Blank Spike Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ921-BS [a]	Z23186.D	1	03/03/14	KW	n/a	n/a	VZ921

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

FA12815-2, FA12815-3, FA12815-4, FA12815-5, FA12815-6, FA12815-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	117	94	50-147
71-43-2	Benzene	25	22.9	92	81-122
75-27-4	Bromodichloromethane	25	22.7	91	79-123
75-25-2	Bromoform	25	22.0	88	66-123
108-90-7	Chlorobenzene	25	25.9	104	82-124
75-00-3	Chloroethane	25	29.1	116	62-144
67-66-3	Chloroform	25	22.9	92	80-124
75-15-0	Carbon disulfide	25	25.8	103	66-148
56-23-5	Carbon tetrachloride	25	24.5	98	76-136
75-34-3	1,1-Dichloroethane	25	23.2	93	81-122
75-35-4	1,1-Dichloroethylene	25	24.4	98	78-137
107-06-2	1,2-Dichloroethane	25	25.5	102	75-125
78-87-5	1,2-Dichloropropane	25	22.9	92	76-124
124-48-1	Dibromochloromethane	25	25.4	102	78-122
156-59-2	cis-1,2-Dichloroethylene	25	23.4	94	78-120
10061-01-5	cis-1,3-Dichloropropene	25	23.1	92	75-118
156-60-5	trans-1,2-Dichloroethylene	25	23.0	92	76-127
10061-02-6	trans-1,3-Dichloropropene	25	24.2	97	80-120
100-41-4	Ethylbenzene	25	22.8	91	81-121
591-78-6	2-Hexanone	125	95.4	76	61-129
108-10-1	4-Methyl-2-pentanone	125	99.1	79	66-122
74-83-9	Methyl bromide	25	29.5	118	59-143
74-87-3	Methyl chloride	25	33.9	136	50-159
75-09-2	Methylene chloride	25	24.5	98	69-135
78-93-3	Methyl ethyl ketone	125	95.2	76	56-143
100-42-5	Styrene	25	21.9	88	78-119
71-55-6	1,1,1-Trichloroethane	25	23.5	94	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	22.0	88	72-120
79-00-5	1,1,2-Trichloroethane	25	23.9	96	76-119
127-18-4	Tetrachloroethylene	25	25.2	101	76-135
108-88-3	Toluene	25	26.2	105	80-120
79-01-6	Trichloroethylene	25	24.3	97	81-126
75-01-4	Vinyl chloride	25	35.4	142	69-159
1330-20-7	Xylene (total)	75	69.9	93	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ921-BS [a]	Z23186.D	1	03/03/14	KW	n/a	n/a	VZ921

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

FA12815-2, FA12815-3, FA12815-4, FA12815-5, FA12815-6, FA12815-7

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	105%	83-118%
17060-07-0	1,2-Dichloroethane-D4	96%	79-125%
2037-26-5	Toluene-D8	94%	85-112%
460-00-4	4-Bromofluorobenzene	92%	83-118%

(a) No MSD available for this run.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI322-BS	I18669.D	1	03/03/14	WV	n/a	n/a	VI322

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

FA12815-8, FA12815-9, FA12815-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	106	85	50-147
71-43-2	Benzene	25	26.0	104	81-122
75-27-4	Bromodichloromethane	25	25.8	103	79-123
75-25-2	Bromoform	25	23.3	93	66-123
108-90-7	Chlorobenzene	25	25.8	103	82-124
75-00-3	Chloroethane	25	28.3	113	62-144
67-66-3	Chloroform	25	25.0	100	80-124
75-15-0	Carbon disulfide	25	23.2	93	66-148
56-23-5	Carbon tetrachloride	25	27.8	111	76-136
75-34-3	1,1-Dichloroethane	25	28.1	112	81-122
75-35-4	1,1-Dichloroethylene	25	26.9	108	78-137
107-06-2	1,2-Dichloroethane	25	25.0	100	75-125
78-87-5	1,2-Dichloropropane	25	27.4	110	76-124
124-48-1	Dibromochloromethane	25	25.8	103	78-122
156-59-2	cis-1,2-Dichloroethylene	25	23.8	95	78-120
10061-01-5	cis-1,3-Dichloropropene	25	26.1	104	75-118
156-60-5	trans-1,2-Dichloroethylene	25	27.6	110	76-127
10061-02-6	trans-1,3-Dichloropropene	25	27.8	111	80-120
100-41-4	Ethylbenzene	25	25.0	100	81-121
591-78-6	2-Hexanone	125	126	101	61-129
108-10-1	4-Methyl-2-pentanone	125	129	103	66-122
74-83-9	Methyl bromide	25	29.5	118	59-143
74-87-3	Methyl chloride	25	42.3	169*	50-159
75-09-2	Methylene chloride	25	28.4	114	69-135
78-93-3	Methyl ethyl ketone	125	116	93	56-143
100-42-5	Styrene	25	24.6	98	78-119
71-55-6	1,1,1-Trichloroethane	25	26.7	107	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	23.6	94	72-120
79-00-5	1,1,2-Trichloroethane	25	24.8	99	76-119
127-18-4	Tetrachloroethylene	25	25.8	103	76-135
108-88-3	Toluene	25	24.6	98	80-120
79-01-6	Trichloroethylene	25	25.3	101	81-126
75-01-4	Vinyl chloride	25	32.6	130	69-159
1330-20-7	Xylene (total)	75	77.4	103	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI322-BS	I18669.D	1	03/03/14	WV	n/a	n/a	VI322

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

FA12815-8, FA12815-9, FA12815-10

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	79-125%
2037-26-5	Toluene-D8	94%	85-112%
460-00-4	4-Bromofluorobenzene	94%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB3935-BS	B096541.D	1	03/03/14	WV	n/a	n/a	VB3935

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

FA12815-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	128	102	50-147
71-43-2	Benzene	25	27.9	112	81-122
75-27-4	Bromodichloromethane	25	26.5	106	79-123
75-25-2	Bromoform	25	24.2	97	66-123
108-90-7	Chlorobenzene	25	29.1	116	82-124
75-00-3	Chloroethane	25	28.8	115	62-144
67-66-3	Chloroform	25	26.2	105	80-124
75-15-0	Carbon disulfide	25	29.0	116	66-148
56-23-5	Carbon tetrachloride	25	28.7	115	76-136
75-34-3	1,1-Dichloroethane	25	27.4	110	81-122
75-35-4	1,1-Dichloroethylene	25	30.4	122	78-137
107-06-2	1,2-Dichloroethane	25	24.8	99	75-125
78-87-5	1,2-Dichloropropane	25	26.8	107	76-124
124-48-1	Dibromochloromethane	25	25.5	102	78-122
156-59-2	cis-1,2-Dichloroethylene	25	27.5	110	78-120
10061-01-5	cis-1,3-Dichloropropene	25	26.7	107	75-118
156-60-5	trans-1,2-Dichloroethylene	25	28.0	112	76-127
10061-02-6	trans-1,3-Dichloropropene	25	28.3	113	80-120
100-41-4	Ethylbenzene	25	28.1	112	81-121
591-78-6	2-Hexanone	125	123	98	61-129
108-10-1	4-Methyl-2-pentanone	125	121	97	66-122
74-83-9	Methyl bromide	25	27.8	111	59-143
74-87-3	Methyl chloride	25	31.8	127	50-159
75-09-2	Methylene chloride	25	27.8	111	69-135
78-93-3	Methyl ethyl ketone	125	124	99	56-143
100-42-5	Styrene	25	27.5	110	78-119
71-55-6	1,1,1-Trichloroethane	25	28.4	114	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	26.2	105	72-120
79-00-5	1,1,2-Trichloroethane	25	25.4	102	76-119
127-18-4	Tetrachloroethylene	25	29.0	116	76-135
108-88-3	Toluene	25	26.8	107	80-120
79-01-6	Trichloroethylene	25	27.8	111	81-126
75-01-4	Vinyl chloride	25	31.2	125	69-159
1330-20-7	Xylene (total)	75	88.3	118	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB3935-BS	B096541.D	1	03/03/14	WV	n/a	n/a	VB3935

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

FA12815-11

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	93%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI324-BS	I18725.D	1	03/04/14	WV	n/a	n/a	VI324

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

FA12815-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	104	83	50-147
71-43-2	Benzene	25	26.2	105	81-122
75-27-4	Bromodichloromethane	25	25.8	103	79-123
75-25-2	Bromoform	25	22.3	89	66-123
108-90-7	Chlorobenzene	25	25.5	102	82-124
75-00-3	Chloroethane	25	27.0	108	62-144
67-66-3	Chloroform	25	25.3	101	80-124
75-15-0	Carbon disulfide	25	24.1	96	66-148
56-23-5	Carbon tetrachloride	25	28.2	113	76-136
75-34-3	1,1-Dichloroethane	25	28.9	116	81-122
75-35-4	1,1-Dichloroethylene	25	27.2	109	78-137
107-06-2	1,2-Dichloroethane	25	24.8	99	75-125
78-87-5	1,2-Dichloropropane	25	27.6	110	76-124
124-48-1	Dibromochloromethane	25	24.1	96	78-122
156-59-2	cis-1,2-Dichloroethylene	25	24.0	96	78-120
10061-01-5	cis-1,3-Dichloropropene	25	25.5	102	75-118
156-60-5	trans-1,2-Dichloroethylene	25	27.4	110	76-127
10061-02-6	trans-1,3-Dichloropropene	25	26.4	106	80-120
100-41-4	Ethylbenzene	25	25.0	100	81-121
591-78-6	2-Hexanone	125	123	98	61-129
108-10-1	4-Methyl-2-pentanone	125	124	99	66-122
74-83-9	Methyl bromide	25	28.2	113	59-143
74-87-3	Methyl chloride	25	39.0	156	50-159
75-09-2	Methylene chloride	25	28.1	112	69-135
78-93-3	Methyl ethyl ketone	125	114	91	56-143
100-42-5	Styrene	25	24.1	96	78-119
71-55-6	1,1,1-Trichloroethane	25	27.5	110	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	23.1	92	72-120
79-00-5	1,1,2-Trichloroethane	25	24.0	96	76-119
127-18-4	Tetrachloroethylene	25	26.1	104	76-135
108-88-3	Toluene	25	24.6	98	80-120
79-01-6	Trichloroethylene	25	25.7	103	81-126
75-01-4	Vinyl chloride	25	30.2	121	69-159
1330-20-7	Xylene (total)	75	77.8	104	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI324-BS	I18725.D	1	03/04/14	WV	n/a	n/a	VI324

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

FA12815-1

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

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12815-1MS	Z23209.D	1	03/03/14	KW	n/a	n/a	VZ921
FA12815-1 [a]	Z23208.D	1	03/03/14	KW	n/a	n/a	VZ921

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

FA12815-2, FA12815-3, FA12815-4, FA12815-5, FA12815-6, FA12815-7

CAS No.	Compound	FA12815-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
67-64-1	Acetone	ND		125	111	89	50-147
71-43-2	Benzene	ND		25	23.9	96	81-122
75-27-4	Bromodichloromethane	ND		25	23.9	96	79-123
75-25-2	Bromoform	ND		25	22.2	89	66-123
108-90-7	Chlorobenzene	ND		25	26.7	107	82-124
75-00-3	Chloroethane	ND		25	28.9	116	62-144
67-66-3	Chloroform	ND		25	24.4	98	80-124
75-15-0	Carbon disulfide	ND		25	27.0	108	66-148
56-23-5	Carbon tetrachloride	ND		25	25.3	101	76-136
75-34-3	1,1-Dichloroethane	ND		25	24.0	96	81-122
75-35-4	1,1-Dichloroethylene	ND		25	24.9	100	78-137
107-06-2	1,2-Dichloroethane	ND		25	26.8	107	75-125
78-87-5	1,2-Dichloropropane	ND		25	24.4	98	76-124
124-48-1	Dibromochloromethane	ND		25	26.2	105	78-122
156-59-2	cis-1,2-Dichloroethylene	ND		25	23.7	95	78-120
10061-01-5	cis-1,3-Dichloropropene	ND		25	23.0	92	75-118
156-60-5	trans-1,2-Dichloroethylene	ND		25	23.8	95	76-127
10061-02-6	trans-1,3-Dichloropropene	ND		25	25.0	100	80-120
100-41-4	Ethylbenzene	ND		25	23.7	95	81-121
591-78-6	2-Hexanone	ND		125	96.4	77	61-129
108-10-1	4-Methyl-2-pentanone	ND		125	103	82	66-122
74-83-9	Methyl bromide	ND		25	26.3	105	59-143
74-87-3	Methyl chloride	ND		25	38.1	152	50-159
75-09-2	Methylene chloride	ND		25	26.0	104	69-135
78-93-3	Methyl ethyl ketone	ND		125	89.0	71	56-143
100-42-5	Styrene	ND		25	22.5	90	78-119
71-55-6	1,1,1-Trichloroethane	ND		25	24.7	99	75-130
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	23.2	93	72-120
79-00-5	1,1,2-Trichloroethane	ND		25	25.6	102	76-119
127-18-4	Tetrachloroethylene	ND		25	25.8	103	76-135
108-88-3	Toluene	ND		25	27.7	111	80-120
79-01-6	Trichloroethylene	ND		25	24.5	98	81-126
75-01-4	Vinyl chloride	ND		25	37.6	150	69-159
1330-20-7	Xylene (total)	ND		75	72.7	97	80-126

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12815-1MS	Z23209.D	1	03/03/14	KW	n/a	n/a	VZ921
FA12815-1 [a]	Z23208.D	1	03/03/14	KW	n/a	n/a	VZ921

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

FA12815-2, FA12815-3, FA12815-4, FA12815-5, FA12815-6, FA12815-7

CAS No.	Surrogate Recoveries	MS	FA12815-1	Limits
1868-53-7	Dibromofluoromethane	105%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	101%	79-125%
2037-26-5	Toluene-D8	95%	101%	85-112%
460-00-4	4-Bromofluorobenzene	91%	95%	83-118%

(a) Confirmation run.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12886-4MS	I18679.D	1	03/03/14	WV	n/a	n/a	VI322
FA12886-4MSD	I18680.D	1	03/03/14	WV	n/a	n/a	VI322
FA12886-4	I18676.D	1	03/03/14	WV	n/a	n/a	VI322

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

FA12815-8, FA12815-9, FA12815-10

CAS No.	Compound	FA12886-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25	U	125	73.4	59	78.9	63	7	50-147/21
71-43-2	Benzene	1.0	U	25	25.5	102	24.7	99	3	81-122/14
75-27-4	Bromodichloromethane	1.0	U	25	24.0	96	22.7	91	6	79-123/19
75-25-2	Bromoform	1.0	U	25	17.0	68	16.8	67	1	66-123/21
108-90-7	Chlorobenzene	4.2		25	29.2	100	29.1	100	0	82-124/14
75-00-3	Chloroethane	2.0	U	25	24.6	98	26.5	106	7	62-144/20
67-66-3	Chloroform	1.0	U	25	24.8	99	24.2	97	2	80-124/15
75-15-0	Carbon disulfide	2.0	U	25	22.2	89	20.1	80	10	66-148/23
56-23-5	Carbon tetrachloride	1.0	U	25	26.0	104	23.2	93	11	76-136/23
75-34-3	1,1-Dichloroethane	1.0	U	25	27.2	109	27.0	108	1	81-122/15
75-35-4	1,1-Dichloroethylene	1.0	U	25	25.8	103	24.7	99	4	78-137/18
107-06-2	1,2-Dichloroethane	1.0	U	25	23.9	96	24.4	98	2	75-125/14
78-87-5	1,2-Dichloropropane	1.0	U	25	26.8	107	26.8	107	0	76-124/14
124-48-1	Dibromochloromethane	1.0	U	25	21.0	84	20.8	83	1	78-122/19
156-59-2	cis-1,2-Dichloroethylene	1.0	U	25	23.3	93	22.8	91	2	78-120/15
10061-01-5	cis-1,3-Dichloropropene	1.0	U	25	20.1	80	18.2	73*	10	75-118/23
156-60-5	trans-1,2-Dichloroethylene	1.0	U	25	25.9	104	25.8	103	0	76-127/17
10061-02-6	trans-1,3-Dichloropropene	1.0	U	25	19.5	78*	18.9	76*	3	80-120/22
100-41-4	Ethylbenzene	1.0	U	25	24.3	97	23.9	96	2	81-121/14
591-78-6	2-Hexanone	10	U	125	113	90	124	99	9	61-129/18
108-10-1	4-Methyl-2-pentanone	5.0	U	125	123	98	135	108	9	66-122/16
74-83-9	Methyl bromide	2.0	U	25	26.1	104	26.7	107	2	59-143/19
74-87-3	Methyl chloride	2.0	U	25	37.3	149	40.5	162*	8	50-159/19
75-09-2	Methylene chloride	5.0	U	25	25.8	103	26.2	105	2	69-135/16
78-93-3	Methyl ethyl ketone	5.0	U	125	96.9	78	103	82	6	56-143/18
100-42-5	Styrene	1.0	U	25	20.4	82	19.8	79	3	78-119/23
71-55-6	1,1,1-Trichloroethane	1.0	U	25	25.8	103	24.9	100	4	75-130/16
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	25	22.5	90	23.9	96	6	72-120/14
79-00-5	1,1,2-Trichloroethane	1.0	U	25	23.2	93	23.9	96	3	76-119/14
127-18-4	Tetrachloroethylene	1.0	U	25	25.3	101	24.1	96	5	76-135/16
108-88-3	Toluene	1.0	U	25	24.6	98	24.0	96	2	80-120/14
79-01-6	Trichloroethylene	1.0	U	25	25.6	102	25.4	102	1	81-126/15
75-01-4	Vinyl chloride	1.0	U	25	27.6	110	29.4	118	6	69-159/18
1330-20-7	Xylene (total)	3.0	U	75	76.2	102	74.8	100	2	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12886-4MS	I18679.D	1	03/03/14	WV	n/a	n/a	VI322
FA12886-4MSD	I18680.D	1	03/03/14	WV	n/a	n/a	VI322
FA12886-4	I18676.D	1	03/03/14	WV	n/a	n/a	VI322

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

FA12815-8, FA12815-9, FA12815-10

CAS No.	Surrogate Recoveries	MS	MSD	FA12886-4	Limits
1868-53-7	Dibromofluoromethane	102%	100%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	102%	103%	79-125%
2037-26-5	Toluene-D8	94%	94%	98%	85-112%
460-00-4	4-Bromofluorobenzene	95%	96%	100%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12653-3MS	B096551.D	5	03/03/14	WV	n/a	n/a	VB3935
FA12653-3MSD	B096552.D	5	03/03/14	WV	n/a	n/a	VB3935
FA12653-3	B096545.D	5	03/03/14	WV	n/a	n/a	VB3935
FA12653-3	B096553.D	10	03/03/14	WV	n/a	n/a	VB3935

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

FA12815-11

CAS No.	Compound	FA12653-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		625	627	100	621	99	1	50-147/21
71-43-2	Benzene	ND		125	142	114	133	106	7	81-122/14
75-27-4	Bromodichloromethane	ND		125	132	106	128	102	3	79-123/19
75-25-2	Bromoform	ND		125	116	93	111	89	4	66-123/21
108-90-7	Chlorobenzene	ND		125	144	115	138	110	4	82-124/14
75-00-3	Chloroethane	ND		125	155	124	135	108	14	62-144/20
67-66-3	Chloroform	ND		125	129	103	125	100	3	80-124/15
75-15-0	Carbon disulfide	ND		125	134	107	115	92	15	66-148/23
56-23-5	Carbon tetrachloride	ND		125	143	114	134	107	6	76-136/23
75-34-3	1,1-Dichloroethane	ND		125	138	110	134	107	3	81-122/15
75-35-4	1,1-Dichloroethylene	30.4		125	186	124	176	116	6	78-137/18
107-06-2	1,2-Dichloroethane	ND		125	125	100	124	99	1	75-125/14
78-87-5	1,2-Dichloropropane	ND		125	138	110	133	106	4	76-124/14
124-48-1	Dibromochloromethane	ND		125	128	102	119	95	7	78-122/19
156-59-2	cis-1,2-Dichloroethylene	5.8		125	140	107	136	104	3	78-120/15
10061-01-5	cis-1,3-Dichloropropene	ND		125	134	107	129	103	4	75-118/23
156-60-5	trans-1,2-Dichloroethylene	ND		125	141	113	134	107	5	76-127/17
10061-02-6	trans-1,3-Dichloropropene	ND		125	140	112	133	106	5	80-120/22
100-41-4	Ethylbenzene	ND		125	139	111	133	106	4	81-121/14
591-78-6	2-Hexanone	ND		625	634	101	619	99	2	61-129/18
108-10-1	4-Methyl-2-pentanone	ND		625	626	100	642	103	3	66-122/16
74-83-9	Methyl bromide	ND		125	198	158*	136	109	37*	59-143/19
74-87-3	Methyl chloride	ND		125	152	122	150	120	1	50-159/19
75-09-2	Methylene chloride	16.0	J	125	158	114	150	107	5	69-135/16
78-93-3	Methyl ethyl ketone	ND		625	647	104	615	98	5	56-143/18
100-42-5	Styrene	ND		125	138	110	130	104	6	78-119/23
71-55-6	1,1,1-Trichloroethane	ND		125	140	112	136	109	3	75-130/16
79-34-5	1,1,2,2-Tetrachloroethane	ND		125	127	102	129	103	2	72-120/14
79-00-5	1,1,2-Trichloroethane	ND		125	125	100	120	96	4	76-119/14
127-18-4	Tetrachloroethylene	527 [a]		125	654	102	656	103	0	76-135/16
108-88-3	Toluene	1.6	JB	125	132	104	132	104	0	80-120/14
79-01-6	Trichloroethylene	19.2		125	154	108	151	105	2	81-126/15
75-01-4	Vinyl chloride	ND		125	151	121	145	116	4	69-159/18
1330-20-7	Xylene (total)	ND		375	442	118	421	112	5	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12653-3MS	B096551.D	5	03/03/14	WV	n/a	n/a	VB3935
FA12653-3MSD	B096552.D	5	03/03/14	WV	n/a	n/a	VB3935
FA12653-3	B096545.D	5	03/03/14	WV	n/a	n/a	VB3935
FA12653-3	B096553.D	10	03/03/14	WV	n/a	n/a	VB3935

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

FA12815-11

CAS No.	Surrogate Recoveries	MS	MSD	FA12653-3	FA12653-3	Limits
1868-53-7	Dibromofluoromethane	95%	96%	95%	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	97%	94%	97%	79-125%
2037-26-5	Toluene-D8	102%	103%	102%	103%	85-112%
460-00-4	4-Bromofluorobenzene	97%	101%	100%	100%	83-118%

(a) Result is from Run #2.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12815-1MS	I18731.D	1	03/04/14	WV	n/a	n/a	VI324
FA12815-1MSD	I18732.D	1	03/04/14	WV	n/a	n/a	VI324
FA12815-1 [a]	I18733.D	1	03/04/14	WV	n/a	n/a	VI324

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

FA12815-1

CAS No.	Compound	FA12815-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	81.2	65	102	82	23*	50-147/21
71-43-2	Benzene	ND		25	24.2	97	25.6	102	6	81-122/14
75-27-4	Bromodichloromethane	ND		25	23.9	96	25.0	100	4	79-123/19
75-25-2	Bromoform	ND		25	18.2	73	20.7	83	13	66-123/21
108-90-7	Chlorobenzene	ND		25	24.0	96	25.5	102	6	82-124/14
75-00-3	Chloroethane	ND		25	24.0	96	27.1	108	12	62-144/20
67-66-3	Chloroform	ND		25	23.5	94	25.3	101	7	80-124/15
75-15-0	Carbon disulfide	0.24	J	25	21.6	85	21.0	83	3	66-148/23
56-23-5	Carbon tetrachloride	ND		25	25.9	104	26.7	107	3	76-136/23
75-34-3	1,1-Dichloroethane	ND		25	26.5	106	28.2	113	6	81-122/15
75-35-4	1,1-Dichloroethylene	ND		25	25.1	100	26.1	104	4	78-137/18
107-06-2	1,2-Dichloroethane	ND		25	22.3	89	24.5	98	9	75-125/14
78-87-5	1,2-Dichloropropane	ND		25	25.8	103	27.4	110	6	76-124/14
124-48-1	Dibromochloromethane	ND		25	21.3	85	22.8	91	7	78-122/19
156-59-2	cis-1,2-Dichloroethylene	ND		25	21.6	86	23.9	96	10	78-120/15
10061-01-5	cis-1,3-Dichloropropene	ND		25	23.0	92	24.8	99	8	75-118/23
156-60-5	trans-1,2-Dichloroethylene	ND		25	24.4	98	26.6	106	9	76-127/17
10061-02-6	trans-1,3-Dichloropropene	ND		25	23.0	92	25.5	102	10	80-120/22
100-41-4	Ethylbenzene	ND		25	23.5	94	24.4	98	4	81-121/14
591-78-6	2-Hexanone	ND		125	96.5	77	122	98	23*	61-129/18
108-10-1	4-Methyl-2-pentanone	ND		125	99.0	79	122	98	21*	66-122/16
74-83-9	Methyl bromide	ND		25	26.3	105	28.3	113	7	59-143/19
74-87-3	Methyl chloride	ND		25	36.3	145	41.1	164*	12	50-159/19
75-09-2	Methylene chloride	ND		25	25.0	100	27.4	110	9	69-135/16
78-93-3	Methyl ethyl ketone	ND		125	94.3	75	117	94	21*	56-143/18
100-42-5	Styrene	ND		25	22.2	89	24.0	96	8	78-119/23
71-55-6	1,1,1-Trichloroethane	ND		25	25.1	100	26.6	106	6	75-130/16
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	19.2	77	22.2	89	14	72-120/14
79-00-5	1,1,2-Trichloroethane	ND		25	21.0	84	23.0	92	9	76-119/14
127-18-4	Tetrachloroethylene	ND		25	23.5	94	24.4	98	4	76-135/16
108-88-3	Toluene	ND		25	22.5	90	23.9	96	6	80-120/14
79-01-6	Trichloroethylene	ND		25	23.8	95	24.9	100	5	81-126/15
75-01-4	Vinyl chloride	ND		25	28.1	112	30.5	122	8	69-159/18
1330-20-7	Xylene (total)	ND		75	72.2	96	76.3	102	6	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12815-1MS	I18731.D	1	03/04/14	WV	n/a	n/a	VI324
FA12815-1MSD	I18732.D	1	03/04/14	WV	n/a	n/a	VI324
FA12815-1 [a]	I18733.D	1	03/04/14	WV	n/a	n/a	VI324

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

FA12815-1

CAS No.	Surrogate Recoveries	MS	MSD	FA12815-1	Limits
1868-53-7	Dibromofluoromethane	104%	103%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	103%	104%	79-125%
2037-26-5	Toluene-D8	93%	92%	96%	85-112%
460-00-4	4-Bromofluorobenzene	94%	91%	98%	83-118%

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

* = 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: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50659-MB	X033519.D	1	03/03/14	FS	02/28/14	OP50659	SX1577

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12815-7, FA12815-8

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: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50659-MB	X033519.D	1	03/03/14	FS	02/28/14	OP50659	SX1577

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12815-7, FA12815-8

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	35%	14-67%
4165-62-2	Phenol-d5	20%	10-50%

Method Blank Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50659-MB	X033519.D	1	03/03/14	FS	02/28/14	OP50659	SX1577

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12815-7, FA12815-8

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	80%	33-118%
4165-60-0	Nitrobenzene-d5	66%	42-108%
321-60-8	2-Fluorobiphenyl	70%	40-106%
1718-51-0	Terphenyl-d14	90%	39-121%

Method Blank Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50665-MB	L0677104.D	1	03/03/14	NAF	03/03/14	OP50665	SL3412

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12815-11

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: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50665-MB	L0677104.D	1	03/03/14	NAF	03/03/14	OP50665	SL3412

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12815-11

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	32%	14-67%
4165-62-2	Phenol-d5	21%	10-50%

Method Blank Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50665-MB	L0677104.D	1	03/03/14	NAF	03/03/14	OP50665	SL3412

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12815-11

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	70%	33-118%
4165-60-0	Nitrobenzene-d5	76%	42-108%
321-60-8	2-Fluorobiphenyl	68%	40-106%
1718-51-0	Terphenyl-d14	79%	39-121%

Blank Spike Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50659-BS	X033518.D	1	03/03/14	FS	02/28/14	OP50659	SX1577

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12815-7, FA12815-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	100	11.3	11	10-69
95-57-8	2-Chlorophenol	50	33.9	68	52-98
59-50-7	4-Chloro-3-methyl phenol	50	33.3	67	54-103
120-83-2	2,4-Dichlorophenol	50	35.2	70	53-103
105-67-9	2,4-Dimethylphenol	50	33.9	68	43-90
51-28-5	2,4-Dinitrophenol	100	66.8	67	44-112
534-52-1	4,6-Dinitro-o-cresol	100	76.7	77	66-121
95-48-7	2-Methylphenol	50	26.9	54	43-90
	3&4-Methylphenol	100	47.5	48	36-88
88-75-5	2-Nitrophenol	50	38.7	77	53-102
100-02-7	4-Nitrophenol	100	18.3	18	18-62
87-86-5	Pentachlorophenol	100	82.3	82	61-115
108-95-2	Phenol	50	11.6	23	19-56
95-95-4	2,4,5-Trichlorophenol	50	36.3	73	62-109
88-06-2	2,4,6-Trichlorophenol	50	39.6	79	59-107
83-32-9	Acenaphthene	50	37.8	76	61-107
208-96-8	Acenaphthylene	50	38.0	76	60-104
120-12-7	Anthracene	50	37.3	75	65-108
56-55-3	Benzo(a)anthracene	50	37.3	75	66-111
50-32-8	Benzo(a)pyrene	50	37.6	75	62-107
205-99-2	Benzo(b)fluoranthene	50	37.3	75	65-114
191-24-2	Benzo(g,h,i)perylene	50	42.0	84	66-116
207-08-9	Benzo(k)fluoranthene	50	39.6	79	65-114
101-55-3	4-Bromophenyl phenyl ether	50	31.4	63* [a]	65-109
85-68-7	Butyl benzyl phthalate	50	35.2	70	65-112
100-51-6	Benzyl Alcohol	50	29.9	60	46-94
91-58-7	2-Chloronaphthalene	50	35.4	71	57-103
106-47-8	4-Chloroaniline	50	31.8	64	49-105
86-74-8	Carbazole	50	37.4	75	59-113
218-01-9	Chrysene	50	39.6	79	66-111
111-91-1	bis(2-Chloroethoxy)methane	50	35.7	71	51-102
111-44-4	bis(2-Chloroethyl)ether	50	34.0	68	53-100
108-60-1	bis(2-Chloroisopropyl)ether	50	30.8	62	45-106
7005-72-3	4-Chlorophenyl phenyl ether	50	34.8	70	62-105
95-50-1	1,2-Dichlorobenzene	50	29.9	60	48-97
541-73-1	1,3-Dichlorobenzene	50	30.0	60	45-95

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50659-BS	X033518.D	1	03/03/14	FS	02/28/14	OP50659	SX1577

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12815-7, FA12815-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
106-46-7	1,4-Dichlorobenzene	50	30.9	62	45-98
121-14-2	2,4-Dinitrotoluene	50	36.2	72	61-110
606-20-2	2,6-Dinitrotoluene	50	36.5	73	63-108
91-94-1	3,3'-Dichlorobenzidine	50	42.1	84	46-117
53-70-3	Dibenzo(a,h)anthracene	50	37.5	75	66-119
132-64-9	Dibenzofuran	50	36.7	73	61-106
84-74-2	Di-n-butyl phthalate	50	32.4	65	65-107
117-84-0	Di-n-octyl phthalate	50	30.2	60* [a]	62-118
84-66-2	Diethyl phthalate	50	31.9	64	64-108
131-11-3	Dimethyl phthalate	50	32.7	65	63-106
117-81-7	bis(2-Ethylhexyl)phthalate	50	36.0	72	61-117
206-44-0	Fluoranthene	50	35.4	71	63-106
86-73-7	Fluorene	50	37.1	74	62-108
118-74-1	Hexachlorobenzene	50	38.7	77	63-108
87-68-3	Hexachlorobutadiene	50	31.7	63	42-102
77-47-4	Hexachlorocyclopentadiene	50	21.8	44	39-102
67-72-1	Hexachloroethane	50	29.5	59	42-100
193-39-5	Indeno(1,2,3-cd)pyrene	50	35.3	71	64-119
78-59-1	Isophorone	50	33.6	67	43-87
91-57-6	2-Methylnaphthalene	50	35.0	70	51-102
88-74-4	2-Nitroaniline	50	38.0	76	54-128
99-09-2	3-Nitroaniline	50	37.3	75	56-106
100-01-6	4-Nitroaniline	50	33.9	68	55-120
91-20-3	Naphthalene	50	35.5	71	47-100
98-95-3	Nitrobenzene	50	32.7	65	50-104
621-64-7	N-Nitroso-di-n-propylamine	50	36.2	72	52-104
86-30-6	N-Nitrosodiphenylamine	50	39.6	79	64-108
85-01-8	Phenanthrene	50	37.8	76	66-110
129-00-0	Pyrene	50	36.6	73	64-113
120-82-1	1,2,4-Trichlorobenzene	50	28.1	56	45-97

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	39%	14-67%
4165-62-2	Phenol-d5	22%	10-50%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50659-BS	X033518.D	1	03/03/14	FS	02/28/14	OP50659	SX1577

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12815-7, FA12815-8

CAS No.	Surrogate Recoveries	BSP	Limits
118-79-6	2,4,6-Tribromophenol	84%	33-118%
4165-60-0	Nitrobenzene-d5	71%	42-108%
321-60-8	2-Fluorobiphenyl	76%	40-106%
1718-51-0	Terphenyl-d14	87%	39-121%

(a) Sporadic marginal failure, within limits in MS/MSD.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50665-BS	L0677103.D	1	03/03/14	NAF	03/03/14	OP50665	SL3412

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12815-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	100	14.1	14	10-69
95-57-8	2-Chlorophenol	50	35.8	72	52-98
59-50-7	4-Chloro-3-methyl phenol	50	38.3	77	54-103
120-83-2	2,4-Dichlorophenol	50	37.3	75	53-103
105-67-9	2,4-Dimethylphenol	50	37.7	75	43-90
51-28-5	2,4-Dinitrophenol	100	91.6	92	44-112
534-52-1	4,6-Dinitro-o-cresol	100	89.7	90	66-121
95-48-7	2-Methylphenol	50	29.9	60	43-90
	3&4-Methylphenol	100	52.0	52	36-88
88-75-5	2-Nitrophenol	50	41.0	82	53-102
100-02-7	4-Nitrophenol	100	30.0	30	18-62
87-86-5	Pentachlorophenol	100	101	101	61-115
108-95-2	Phenol	50	15.0	30	19-56
95-95-4	2,4,5-Trichlorophenol	50	41.4	83	62-109
88-06-2	2,4,6-Trichlorophenol	50	40.6	81	59-107
83-32-9	Acenaphthene	50	43.0	86	61-107
208-96-8	Acenaphthylene	50	42.3	85	60-104
120-12-7	Anthracene	50	39.9	80	65-108
56-55-3	Benzo(a)anthracene	50	41.5	83	66-111
50-32-8	Benzo(a)pyrene	50	40.9	82	62-107
205-99-2	Benzo(b)fluoranthene	50	40.6	81	65-114
191-24-2	Benzo(g,h,i)perylene	50	42.9	86	66-116
207-08-9	Benzo(k)fluoranthene	50	39.6	79	65-114
101-55-3	4-Bromophenyl phenyl ether	50	34.2	68	65-109
85-68-7	Butyl benzyl phthalate	50	38.2	76	65-112
100-51-6	Benzyl Alcohol	50	34.9	70	46-94
91-58-7	2-Chloronaphthalene	50	37.4	75	57-103
106-47-8	4-Chloroaniline	50	39.9	80	49-105
86-74-8	Carbazole	50	42.1	84	59-113
218-01-9	Chrysene	50	42.5	85	66-111
111-91-1	bis(2-Chloroethoxy)methane	50	37.6	75	51-102
111-44-4	bis(2-Chloroethyl)ether	50	36.8	74	53-100
108-60-1	bis(2-Chloroisopropyl)ether	50	38.7	77	45-106
7005-72-3	4-Chlorophenyl phenyl ether	50	38.5	77	62-105
95-50-1	1,2-Dichlorobenzene	50	33.1	66	48-97
541-73-1	1,3-Dichlorobenzene	50	33.3	67	45-95

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50665-BS	L0677103.D	1	03/03/14	NAF	03/03/14	OP50665	SL3412

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12815-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
106-46-7	1,4-Dichlorobenzene	50	33.5	67	45-98
121-14-2	2,4-Dinitrotoluene	50	42.2	84	61-110
606-20-2	2,6-Dinitrotoluene	50	40.7	81	63-108
91-94-1	3,3'-Dichlorobenzidine	50	41.4	83	46-117
53-70-3	Dibenzo(a,h)anthracene	50	43.3	87	66-119
132-64-9	Dibenzofuran	50	41.1	82	61-106
84-74-2	Di-n-butyl phthalate	50	37.9	76	65-107
117-84-0	Di-n-octyl phthalate	50	38.2	76	62-118
84-66-2	Diethyl phthalate	50	39.5	79	64-108
131-11-3	Dimethyl phthalate	50	38.1	76	63-106
117-81-7	bis(2-Ethylhexyl)phthalate	50	39.0	78	61-117
206-44-0	Fluoranthene	50	41.6	83	63-106
86-73-7	Fluorene	50	43.5	87	62-108
118-74-1	Hexachlorobenzene	50	37.5	75	63-108
87-68-3	Hexachlorobutadiene	50	35.0	70	42-102
77-47-4	Hexachlorocyclopentadiene	50	28.9	58	39-102
67-72-1	Hexachloroethane	50	32.7	65	42-100
193-39-5	Indeno(1,2,3-cd)pyrene	50	38.4	77	64-119
78-59-1	Isophorone	50	39.7	79	43-87
91-57-6	2-Methylnaphthalene	50	39.1	78	51-102
88-74-4	2-Nitroaniline	50	42.8	86	54-128
99-09-2	3-Nitroaniline	50	43.5	87	56-106
100-01-6	4-Nitroaniline	50	46.0	92	55-120
91-20-3	Naphthalene	50	39.0	78	47-100
98-95-3	Nitrobenzene	50	37.2	74	50-104
621-64-7	N-Nitroso-di-n-propylamine	50	41.1	82	52-104
86-30-6	N-Nitrosodiphenylamine	50	41.5	83	64-108
85-01-8	Phenanthrene	50	41.7	83	66-110
129-00-0	Pyrene	50	38.7	77	64-113
120-82-1	1,2,4-Trichlorobenzene	50	34.3	69	45-97

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	42%	14-67%
4165-62-2	Phenol-d5	27%	10-50%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50665-BS	L0677103.D	1	03/03/14	NAF	03/03/14	OP50665	SL3412

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12815-11

CAS No.	Surrogate Recoveries	BSP	Limits
118-79-6	2,4,6-Tribromophenol	82%	33-118%
4165-60-0	Nitrobenzene-d5	78%	42-108%
321-60-8	2-Fluorobiphenyl	80%	40-106%
1718-51-0	Terphenyl-d14	90%	39-121%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50659-MS	X033524.D	1	03/03/14	FS	02/28/14	OP50659	SX1577
OP50659-MSD	X033525.D	1	03/03/14	FS	02/28/14	OP50659	SX1577
FA12826-4	X033523.D	1	03/03/14	FS	02/28/14	OP50659	SX1577

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12815-7, FA12815-8

CAS No.	Compound	FA12826-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	47 U		189	52.7	28	57.2	30	8	10-69/39
95-57-8	2-Chlorophenol	4.7 U		94.3	66.7	71	65.2	69	2	52-98/25
59-50-7	4-Chloro-3-methyl phenol	4.7 U		94.3	71.3	76	68.4	73	4	54-103/23
120-83-2	2,4-Dichlorophenol	4.7 U		94.3	73.2	78	70.7	75	3	53-103/26
105-67-9	2,4-Dimethylphenol	4.7 U		94.3	68.6	73	65.8	70	4	43-90/27
51-28-5	2,4-Dinitrophenol	24 U		189	152	81	167	89	9	44-112/25
534-52-1	4,6-Dinitro-o-cresol	9.4 U		189	160	85	167	89	4	66-121/23
95-48-7	2-Methylphenol	4.7 U		94.3	57.4	61	54.4	58	5	43-90/28
	3&4-Methylphenol	4.7 U		189	102	54	98.9	52	3	36-88/28
88-75-5	2-Nitrophenol	4.7 U		94.3	75.6	80	74.3	79	2	53-102/29
100-02-7	4-Nitrophenol	24 U		189	60.3	32	57.5	30	5	18-62/33
87-86-5	Pentachlorophenol	24 U		189	179	95	182	96	2	61-115/26
108-95-2	Phenol	4.7 U		94.3	28.7	30	27.2	29	5	19-56/35
95-95-4	2,4,5-Trichlorophenol	4.7 U		94.3	74.2	79	71.0	75	4	62-109/22
88-06-2	2,4,6-Trichlorophenol	4.7 U		94.3	82.3	87	78.6	83	5	59-107/23
83-32-9	Acenaphthene	4.7 U		94.3	79.8	85	76.9	82	4	61-107/22
208-96-8	Acenaphthylene	4.7 U		94.3	80.7	86	77.6	82	4	60-104/22
120-12-7	Anthracene	4.7 U		94.3	78.6	83	76.5	81	3	65-108/20
56-55-3	Benzo(a)anthracene	4.7 U		94.3	80.6	85	77.2	82	4	66-111/22
50-32-8	Benzo(a)pyrene	4.7 U		94.3	79.1	84	77.1	82	3	62-107/23
205-99-2	Benzo(b)fluoranthene	4.7 U		94.3	80.4	85	75.3	80	7	65-114/23
191-24-2	Benzo(g,h,i)perylene	4.7 U		94.3	85.9	91	84.7	90	1	66-116/23
207-08-9	Benzo(k)fluoranthene	4.7 U		94.3	80.6	85	81.4	86	1	65-114/24
101-55-3	4-Bromophenyl phenyl ether	4.7 U		94.3	67.3	71	65.0	69	3	65-109/23
85-68-7	Butyl benzyl phthalate	4.7 U		94.3	77.0	82	73.5	78	5	65-112/24
100-51-6	Benzyl Alcohol	4.7 U		94.3	67.3	71	64.8	69	4	46-94/27
91-58-7	2-Chloronaphthalene	4.7 U		94.3	75.9	80	72.9	77	4	57-103/23
106-47-8	4-Chloroaniline	4.7 U		94.3	66.6	71	63.8	68	4	49-105/27
86-74-8	Carbazole	4.7 U		94.3	79.5	84	79.0	84	1	59-113/21
218-01-9	Chrysene	4.7 U		94.3	84.9	90	80.3	85	6	66-111/22
111-91-1	bis(2-Chloroethoxy)methane	4.7 U		94.3	71.4	76	69.2	73	3	51-102/28
111-44-4	bis(2-Chloroethyl)ether	4.7 U		94.3	62.9	67	61.9	66	2	53-100/27
108-60-1	bis(2-Chloroisopropyl)ether	4.7 U		94.3	56.7	60	56.2	60	1	45-106/26
7005-72-3	4-Chlorophenyl phenyl ether	4.7 U		94.3	75.1	80	71.8	76	4	62-105/20
95-50-1	1,2-Dichlorobenzene	4.7 U		94.3	63.7	68	61.4	65	4	48-97/24
541-73-1	1,3-Dichlorobenzene	4.7 U		94.3	65.5	69	62.3	66	5	45-95/25

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50659-MS	X033524.D	1	03/03/14	FS	02/28/14	OP50659	SX1577
OP50659-MSD	X033525.D	1	03/03/14	FS	02/28/14	OP50659	SX1577
FA12826-4	X033523.D	1	03/03/14	FS	02/28/14	OP50659	SX1577

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12815-7, FA12815-8

CAS No.	Compound	FA12826-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
106-46-7	1,4-Dichlorobenzene	4.7	U	94.3	67.8	72	63.4	67	7	45-98/25
121-14-2	2,4-Dinitrotoluene	4.7	U	94.3	76.9	82	74.7	79	3	61-110/21
606-20-2	2,6-Dinitrotoluene	4.7	U	94.3	78.3	83	76.2	81	3	63-108/21
91-94-1	3,3'-Dichlorobenzidine	4.7	U	94.3	79.7	84	73.3	78	8	46-117/29
53-70-3	Dibenzo(a,h)anthracene	4.7	U	94.3	76.1	81	75.0	80	1	66-119/24
132-64-9	Dibenzofuran	4.7	U	94.3	78.0	83	75.5	80	3	61-106/21
84-74-2	Di-n-butyl phthalate	4.7	U	94.3	69.7	74	68.6	73	2	65-107/21
117-84-0	Di-n-octyl phthalate	4.7	U	94.3	67.1	71	65.6	70	2	62-118/24
84-66-2	Diethyl phthalate	4.7	U	94.3	69.0	73	67.2	71	3	64-108/21
131-11-3	Dimethyl phthalate	4.7	U	94.3	69.6	74	66.7	71	4	63-106/22
117-81-7	bis(2-Ethylhexyl)phthalate	4.7	U	94.3	78.1	83	75.5	80	3	61-117/23
206-44-0	Fluoranthene	4.7	U	94.3	78.0	83	76.0	81	3	63-106/21
86-73-7	Fluorene	4.7	U	94.3	79.9	85	78.8	84	1	62-108/20
118-74-1	Hexachlorobenzene	4.7	U	94.3	79.9	85	78.6	83	2	63-108/22
87-68-3	Hexachlorobutadiene	4.7	U	94.3	73.3	78	69.3	73	6	42-102/28
77-47-4	Hexachlorocyclopentadiene	4.7	U	94.3	52.7	56	51.4	54	2	39-102/29
67-72-1	Hexachloroethane	4.7	U	94.3	63.3	67	60.4	64	5	42-100/29
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	94.3	72.6	77	70.6	75	3	64-119/24
78-59-1	Isophorone	4.7	U	94.3	69.1	73	66.6	71	4	43-87/25
91-57-6	2-Methylnaphthalene	4.7	U	94.3	75.8	80	72.0	76	5	51-102/26
88-74-4	2-Nitroaniline	4.7	U	94.3	75.0	80	74.2	79	1	54-128/24
99-09-2	3-Nitroaniline	4.7	U	94.3	79.3	84	77.7	82	2	56-106/27
100-01-6	4-Nitroaniline	4.7	U	94.3	73.5	78	71.6	76	3	55-120/24
91-20-3	Naphthalene	4.7	U	94.3	76.2	81	73.0	77	4	47-100/29
98-95-3	Nitrobenzene	4.7	U	94.3	64.0	68	62.5	66	2	50-104/28
621-64-7	N-Nitroso-di-n-propylamine	4.7	U	94.3	69.0	73	68.8	73	0	52-104/25
86-30-6	N-Nitrosodiphenylamine	4.7	U	94.3	81.7	87	80.9	86	1	64-108/23
85-01-8	Phenanthrene	4.7	U	94.3	81.0	86	79.8	85	1	66-110/21
129-00-0	Pyrene	4.7	U	94.3	78.6	83	75.0	80	5	64-113/23
120-82-1	1,2,4-Trichlorobenzene	4.7	U	94.3	60.7	64	57.6	61	5	45-97/28

CAS No.	Surrogate Recoveries	MS	MSD	FA12826-4	Limits
367-12-4	2-Fluorophenol	49%	47%	30%	14-67%
4165-62-2	Phenol-d5	34%	31%	17%	10-50%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50659-MS	X033524.D	1	03/03/14	FS	02/28/14	OP50659	SX1577
OP50659-MSD	X033525.D	1	03/03/14	FS	02/28/14	OP50659	SX1577
FA12826-4	X033523.D	1	03/03/14	FS	02/28/14	OP50659	SX1577

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12815-7, FA12815-8

CAS No.	Surrogate Recoveries	MS	MSD	FA12826-4	Limits
118-79-6	2,4,6-Tribromophenol	90%	89%	86%	33-118%
4165-60-0	Nitrobenzene-d5	72%	70%	70%	42-108%
321-60-8	2-Fluorobiphenyl	81%	78%	78%	40-106%
1718-51-0	Terphenyl-d14	97%	95%	96%	39-121%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50665-MS	L0677124.D	1	03/03/14	NAF	03/03/14	OP50665	SL3413
OP50665-MSD	L0677125.D	1	03/04/14	NAF	03/03/14	OP50665	SL3413
FA12867-3A	L0677123.D	1	03/03/14	NAF	03/03/14	OP50665	SL3413

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12815-11

CAS No.	Compound	FA12867-3A ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	47 U		189	102	54	95.7	51	6	10-69/39
95-57-8	2-Chlorophenol	4.7 U		94.3	62.2	66	56.2	60	10	52-98/25
59-50-7	4-Chloro-3-methyl phenol	4.7 U		94.3	84.1	89	76.4	81	10	54-103/23
120-83-2	2,4-Dichlorophenol	4.7 U		94.3	68.2	72	61.8	66	10	53-103/26
105-67-9	2,4-Dimethylphenol	4.7 U		94.3	73.0	77	70.8	75	3	43-90/27
51-28-5	2,4-Dinitrophenol	24 U		189	170	90	176	93	3	44-112/25
534-52-1	4,6-Dinitro-o-cresol	9.4 U		189	168	89	170	90	1	66-121/23
95-48-7	2-Methylphenol	4.7 U		94.3	60.3	64	56.5	60	7	43-90/28
	3&4-Methylphenol	4.7 U		189	115	61	105	56	9	36-88/28
88-75-5	2-Nitrophenol	4.7 U		94.3	65.7	70	62.3	66	5	53-102/29
100-02-7	4-Nitrophenol	24 U		189	93.7	50	90.5	48	3	18-62/33
87-86-5	Pentachlorophenol	24 U		189	221	117*	222	118*	0	61-115/26
108-95-2	Phenol	4.7 U		94.3	39.7	42	36.6	39	8	19-56/35
95-95-4	2,4,5-Trichlorophenol	4.7 U		94.3	75.0	80	74.3	79	1	62-109/22
88-06-2	2,4,6-Trichlorophenol	4.7 U		94.3	74.5	79	73.5	78	1	59-107/23
83-32-9	Acenaphthene	4.7 U		94.3	75.7	80	74.4	79	2	61-107/22
208-96-8	Acenaphthylene	4.7 U		94.3	76.4	81	73.7	78	4	60-104/22
120-12-7	Anthracene	4.7 U		94.3	80.9	86	79.3	84	2	65-108/20
56-55-3	Benzo(a)anthracene	4.7 U		94.3	79.0	84	77.3	82	2	66-111/22
50-32-8	Benzo(a)pyrene	4.7 U		94.3	78.4	83	75.6	80	4	62-107/23
205-99-2	Benzo(b)fluoranthene	4.7 U		94.3	76.9	82	73.4	78	5	65-114/23
191-24-2	Benzo(g,h,i)perylene	4.7 U		94.3	81.6	86	81.8	87	0	66-116/23
207-08-9	Benzo(k)fluoranthene	4.7 U		94.3	76.3	81	75.8	80	1	65-114/24
101-55-3	4-Bromophenyl phenyl ether	4.7 U		94.3	67.0	71	65.5	69	2	65-109/23
85-68-7	Butyl benzyl phthalate	4.7 U		94.3	71.0	75	70.4	75	1	65-112/24
100-51-6	Benzyl Alcohol	4.7 U		94.3	71.9	76	68.3	72	5	46-94/27
91-58-7	2-Chloronaphthalene	4.7 U		94.3	69.1	73	66.8	71	3	57-103/23
106-47-8	4-Chloroaniline	4.7 U		94.3	89.8	95	84.9	90	6	49-105/27
86-74-8	Carbazole	4.7 U		94.3	84.8	90	82.2	87	3	59-113/21
218-01-9	Chrysene	4.7 U		94.3	83.1	88	81.6	86	2	66-111/22
111-91-1	bis(2-Chloroethoxy)methane	4.7 U		94.3	65.9	70	63.9	68	3	51-102/28
111-44-4	bis(2-Chloroethyl)ether	4.7 U		94.3	63.5	67	57.3	61	10	53-100/27
108-60-1	bis(2-Chloroisopropyl)ether	4.7 U		94.3	66.8	71	61.3	65	9	45-106/26
7005-72-3	4-Chlorophenyl phenyl ether	4.7 U		94.3	71.0	75	69.1	73	3	62-105/20
95-50-1	1,2-Dichlorobenzene	4.7 U		94.3	55.7	59	54.7	58	2	48-97/24
541-73-1	1,3-Dichlorobenzene	4.7 U		94.3	55.7	59	53.9	57	3	45-95/25

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50665-MS	L0677124.D	1	03/03/14	NAF	03/03/14	OP50665	SL3413
OP50665-MSD	L0677125.D	1	03/04/14	NAF	03/03/14	OP50665	SL3413
FA12867-3A	L0677123.D	1	03/03/14	NAF	03/03/14	OP50665	SL3413

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12815-11

CAS No.	Compound	FA12867-3A ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
106-46-7	1,4-Dichlorobenzene	4.7 U		94.3	58.5	62	56.7	60	3	45-98/25
121-14-2	2,4-Dinitrotoluene	4.7 U		94.3	78.5	83	72.3	77	8	61-110/21
606-20-2	2,6-Dinitrotoluene	4.7 U		94.3	78.8	84	76.4	81	3	63-108/21
91-94-1	3,3'-Dichlorobenzidine	4.7 U		94.3	10.5	11*	14.9	16*	35*	46-117/29
53-70-3	Dibenzo(a,h)anthracene	4.7 U		94.3	83.5	89	82.9	88	1	66-119/24
132-64-9	Dibenzofuran	4.7 U		94.3	76.6	81	75.2	80	2	61-106/21
84-74-2	Di-n-butyl phthalate	4.7 U		94.3	74.0	78	73.1	77	1	65-107/21
117-84-0	Di-n-octyl phthalate	4.7 U		94.3	71.5	76	68.6	73	4	62-118/24
84-66-2	Diethyl phthalate	4.7 U		94.3	72.0	76	68.4	73	5	64-108/21
131-11-3	Dimethyl phthalate	4.7 U		94.3	67.4	71	66.6	71	1	63-106/22
117-81-7	bis(2-Ethylhexyl)phthalate	4.7 U		94.3	75.6	80	73.0	77	3	61-117/23
206-44-0	Fluoranthene	4.7 U		94.3	84.3	89	80.6	85	4	63-106/21
86-73-7	Fluorene	2.7	I	94.3	84.2	86	79.6	82	6	62-108/20
118-74-1	Hexachlorobenzene	4.7 U		94.3	76.9	82	77.5	82	1	63-108/22
87-68-3	Hexachlorobutadiene	4.7 U		94.3	60.8	64	59.6	63	2	42-102/28
77-47-4	Hexachlorocyclopentadiene	4.7 U		94.3	46.5	49	47.0	50	1	39-102/29
67-72-1	Hexachloroethane	4.7 U		94.3	58.1	62	56.9	60	2	42-100/29
193-39-5	Indeno(1,2,3-cd)pyrene	4.7 U		94.3	75.9	80	75.8	80	0	64-119/24
78-59-1	Isophorone	4.7 U		94.3	70.8	75	65.9	70	7	43-87/25
91-57-6	2-Methylnaphthalene	21.6		94.3	90.8	73	83.0	65	9	51-102/26
88-74-4	2-Nitroaniline	4.7 U		94.3	81.4	86	83.6	89	3	54-128/24
99-09-2	3-Nitroaniline	4.7 U		94.3	73.9	78	72.2	77	2	56-106/27
100-01-6	4-Nitroaniline	4.7 U		94.3	71.1	75	72.1	76	1	55-120/24
91-20-3	Naphthalene	26.3		94.3	92.8	70	89.9	67	3	47-100/29
98-95-3	Nitrobenzene	4.7 U		94.3	63.5	67	64.6	68	2	50-104/28
621-64-7	N-Nitroso-di-n-propylamine	4.7 U		94.3	71.4	76	65.6	70	8	52-104/25
86-30-6	N-Nitrosodiphenylamine	4.7 U		94.3	87.5	93	85.4	91	2	64-108/23
85-01-8	Phenanthrene	1.0	I	94.3	84.0	88	82.5	86	2	66-110/21
129-00-0	Pyrene	4.7 U		94.3	77.6	82	75.8	80	2	64-113/23
120-82-1	1,2,4-Trichlorobenzene	4.7 U		94.3	59.0	63	55.2	59	7	45-97/28

CAS No.	Surrogate Recoveries	MS	MSD	FA12867-3A Limits
367-12-4	2-Fluorophenol	51%	49%	33% 14-67%
4165-62-2	Phenol-d5	40%	38%	22% 10-50%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50665-MS	L0677124.D	1	03/03/14	NAF	03/03/14	OP50665	SL3413
OP50665-MSD	L0677125.D	1	03/04/14	NAF	03/03/14	OP50665	SL3413
FA12867-3A	L0677123.D	1	03/03/14	NAF	03/03/14	OP50665	SL3413

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12815-11

CAS No.	Surrogate Recoveries	MS	MSD	FA12867-3A Limits	
118-79-6	2,4,6-Tribromophenol	90%	88%	77%	33-118%
4165-60-0	Nitrobenzene-d5	70%	68%	70%	42-108%
321-60-8	2-Fluorobiphenyl	74%	72%	65%	40-106%
1718-51-0	Terphenyl-d14	90%	87%	69%	39-121%

* = Outside of Control Limits.

Southeast ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF905-MB	FF22446.D	1	02/28/14	CP	n/a	n/a	GFF905

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

FA12815-7, FA12815-8

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	

Method Blank Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF906-MB	FF22475.D	1	03/03/14	CP	n/a	n/a	GFF906

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

FA12815-10

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: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF905-BS	FF22447.D	1	02/28/14	CP	n/a	n/a	GFF905

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

FA12815-7, FA12815-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	108	111	103	61-144
74-84-0	Ethane	219	215	98	64-143
74-85-1	Ethene	290	291	100	64-141

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF906-BS	FF22476.D	1	03/03/14	CP	n/a	n/a	GFF906

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

FA12815-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	108	114	106	61-144
74-84-0	Ethane	219	228	104	64-143
74-85-1	Ethene	290	305	105	64-141

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12791-1MS	FF22452.D	1	02/28/14	CP	n/a	n/a	GFF905
FA12791-1	FF22448.D	1	02/28/14	CP	n/a	n/a	GFF905

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

FA12815-7, FA12815-8

CAS No.	Compound	FA12791-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	10.1		108	110	93	61-144
74-84-0	Ethane	ND		219	208	95	64-143
74-85-1	Ethene	ND		290	282	97	64-141

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12856-6MS	FF22489.D	1	03/03/14	CP	n/a	n/a	GFF906
FA12856-6	FF22481.D	1	03/03/14	CP	n/a	n/a	GFF906

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

FA12815-10

CAS No.	Compound	FA12856-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	8.4		108	102	87	61-144
74-84-0	Ethane	ND		219	195	89	64-143
74-85-1	Ethene	ND		290	263	91	64-141

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12791-2DUP	FF22454.D	1	02/28/14	CP	n/a	n/a	GFF905
FA12791-2	FF22449.D	1	02/28/14	CP	n/a	n/a	GFF905

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

FA12815-7, FA12815-8

CAS No.	Compound	FA12791-2 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	26.8		31.2		15	33
74-84-0	Ethane	ND		ND		nc	20
74-85-1	Ethene	ND		ND		nc	19

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA12815
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12856-5DUP	FF22488.D	1	03/03/14	CP	n/a	n/a	GFF906
FA12856-5	FF22480.D	1	03/03/14	CP	n/a	n/a	GFF906

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

FA12815-10

CAS No.	Compound	FA12856-5 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	7.6		7.6		0	33
74-84-0	Ethane	ND		ND		nc	20
74-85-1	Ethene	ND		ND		nc	19

* = 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: FA12815
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26894
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/03/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	15	15		
Antimony	6.0	2	2.3	0.50	<6.0
Arsenic	10	2	2.4	-1.9	<10
Barium	200	1	1		
Beryllium	4.0	.5	.5	0.10	<4.0
Cadmium	5.0	.5	.5	0.0	<5.0
Calcium	1000	50	50		
Chromium	10	1	2	-0.10	<10
Cobalt	50	.5	.5		
Copper	25	1	1	1.2	<25
Iron	300	17	17		
Lead	5.0	1.1	1.1	-0.70	<5.0
Magnesium	5000	50	56		
Manganese	15	.5	1		
Molybdenum	50	.5	.5		
Nickel	40	.5	.5	-0.20	<40
Potassium	10000	200	200		
Selenium	10	2.3	2.3	1.6	<10
Silver	10	.65	.77	-0.40	<10
Sodium	10000	500	500		
Strontium	10	.4	.4		
Thallium	10	1.5	2	-2.0	<10
Tin	50	.7	1		
Titanium	10	.9	1		
Vanadium	50	.5	.5		
Zinc	20	3	3	1.7	<20

Associated samples MP26894: FA12815-7, FA12815-8, FA12815-11

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: FA12815
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26894
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:			03/03/14					03/03/14	
Metal	FA12853-1 Original	DUP	RPD	QC Limits	FA12853-1 Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum									
Antimony	0.0	0.0	NC	0-20	0.0	496	500	99.2	80-120
Arsenic	0.0	0.0	NC	0-20	0.0	1970	2000	98.5	80-120
Barium	anr								
Beryllium	0.0	0.0	NC	0-20	0.0	52.6	50	105.2	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	49.1	50	98.2	80-120
Calcium									
Chromium	0.0	0.0	NC	0-20	0.0	210	200	105.0	80-120
Cobalt									
Copper	1.6	1.1	37.0 (a)	0-20	1.6	259	250	103.0	80-120
Iron	anr								
Lead	0.0	0.0	NC	0-20	0.0	487	500	97.4	80-120
Magnesium									
Manganese	anr								
Molybdenum									
Nickel	0.0	0.0	NC	0-20	0.0	513	500	102.6	80-120
Potassium									
Selenium	0.0	0.0	NC	0-20	0.0	1960	2000	98.0	80-120
Silver	0.0	0.0	NC	0-20	0.0	49.1	50	98.2	80-120
Sodium									
Strontium									
Thallium	0.0	0.0	NC	0-20	0.0	1940	2000	97.0	80-120
Tin									
Titanium									
Vanadium									
Zinc	6.4	7.1	10.4	0-20	6.4	507	500	100.1	80-120

Associated samples MP26894: FA12815-7, FA12815-8, FA12815-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA12815
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26894
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/03/14

Metal	FA12853-1 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.0	509	500	101.8	2.6	20
Arsenic	0.0	2020	2000	101.0	2.5	20
Barium	anr					
Beryllium	0.0	53.6	50	107.2	1.9	20
Cadmium	0.0	50.1	50	100.2	2.0	20
Calcium						
Chromium	0.0	213	200	106.5	1.4	20
Cobalt						
Copper	1.6	264	250	105.0	1.9	20
Iron	anr					
Lead	0.0	494	500	98.8	1.4	20
Magnesium						
Manganese	anr					
Molybdenum						
Nickel	0.0	523	500	104.6	1.9	20
Potassium						
Selenium	0.0	2010	2000	100.5	2.5	20
Silver	0.0	49.9	50	99.8	1.6	20
Sodium						
Strontium						
Thallium	0.0	1980	2000	99.0	2.0	20
Tin						
Titanium						
Vanadium						
Zinc	6.4	517	500	102.1	2.0	20

Associated samples MP26894: FA12815-7, FA12815-8, FA12815-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12815
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26894
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/03/14

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum				
Antimony	492	500	98.4	80-120
Arsenic	1960	2000	98.0	80-120
Barium	anr			
Beryllium	51.9	50	103.8	80-120
Cadmium	48.8	50	97.6	80-120
Calcium				
Chromium	208	200	104.0	80-120
Cobalt				
Copper	256	250	102.4	80-120
Iron	anr			
Lead	484	500	96.8	80-120
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	510	500	102.0	80-120
Potassium				
Selenium	1960	2000	98.0	80-120
Silver	48.6	50	97.2	80-120
Sodium				
Strontium				
Thallium	1930	2000	96.5	80-120
Tin				
Titanium				
Vanadium				
Zinc	500	500	100.0	80-120

Associated samples MP26894: FA12815-7, FA12815-8, FA12815-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12815
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26894
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/03/14

Metal	FA12853-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	0.00	0.00	NC	0-10
Arsenic	0.00	0.00	NC	0-10
Barium	anr			
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	0.00	0.00	NC	0-10
Cobalt				
Copper	1.60	0.00	100.0(a)	0-10
Iron	anr			
Lead	0.00	0.00	NC	0-10
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	0.00	0.00	NC	0-10
Potassium				
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium				
Zinc	6.40	0.00	100.0(a)	0-10

Associated samples MP26894: FA12815-7, FA12815-8, FA12815-11

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: FA12815
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26894
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/03/14

Metal	Sample ml	Final ml	FA12853-1 Raw	FA12853-1 Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10			103.4	0.2	5	100	103.4	80-120
Arsenic	9.8	10			102.2	0.2	5	100	102.2	80-120
Barium										
Beryllium	9.8	10			54.4	0.2	2.5	50	108.8	80-120
Cadmium	9.8	10			52.6	0.2	2.5	50	105.2	80-120
Calcium										
Chromium	9.8	10			55.2	0.2	2.5	50	110.4	80-120
Cobalt										
Copper	9.8	10	1.6	1.568	105.3	0.2	5	100	103.7	80-120
Iron										
Lead	9.8	10			49.3	0.2	2.5	50	98.6	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel	9.8	10			107.2	0.2	5	100	107.2	80-120
Potassium										
Selenium	9.8	10			100.8	0.2	5	100	100.8	80-120
Silver	9.8	10			52.6	0.2	2.5	50	105.2	80-120
Sodium										
Strontium										
Thallium	9.8	10			97.1	0.2	5	100	97.1	80-120
Tin										
Titanium										
Vanadium										
Zinc	9.8	10	6.4	6.272	275.4	0.2	12.5	250	107.7	80-120

Associated samples MP26894: FA12815-7, FA12815-8, FA12815-11

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA12815
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26905
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/05/14

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	0.012	<0.50

Associated samples MP26905: FA12815-7, FA12815-8, FA12815-11

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: FA12815
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26905
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/05/14 03/05/14

Metal	FA12934-1 Original	DUP	RPD	QC Limits	FA12934-1 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	2.9	3	96.7	80-120

Associated samples MP26905: FA12815-7, FA12815-8, FA12815-11

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: FA12815
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26905
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/05/14

Metal	FA12934-1 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.0	3	100.0	3.4	20

Associated samples MP26905: FA12815-7, FA12815-8, FA12815-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12815
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26905
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/05/14

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	80-120

Associated samples MP26905: FA12815-7, FA12815-8, FA12815-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12815
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26905
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/05/14

Metal	FA12934-1 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP26905: FA12815-7, FA12815-8, FA12815-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

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: FA12815
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	GP23547/GN60422	2.0	0.0	mg/l	50	51.5	103.0	90-110%
Chromium, Hexavalent	GN60367	0.010	0.0	mg/l	.100	0.098	97.7	85-115%
Nitrogen, Nitrate	GP23547/GN60422	0.10	0.0	mg/l	2.5	2.48	99.2	90-110%
Nitrogen, Nitrite	GP23547/GN60422	0.10	0.0	mg/l	2.5	2.74	109.6	90-110%
Sulfate	GP23547/GN60422	2.0	0.0	mg/l	50	54.4	108.8	90-110%
Total Organic Carbon	GP23546/GN60387	1.0	0.0	mg/l	15	16.2	108.0	90-110%

Associated Samples:
Batch GN60367: FA12815-11
Batch GP23546: FA12815-7, FA12815-8, FA12815-10
Batch GP23547: FA12815-7, FA12815-8, FA12815-10
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA12815
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	GP23546/GN60387	FA12815-7	mg/l	0.55	0.54	1.8	0-20%

Associated Samples:
Batch GP23546: FA12815-7, FA12815-8, FA12815-10
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA12815
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	GP23547/GN60422	FA12815-7	mg/l	7.0	50	61.4	108.8	90-110%
Chromium, Hexavalent	GN60367	FA12815-11	mg/l	0.019	.100	0.11	86.8(a)	85-115%
Nitrogen, Nitrate	GP23547/GN60422	FA12815-7	mg/l	0.44	2.5	3.1	106.4	90-110%
Nitrogen, Nitrite	GP23547/GN60422	FA12815-7	mg/l	0.050 U	2.5	2.9	116.0N(a)	90-110%
Sulfate	GP23547/GN60422	FA12815-7	mg/l	4.5	50	61.3	113.6N(a)	90-110%
Total Organic Carbon	GP23546/GN60387	FA12815-7	mg/l	0.55	15	16.7	107.7	90-110%

Associated Samples:
Batch GN60367: FA12815-11
Batch GP23546: FA12815-7, FA12815-8, FA12815-10
Batch GP23547: FA12815-7, FA12815-8, FA12815-10
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery indicates possible matrix interference.

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA12815
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	GP23547/GN60422	FA12815-7	mg/l	7.0	50	61.1	0.5	20%
Chromium, Hexavalent	GN60367	FA12815-11	mg/l	0.019	.100	0.107	0.9	20%
Nitrogen, Nitrate	GP23547/GN60422	FA12815-7	mg/l	0.44	2.5	3.1	0.0	20%
Nitrogen, Nitrite	GP23547/GN60422	FA12815-7	mg/l	0.050 U	2.5	2.9	0.0	20%
Sulfate	GP23547/GN60422	FA12815-7	mg/l	4.5	50	60.5	1.3	20%

Associated Samples:
Batch GN60367: FA12815-11
Batch GP23547: FA12815-7, FA12815-8, FA12815-10
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Southeast
ACCUTEST LABORATORIES

03/26/14

Technical Report for

United Technologies Corporation

AECOMSCG: Delavan Spray Technologies; Bamberg, SC

60314964

Accutest Job Number: FA12854

Sampling Date: 02/27/14

Report to:

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Greenville, SC 29615
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ATTN: Doria Cullom

Total number of pages in report: **133**

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Harry Behzadi, Ph.D.
Laboratory Director

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Accutest Laboratories

Sample Summary

United Technologies Corporation

Job No: FA12854

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA12854-1	02/27/14	10:00	LARM	02/28/14	SO	Soil	DPT-28 (3-5)
FA12854-2	02/27/14	10:35	LARM	02/28/14	SO	Soil	DPT-30 (7-9)
FA12854-3	02/27/14	10:55	LARM	02/28/14	SO	Soil	DPT-31 (5-7)
FA12854-4	02/27/14	12:00	LARM	02/28/14	SO	Soil	DPT-29 (2-4)
FA12854-5	02/27/14	13:30	LARM	02/28/14	SO	Soil	DPT-32 (8-10)
FA12854-6	02/27/14	14:40	LARM	02/28/14	SO	Soil	DPT-33 (6-8)
FA12854-7	02/27/14	16:38	LARM	02/28/14	SO	Soil	BG-5 (12-13)
FA12854-8	02/27/14	16:10	LARM	02/28/14	SO	Soil	BG-5 (1-3)
FA12854-9	02/27/14	16:15	LARM	02/28/14	SO	Soil	BG-5 (3-5)
FA12854-10	02/27/14	16:25	LARM	02/28/14	SO	Soil	BG-5 (6-7.5)
FA12854-11	02/27/14	16:30	LARM	02/28/14	SO	Soil	BG-5 (8-9)
FA12854-12	02/27/14	16:45	LARM	02/28/14	SO	Soil	BG-5 (16-17)
FA12854-13	02/27/14	17:15	LARM	02/28/14	SO	Soil	BG-4 (1-3)

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

Sample Summary
(continued)

United Technologies Corporation

Job No: FA12854

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA12854-14	02/27/14	17:20	LARM	02/28/14	SO	Soil	BG-4 (5-7)
FA12854-15	02/27/14	17:15	LARM	02/28/14	SO	Soil	BG-4 (1-3)A

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

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: United Technologies Corporation **Job No:** FA12854

Site: AECOMSCG: Delavan Spray Technologies; Bamberg, SC **Report Date** 3/26/2014 10:05:31 AM

14 Samples were collected on 02/27/2014 and were received at Accutest SE on 02/28/2014 properly preserved, at 2.2 Deg. C and intact. These Samples received an Accutest job number of FA12854. 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: SO **Batch ID:** VF2083

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12854-3MS, FA12854-3MSD were used as the QC samples indicated.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for Tetrachloroethylene are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

FA12854-1: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12854-2: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12854-3: Confirmation run for internal standard areas.

Matrix: SO **Batch ID:** VF2084

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12884-1MS, FA12884-1MSD were used as the QC samples indicated.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for Tetrachloroethylene are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

Extractables by GCMS By Method SW846 8270D

Matrix: SO **Batch ID:** OP50690

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) FA12790-12RMS, FA12790-12RMSD were used as the QC samples indicated.

Blank Spike Recovery(s) for 2,4-Dimethylphenol, Benzo(a)anthracene, Benzo(a)pyrene, Chrysene, Isophorone are outside control limits. Blank Spike recoveries are biased high. Analytes are non-detect in associated samples; therefore data integrity is not compromised.

Matrix Spike Recovery(s) for 2,4-Dimethylphenol, 4-Nitrophenol, Acenaphthylene, Isophorone are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 2,4,6-Trichlorophenol, 2,4-Dichlorophenol, 2,4-Dimethylphenol, 2,6-Dinitrotoluene, 2-Nitrophenol, Acenaphthylene, Benzo(a)anthracene, Benzo(a)pyrene, Benzyl Alcohol, Isophorone, N-Nitroso-di-n-propylamine, N-Nitrosodiphenylamine, Pentachlorophenol are outside control limits. Probable cause is due to matrix interference.

Sample(s) OP50690-MB, OP50690-BS have surrogates outside control limits.

OP50690-MB for Terphenyl-d14: Outside control limits.

OP50690-BS for Phenol-d5: Outside control limits.

OP50690-BS for Terphenyl-d14: Outside control limits.

Sample(s) OP50690-MS, OP50690-MSD, FA12854-3 have surrogates outside control limits. Probable cause is due to matrix interference.

Extractables by GCMS By Method SW846 8270D

Matrix: SO **Batch ID:** OP50690

FA12854-3 for 2-Fluorophenol: Outside control limits. However, sample was ND.

FA12854-3 for Phenol-d5: Outside control limits. However, sample was ND.

FA12854-3 for Nitrobenzene-d5: Outside control limits. However, sample was ND.

FA12854-3 for Terphenyl-d14: Outside control limits. However, sample was ND.

FA12854-1 for 2,4-Dimethylphenol: Associated BS recovery outside control limits.

FA12854-1 for Benzo(a)anthracene: Associated BS recovery outside control limits.

FA12854-1 for Benzo(a)pyrene: Associated BS recovery outside control limits.

FA12854-1 for Chrysene: Associated BS recovery outside control limits.

FA12854-1 for Isophorone: Associated BS recovery outside control limits.

FA12854-2 for 2,4-Dimethylphenol: Associated BS recovery outside control limits.

FA12854-2 for Benzo(a)anthracene: Associated BS recovery outside control limits.

FA12854-2 for Benzo(a)pyrene: Associated BS recovery outside control limits.

FA12854-2 for Chrysene: Associated BS recovery outside control limits.

FA12854-2 for Isophorone: Associated BS recovery outside control limits.

FA12854-3 for 2,4-Dimethylphenol: Associated BS recovery outside control limits.

FA12854-3 for Benzo(a)anthracene: Associated BS recovery outside control limits.

FA12854-3 for Benzo(a)pyrene: Associated BS recovery outside control limits.

FA12854-3 for Chrysene: Associated BS recovery outside control limits.

FA12854-3 for Isophorone: Associated BS recovery outside control limits.

FA12854-4 for 2,4-Dimethylphenol: Associated BS recovery outside control limits.

FA12854-4 for Benzo(a)pyrene: Associated BS recovery outside control limits.

FA12854-4 for Benzo(a)anthracene: Associated BS recovery outside control limits.

FA12854-4 for Chrysene: Associated BS recovery outside control limits.

FA12854-4 for Isophorone: Associated BS recovery outside control limits.

FA12854-5 for 2,4-Dimethylphenol: Associated BS recovery outside control limits.

FA12854-5 for Benzo(a)anthracene: Associated BS recovery outside control limits.

FA12854-5 for Benzo(a)pyrene: Associated BS recovery outside control limits.

FA12854-5 for Chrysene: Associated BS recovery outside control limits.

FA12854-5 for Isophorone: Associated BS recovery outside control limits.

FA12854-6 for 2,4-Dimethylphenol: Associated BS recovery outside control limits.

FA12854-6 for Benzo(a)anthracene: Associated BS recovery outside control limits.

FA12854-6 for Benzo(a)pyrene: Associated BS recovery outside control limits.

FA12854-6 for Chrysene: Associated BS recovery outside control limits.

FA12854-6 for Isophorone: Associated BS recovery outside control limits.

Metals By Method SW846 6010C

Matrix: SO **Batch ID:** MP26900

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) FA12814-11DUP, FA12814-11MS, FA12814-11MSD, FA12814-11PS, FA12814-11SDL were used as the QC samples for metals.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for Arsenic, Antimony, Chromium, Selenium are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

RPD(s) for Duplicate for Arsenic, Copper, Silver are outside control limits for sample MP26900-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for MSD for Antimony, Chromium, Selenium are outside control limits for sample MP26900-S2. High RPD due to possible sample non-homogeneity.

Metals By Method SW846 6010C

Matrix: SO **Batch ID:** MP26900

RPD(s) for Serial Dilution for Arsenic, Beryllium, Nickel, Selenium, Silver, Zinc are outside control limits for sample MP26900-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP26900-SD1 for Chromium: Serial dilution indicates possible matrix interference.

MP26900-SD1 for Copper: Serial dilution indicates possible matrix interference.

FA12854-8 for Antimony: Elevated reporting limit(s) due to matrix interference.

FA12854-8 for Arsenic: Elevated reporting limit(s) due to matrix interference.

FA12854-8 for Beryllium: Elevated reporting limit(s) due to matrix interference.

FA12854-8 for Cadmium: Elevated reporting limit(s) due to matrix interference.

FA12854-8 for Chromium: Elevated reporting limit(s) due to matrix interference.

FA12854-8 for Copper: Elevated reporting limit(s) due to matrix interference.

FA12854-8 for Lead: Elevated reporting limit(s) due to matrix interference.

FA12854-8 for Nickel: Elevated reporting limit(s) due to matrix interference.

FA12854-8 for Selenium: Elevated reporting limit(s) due to matrix interference.

FA12854-8 for Silver: Elevated reporting limit(s) due to matrix interference.

FA12854-8 for Thallium: Elevated reporting limit(s) due to matrix interference.

FA12854-8 for Zinc: Elevated reporting limit(s) due to matrix interference.

Matrix: SO **Batch ID:** MP26903

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) FA12829-1DUP, FA12829-1MS, FA12829-1MSD, FA12829-1PS, FA12829-1SDL were used as the QC samples for metals.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for Arsenic, Chromium, Selenium, Antimony are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

RPD(s) for Duplicate for Arsenic are outside control limits for sample MP26903-D1. High RPD due to possible sample non-homogeneity.

MP26903-D1 for Beryllium: RPD acceptable due to low duplicate and sample concentrations.

MP26903-D1 for Copper: RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for MSD for Antimony are outside control limits for sample MP26903-S2. High RPD due to possible sample non-homogeneity.

RPD(s) for Serial Dilution for Copper are outside control limits for sample MP26903-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP26903-PS1 for Chromium: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

FA12854-10 for Beryllium: Elevated reporting limit(s) due to matrix interference.

FA12854-10 for Thallium: Elevated reporting limit(s) due to matrix interference. Manually elevated.

FA12854-11 for Antimony: Elevated reporting limit(s) due to matrix interference.

FA12854-11 for Arsenic: Elevated reporting limit(s) due to matrix interference.

FA12854-11 for Beryllium: Elevated reporting limit(s) due to matrix interference.

FA12854-11 for Cadmium: Elevated reporting limit(s) due to matrix interference.

FA12854-11 for Chromium: Elevated reporting limit(s) due to matrix interference.

FA12854-11 for Copper: Elevated reporting limit(s) due to matrix interference.

FA12854-11 for Lead: Elevated reporting limit(s) due to matrix interference.

FA12854-11 for Nickel: Elevated reporting limit(s) due to matrix interference.

FA12854-11 for Selenium: Elevated reporting limit(s) due to matrix interference.

FA12854-11 for Silver: Elevated reporting limit(s) due to matrix interference.

FA12854-11 for Thallium: Elevated reporting limit(s) due to matrix interference.

FA12854-11 for Zinc: Elevated reporting limit(s) due to matrix interference.

Metals By Method SW846 6010C

Matrix: SO **Batch ID:** MP26903

FA12854-12 for Antimony: Elevated reporting limit(s) due to matrix interference.

FA12854-12 for Arsenic: Elevated reporting limit(s) due to matrix interference.

FA12854-12 for Beryllium: Elevated reporting limit(s) due to matrix interference.

FA12854-12 for Cadmium: Elevated reporting limit(s) due to matrix interference.

FA12854-12 for Chromium: Elevated reporting limit(s) due to matrix interference.

FA12854-12 for Copper: Elevated reporting limit(s) due to matrix interference.

FA12854-12 for Lead: Elevated reporting limit(s) due to matrix interference.

FA12854-12 for Nickel: Elevated reporting limit(s) due to matrix interference.

FA12854-12 for Selenium: Elevated reporting limit(s) due to matrix interference.

FA12854-12 for Silver: Elevated reporting limit(s) due to matrix interference.

FA12854-12 for Thallium: Elevated reporting limit(s) due to matrix interference.

FA12854-12 for Zinc: Elevated reporting limit(s) due to matrix interference.

Matrix: SO **Batch ID:** MP26909

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) FA12829-4DUP, FA12829-4MS, FA12829-4MSD, FA12829-4PS, FA12829-4SDL were used as the QC samples for metals.

Matrix Spike Recovery(s) for Antimony, Arsenic, Chromium, Copper, Selenium are outside control limits. Spike recovery indicates possible matrix interference and/or sample non-homogeneity. For method performance in a clean matrix, refer to Blank Spike.

Matrix Spike Duplicate Recovery(s) for Arsenic, Chromium, Selenium, Antimony are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

RPD(s) for Duplicate for Copper are outside control limits for sample MP26909-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for MSD for Antimony are outside control limits for sample MP26909-S2. High RPD due to possible sample non-homogeneity.

RPD(s) for Serial Dilution for Cadmium, Zinc are outside control limits for sample MP26909-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP26909-SD1 for Chromium: Serial dilution indicates possible matrix interference.

MP26909-PS1 for Antimony: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

Metals By Method SW846 7471B

Matrix: SO **Batch ID:** MP26913

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) FA12814-11DUP, FA12814-11MS, FA12814-11MSD, FA12814-11SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Mercury are outside control limits for sample MP26913-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Matrix: SO **Batch ID:** MP26919

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) FA12977-7DUP, FA12977-7MS, FA12977-7MSD, FA12977-7SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Mercury are outside control limits for sample MP26919-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Wet Chemistry By Method SM19 2540G

Matrix: SO **Batch ID:** GN60391

Sample(s) FA12854-14DUP was used as the QC samples for Solids, Percent.

Matrix: SO **Batch ID:** GN60430

Sample(s) FA12854-4DUP was used as the QC samples for Solids, Percent.

Matrix: SO **Batch ID:** GN60461

Sample(s) FA13023-1DUP was used as the QC samples for Solids, Percent.

Matrix: SO **Batch ID:** GN60485

Sample(s) FA12854-7DUP was used as the QC samples for Solids, Percent.

Wet Chemistry By Method SW846 3060A/7196A

Matrix: SO **Batch ID:** GN60732

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12854-12DUP, FA12854-12MS were used as the QC samples for Chromium, Hexavalent.

Matrix Spike Recovery(s) for Chromium, Hexavalent are outside control limits. High recovery on insoluble XCR matrix spike (Out of control Limits).

FA12854-1 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12854-2 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12854-3 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12854-4 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12854-5 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12854-6 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12854-7 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12854-8 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12854-9 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12854-10 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12854-11 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12854-12 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12854-13 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12854-14 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

Wet Chemistry By Method SW846 9045D

Matrix: SO **Batch ID:** GN60429

Sample(s) FA12235-2ATDUP was used as the QC samples for pH.

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: March 26, 2014

Lovelie Metzgar, QA Officer (signature on file)

Summary of Hits

Job Number: FA12854
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 02/27/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA12854-1	**DPT-28 (3-5)**					
Arsenic		0.65	0.57	0.11	mg/kg	SW846 6010C
Beryllium		0.046 J	0.29	0.029	mg/kg	SW846 6010C
Chromium		13.1	0.57	0.057	mg/kg	SW846 6010C
Copper		1.0 J	1.4	0.057	mg/kg	SW846 6010C
Lead		6.0	1.1	0.092	mg/kg	SW846 6010C
Mercury		0.017 J	0.045	0.0045	mg/kg	SW846 7471B
Nickel		0.34 J	2.3	0.029	mg/kg	SW846 6010C
Zinc		0.48 J	1.1	0.17	mg/kg	SW846 6010C
Chromium, Hexavalent [a]		1.3 J	2.3	0.98	mg/kg	SW846 3060A/7196A
pH		4.66			su	SW846 9045D
FA12854-2	**DPT-30 (7-9)**					
Methylene chloride [b]		6.4 J	7.0	2.8	ug/kg	SW846 8260B
Arsenic		0.82	0.41	0.082	mg/kg	SW846 6010C
Chromium		17.9	0.41	0.041	mg/kg	SW846 6010C
Copper		0.81 J	1.0	0.041	mg/kg	SW846 6010C
Lead		3.5	0.82	0.066	mg/kg	SW846 6010C
Mercury		0.0070 J	0.043	0.0043	mg/kg	SW846 7471B
Nickel		0.28 J	1.6	0.021	mg/kg	SW846 6010C
Selenium		0.19 J	0.82	0.12	mg/kg	SW846 6010C
Zinc		0.44 J	0.82	0.12	mg/kg	SW846 6010C
Chromium, Hexavalent [a]		1.4 J	2.2	0.95	mg/kg	SW846 3060A/7196A
pH		4.40			su	SW846 9045D
FA12854-3	**DPT-31 (5-7)**					
Acetone		11.3 J	31	9.3	ug/kg	SW846 8260B
Tetrachloroethylene		1.7 J	3.1	0.78	ug/kg	SW846 8260B
Arsenic		1.3	0.53	0.11	mg/kg	SW846 6010C
Beryllium		0.037 J	0.27	0.027	mg/kg	SW846 6010C
Chromium		23.0	0.53	0.053	mg/kg	SW846 6010C
Copper		1.7	1.3	0.053	mg/kg	SW846 6010C
Lead		4.5	1.1	0.085	mg/kg	SW846 6010C
Mercury		0.030 J	0.043	0.0043	mg/kg	SW846 7471B
Nickel		1.1 J	2.1	0.027	mg/kg	SW846 6010C
Selenium		0.42 J	1.1	0.16	mg/kg	SW846 6010C
Silver		0.053 J	0.53	0.035	mg/kg	SW846 6010C
Zinc		2.4	1.1	0.16	mg/kg	SW846 6010C
pH		4.59			su	SW846 9045D

Summary of Hits

Job Number: FA12854
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 02/27/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA12854-4	**DPT-29 (2-4)**					
Arsenic		0.73	0.49	0.098	mg/kg	SW846 6010C
Beryllium		0.039 J	0.24	0.024	mg/kg	SW846 6010C
Chromium		18.7	0.49	0.049	mg/kg	SW846 6010C
Copper		0.65 J	1.2	0.049	mg/kg	SW846 6010C
Lead		3.3	0.98	0.078	mg/kg	SW846 6010C
Mercury		0.019 J	0.042	0.0042	mg/kg	SW846 7471B
Nickel		0.75 J	2.0	0.024	mg/kg	SW846 6010C
Selenium		0.23 J	0.98	0.15	mg/kg	SW846 6010C
Zinc		0.89 J	0.98	0.15	mg/kg	SW846 6010C
Chromium, Hexavalent [a]		3.8	2.2	0.95	mg/kg	SW846 3060A/7196A
pH		4.56			su	SW846 9045D
FA12854-5	**DPT-32 (8-10)**					
Arsenic		0.58	0.41	0.081	mg/kg	SW846 6010C
Beryllium		0.020 J	0.20	0.020	mg/kg	SW846 6010C
Chromium		13.2	0.41	0.041	mg/kg	SW846 6010C
Copper		0.88 J	1.0	0.041	mg/kg	SW846 6010C
Lead		4.1	0.81	0.065	mg/kg	SW846 6010C
Mercury		0.012 J	0.046	0.0046	mg/kg	SW846 7471B
Nickel		0.91 J	1.6	0.020	mg/kg	SW846 6010C
Zinc		1.1	0.81	0.12	mg/kg	SW846 6010C
Chromium, Hexavalent [a]		2.9	2.3	0.99	mg/kg	SW846 3060A/7196A
pH		4.68			su	SW846 9045D
FA12854-6	**DPT-33 (6-8)**					
Tetrachloroethylene		22.8	3.6	0.92	ug/kg	SW846 8260B
Arsenic		1.3	0.41	0.083	mg/kg	SW846 6010C
Beryllium		0.037 J	0.21	0.021	mg/kg	SW846 6010C
Cadmium		0.037 J	0.17	0.021	mg/kg	SW846 6010C
Chromium		27.5	0.41	0.041	mg/kg	SW846 6010C
Copper		266	1.0	0.041	mg/kg	SW846 6010C
Lead		3.0	0.83	0.066	mg/kg	SW846 6010C
Mercury		0.017 J	0.046	0.0046	mg/kg	SW846 7471B
Nickel		1.7	1.7	0.021	mg/kg	SW846 6010C
Selenium		0.21 J	0.83	0.12	mg/kg	SW846 6010C
Silver		0.033 J	0.41	0.027	mg/kg	SW846 6010C
Zinc		92.9	0.83	0.12	mg/kg	SW846 6010C
Chromium, Hexavalent [a]		3.8	2.3	0.97	mg/kg	SW846 3060A/7196A
pH		4.21			su	SW846 9045D

Summary of Hits

Job Number: FA12854
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 02/27/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA12854-7	**BG-5 (12-13)**					
Arsenic		0.36 J	0.50	0.10	mg/kg	SW846 6010C
Chromium		4.2	0.50	0.050	mg/kg	SW846 6010C
Copper		0.57 J	1.3	0.050	mg/kg	SW846 6010C
Lead		1.9	1.0	0.080	mg/kg	SW846 6010C
Nickel		0.45 J	2.0	0.025	mg/kg	SW846 6010C
Zinc		1.2	1.0	0.15	mg/kg	SW846 6010C
Chromium, Hexavalent [a]		2.8	2.3	1.0	mg/kg	SW846 3060A/7196A
FA12854-8	**BG-5 (1-3)**					
Arsenic [c]		1.6	0.93	0.36	mg/kg	SW846 6010C
Beryllium [c]		0.14 J	0.47	0.10	mg/kg	SW846 6010C
Cadmium [c]		0.80	0.37	0.10	mg/kg	SW846 6010C
Chromium [c]		14.4	0.93	0.20	mg/kg	SW846 6010C
Copper [c]		1.4 J	2.3	0.20	mg/kg	SW846 6010C
Lead [c]		4.2	1.9	0.30	mg/kg	SW846 6010C
Mercury		0.050	0.043	0.0043	mg/kg	SW846 7471B
Nickel [c]		1.7 J	3.7	0.10	mg/kg	SW846 6010C
Zinc [c]		2.6	1.9	0.56	mg/kg	SW846 6010C
Chromium, Hexavalent [a]		1.4 J	2.3	0.97	mg/kg	SW846 3060A/7196A
FA12854-9	**BG-5 (3-5)**					
Arsenic		0.39 J	0.54	0.11	mg/kg	SW846 6010C
Beryllium		0.054 J	0.27	0.027	mg/kg	SW846 6010C
Chromium		14.4	0.54	0.054	mg/kg	SW846 6010C
Copper		0.86 J	1.4	0.054	mg/kg	SW846 6010C
Lead		3.8	1.1	0.087	mg/kg	SW846 6010C
Mercury		0.014 J	0.046	0.0046	mg/kg	SW846 7471B
Nickel		0.43 J	2.2	0.027	mg/kg	SW846 6010C
Selenium		0.29 J	1.1	0.16	mg/kg	SW846 6010C
Zinc		0.54 J	1.1	0.16	mg/kg	SW846 6010C
FA12854-10	**BG-5 (6-7.5)**					
Arsenic		3.2	0.59	0.12	mg/kg	SW846 6010C
Beryllium [c]		0.076 J	0.59	0.12	mg/kg	SW846 6010C
Chromium		36.7	0.59	0.059	mg/kg	SW846 6010C
Copper		0.39 J	1.5	0.059	mg/kg	SW846 6010C
Lead		7.8	1.2	0.094	mg/kg	SW846 6010C
Mercury		0.024 J	0.045	0.0045	mg/kg	SW846 7471B
Nickel		0.26 J	2.4	0.029	mg/kg	SW846 6010C
Selenium		0.50 J	1.2	0.18	mg/kg	SW846 6010C

Summary of Hits

Job Number: FA12854
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 02/27/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Silver		0.19 J	0.59	0.038	mg/kg	SW846 6010C
Zinc		0.66 J	1.2	0.18	mg/kg	SW846 6010C
FA12854-11	**BG-5 (8-9)**					
Arsenic [c]		1.5 J	2.2	0.44	mg/kg	SW846 6010C
Chromium [c]		16.3	2.2	0.22	mg/kg	SW846 6010C
Copper [c]		0.62 J	5.4	0.22	mg/kg	SW846 6010C
Lead [c]		10.4	4.4	0.35	mg/kg	SW846 6010C
Mercury		0.056	0.045	0.0045	mg/kg	SW846 7471B
Nickel [c]		0.39 J	8.7	0.11	mg/kg	SW846 6010C
Zinc [c]		1.5 J	4.4	0.65	mg/kg	SW846 6010C
Chromium, Hexavalent [a]		1.5 J	2.3	1.0	mg/kg	SW846 3060A/7196A
FA12854-12	**BG-5 (16-17)**					
Arsenic [c]		1.3 J	2.6	0.52	mg/kg	SW846 6010C
Chromium [c]		14.6	2.6	0.26	mg/kg	SW846 6010C
Copper [c]		1.3 J	6.5	0.26	mg/kg	SW846 6010C
Lead [c]		8.2	5.2	0.41	mg/kg	SW846 6010C
Nickel [c]		0.81 J	10	0.13	mg/kg	SW846 6010C
Zinc [c]		3.5 J	5.2	0.77	mg/kg	SW846 6010C
Chromium, Hexavalent [a]		2.5 J	2.8	1.2	mg/kg	SW846 3060A/7196A
FA12854-13	**BG-4 (1-3)**					
Arsenic		0.88	0.51	0.10	mg/kg	SW846 6010C
Beryllium		0.11 J	0.25	0.025	mg/kg	SW846 6010C
Chromium		12.4	0.51	0.051	mg/kg	SW846 6010C
Copper		0.99 J	1.3	0.051	mg/kg	SW846 6010C
Lead		5.7	1.0	0.081	mg/kg	SW846 6010C
Mercury		0.042 J	0.044	0.0044	mg/kg	SW846 7471B
Nickel		1.8 J	2.0	0.025	mg/kg	SW846 6010C
Selenium		0.21 J	1.0	0.15	mg/kg	SW846 6010C
Zinc		2.3	1.0	0.15	mg/kg	SW846 6010C
Chromium, Hexavalent [a]		4.7	2.3	0.99	mg/kg	SW846 3060A/7196A
FA12854-14	**BG-4 (5-7)**					
Arsenic		0.39 J	0.52	0.10	mg/kg	SW846 6010C
Chromium		6.8	0.52	0.052	mg/kg	SW846 6010C
Copper		0.61 J	1.3	0.052	mg/kg	SW846 6010C
Lead		4.6	1.0	0.083	mg/kg	SW846 6010C
Mercury		0.011 J	0.041	0.0041	mg/kg	SW846 7471B
Nickel		0.67 J	2.1	0.026	mg/kg	SW846 6010C

Summary of Hits

Job Number: FA12854
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 02/27/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Zinc		0.78 J	1.0	0.16	mg/kg	SW846 6010C

(a) Associated insoluble XCR spike recovery outside control limits.
(b) Pre-weighed vials were altered in the field; sample weights are estimated.
(c) Elevated reporting limit(s) due to matrix interference.

Southeast ACCUTEST LABORATORIES

4

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: DPT-28 (3-5)
Lab Sample ID: FA12854-1 **Date Sampled:** 02/27/14
Matrix: SO - Soil **Date Received:** 02/28/14
Method: SW846 8260B **Percent Solids:** 87.3
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	F0063771.D	1	02/28/14	AH	n/a	n/a	VF2083
Run #2							

	Initial Weight
Run #1	7.29 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	39	12	ug/kg	
71-43-2	Benzene	ND	3.9	0.79	ug/kg	
75-27-4	Bromodichloromethane	ND	3.9	0.79	ug/kg	
75-25-2	Bromoform	ND	3.9	0.85	ug/kg	
108-90-7	Chlorobenzene	ND	3.9	0.79	ug/kg	
75-00-3	Chloroethane	ND	3.9	1.8	ug/kg	
67-66-3	Chloroform	ND	3.9	0.89	ug/kg	
75-15-0	Carbon disulfide	ND	3.9	0.79	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.9	1.1	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.9	0.79	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.9	0.79	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.9	0.79	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.9	0.79	ug/kg	
124-48-1	Dibromochloromethane	ND	3.9	0.79	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.9	0.79	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.9	0.79	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.9	1.1	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.9	0.79	ug/kg	
100-41-4	Ethylbenzene	ND	3.9	0.79	ug/kg	
591-78-6	2-Hexanone	ND	20	3.8	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	20	3.9	ug/kg	
74-83-9	Methyl bromide	ND	3.9	1.5	ug/kg	
74-87-3	Methyl chloride	ND	3.9	1.6	ug/kg	
75-09-2	Methylene chloride	ND	7.9	3.1	ug/kg	
78-93-3	Methyl ethyl ketone	ND	20	5.9	ug/kg	
100-42-5	Styrene	ND	3.9	0.79	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.9	0.79	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.9	1.1	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.9	1.3	ug/kg	
127-18-4	Tetrachloroethylene	ND	3.9	0.99	ug/kg	
108-88-3	Toluene	ND	3.9	0.79	ug/kg	
79-01-6	Trichloroethylene	ND	3.9	0.80	ug/kg	

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:	DPT-28 (3-5)		
Lab Sample ID:	FA12854-1	**Date Sampled:**	02/27/14
Matrix:	SO - Soil	**Date Received:**	02/28/14
Method:	SW846 8260B	**Percent Solids:**	87.3
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.9	0.80	ug/kg	
1330-20-7	Xylene (total)	ND	12	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		75-124%
2037-26-5	Toluene-D8	94%		75-126%
460-00-4	4-Bromofluorobenzene	113%		71-133%
17060-07-0	1,2-Dichloroethane-D4	111%		72-135%

(a) Pre-weighed vials were altered in the field; sample weights are estimated.

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: DPT-28 (3-5)
Lab Sample ID: FA12854-1 **Date Sampled:** 02/27/14
Matrix: SO - Soil **Date Received:** 02/28/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 87.3
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T011845.D	1	03/06/14	FS	03/04/14	OP50690	ST562
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	950	190	ug/kg	
95-57-8	2-Chlorophenol	ND	190	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	20	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	ND	190	21	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	950	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	380	76	ug/kg	
95-48-7	2-Methylphenol	ND	190	19	ug/kg	
	3&4-Methylphenol	ND	190	38	ug/kg	
88-75-5	2-Nitrophenol	ND	190	19	ug/kg	
100-02-7	4-Nitrophenol	ND	950	150	ug/kg	
87-86-5	Pentachlorophenol	ND	950	150	ug/kg	
108-95-2	Phenol	ND	190	19	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	19	ug/kg	
83-32-9	Acenaphthene	ND	190	24	ug/kg	
208-96-8	Acenaphthylene	ND	190	19	ug/kg	
120-12-7	Anthracene	ND	190	19	ug/kg	
56-55-3	Benzo(a)anthracene [a]	ND	190	19	ug/kg	
50-32-8	Benzo(a)pyrene [a]	ND	190	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	21	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	190	38	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	19	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	23	ug/kg	
106-47-8	4-Chloroaniline	ND	190	19	ug/kg	
86-74-8	Carbazole	ND	190	19	ug/kg	
218-01-9	Chrysene [a]	ND	190	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	19	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	19	ug/kg	

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: DPT-28 (3-5)
Lab Sample ID: FA12854-1 **Date Sampled:** 02/27/14
Matrix: SO - Soil **Date Received:** 02/28/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 87.3
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	190	20	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	28	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	22	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	21	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	19	ug/kg	
132-64-9	Dibenzofuran	ND	190	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	380	38	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	190	38	ug/kg	
84-66-2	Diethyl phthalate	ND	380	38	ug/kg	
131-11-3	Dimethyl phthalate	ND	190	38	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	380	38	ug/kg	
206-44-0	Fluoranthene	ND	190	19	ug/kg	
86-73-7	Fluorene	ND	190	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	19	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	19	ug/kg	
78-59-1	Isophorone [a]	ND	190	19	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	19	ug/kg	
88-74-4	2-Nitroaniline	ND	190	38	ug/kg	
99-09-2	3-Nitroaniline	ND	190	38	ug/kg	
100-01-6	4-Nitroaniline	ND	190	38	ug/kg	
91-20-3	Naphthalene	ND	190	19	ug/kg	
98-95-3	Nitrobenzene	ND	190	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	19	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	19	ug/kg	
85-01-8	Phenanthrene	ND	190	19	ug/kg	
129-00-0	Pyrene	ND	190	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	81%		40-102%
4165-62-2	Phenol-d5	83%		41-100%
118-79-6	2,4,6-Tribromophenol	89%		42-108%

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:	DPT-28 (3-5)		
Lab Sample ID:	FA12854-1	**Date Sampled:**	02/27/14
Matrix:	SO - Soil	**Date Received:**	02/28/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	87.3
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	94%		40-105%
321-60-8	2-Fluorobiphenyl	82%		43-107%
1718-51-0	Terphenyl-d14	105%		45-119%

(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: DPT-28 (3-5)
Lab Sample ID: FA12854-1
Matrix: SO - Soil
Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 87.3
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.11 U	1.1	0.11	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	0.65	0.57	0.11	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.046 J	0.29	0.029	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.029 U	0.23	0.029	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	13.1	0.57	0.057	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	1.0 J	1.4	0.057	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	6.0	1.1	0.092	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.017 J	0.045	0.0045	mg/kg	1	03/06/14	03/06/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	0.34 J	2.3	0.029	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.17 U	1.1	0.17	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.037 U	0.57	0.037	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.086 U	0.57	0.086	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	0.48 J	1.1	0.17	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11433
(2) Instrument QC Batch: MA11436
(3) Prep QC Batch: MP26900
(4) Prep QC Batch: MP26913

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: DPT-28 (3-5)
Lab Sample ID: FA12854-1
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 87.3

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	1.3 J	2.3	0.98	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	87.3			%	1	02/28/14 15:44	LE	SM19 2540G
pH	4.66			su	1	03/05/14 13:01	LE	SW846 9045D

(a) Associated insoluble XCR spike recovery outside control limits.

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: DPT-30 (7-9)
Lab Sample ID: FA12854-2 **Date Sampled:** 02/27/14
Matrix: SO - Soil **Date Received:** 02/28/14
Method: SW846 8260B **Percent Solids:** 89.9
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	F0063772.D	1	02/28/14	AH	n/a	n/a	VF2083
Run #2							

	Initial Weight
Run #1	7.96 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	35	10	ug/kg	
71-43-2	Benzene	ND	3.5	0.70	ug/kg	
75-27-4	Bromodichloromethane	ND	3.5	0.70	ug/kg	
75-25-2	Bromoform	ND	3.5	0.75	ug/kg	
108-90-7	Chlorobenzene	ND	3.5	0.70	ug/kg	
75-00-3	Chloroethane	ND	3.5	1.6	ug/kg	
67-66-3	Chloroform	ND	3.5	0.79	ug/kg	
75-15-0	Carbon disulfide	ND	3.5	0.70	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.5	0.97	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.5	0.70	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.5	0.70	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.5	0.70	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.5	0.70	ug/kg	
124-48-1	Dibromochloromethane	ND	3.5	0.70	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.5	0.70	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.5	0.70	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.5	0.94	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.5	0.70	ug/kg	
100-41-4	Ethylbenzene	ND	3.5	0.70	ug/kg	
591-78-6	2-Hexanone	ND	17	3.4	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	17	3.5	ug/kg	
74-83-9	Methyl bromide	ND	3.5	1.3	ug/kg	
74-87-3	Methyl chloride	ND	3.5	1.4	ug/kg	
75-09-2	Methylene chloride	6.4	7.0	2.8	ug/kg	J
78-93-3	Methyl ethyl ketone	ND	17	5.2	ug/kg	
100-42-5	Styrene	ND	3.5	0.70	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.5	0.70	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.5	0.99	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.5	1.1	ug/kg	
127-18-4	Tetrachloroethylene	ND	3.5	0.88	ug/kg	
108-88-3	Toluene	ND	3.5	0.70	ug/kg	
79-01-6	Trichloroethylene	ND	3.5	0.71	ug/kg	

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:	DPT-30 (7-9)		
Lab Sample ID:	FA12854-2	**Date Sampled:**	02/27/14
Matrix:	SO - Soil	**Date Received:**	02/28/14
Method:	SW846 8260B	**Percent Solids:**	89.9
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.5	0.71	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		75-124%
2037-26-5	Toluene-D8	95%		75-126%
460-00-4	4-Bromofluorobenzene	112%		71-133%
17060-07-0	1,2-Dichloroethane-D4	121%		72-135%

(a) Pre-weighed vials were altered in the field; sample weights are estimated.

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: DPT-30 (7-9)
Lab Sample ID: FA12854-2 **Date Sampled:** 02/27/14
Matrix: SO - Soil **Date Received:** 02/28/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 89.9
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T011846.D	1	03/06/14	FS	03/04/14	OP50690	ST562
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	930	190	ug/kg	
95-57-8	2-Chlorophenol	ND	190	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	19	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	ND	190	20	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	930	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	370	74	ug/kg	
95-48-7	2-Methylphenol	ND	190	19	ug/kg	
	3&4-Methylphenol	ND	190	37	ug/kg	
88-75-5	2-Nitrophenol	ND	190	19	ug/kg	
100-02-7	4-Nitrophenol	ND	930	150	ug/kg	
87-86-5	Pentachlorophenol	ND	930	150	ug/kg	
108-95-2	Phenol	ND	190	19	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	24	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	19	ug/kg	
83-32-9	Acenaphthene	ND	190	23	ug/kg	
208-96-8	Acenaphthylene	ND	190	19	ug/kg	
120-12-7	Anthracene	ND	190	19	ug/kg	
56-55-3	Benzo(a)anthracene [a]	ND	190	19	ug/kg	
50-32-8	Benzo(a)pyrene [a]	ND	190	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	190	37	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	19	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	22	ug/kg	
106-47-8	4-Chloroaniline	ND	190	19	ug/kg	
86-74-8	Carbazole	ND	190	19	ug/kg	
218-01-9	Chrysene [a]	ND	190	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	19	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	19	ug/kg	

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: DPT-30 (7-9)
Lab Sample ID: FA12854-2 **Date Sampled:** 02/27/14
Matrix: SO - Soil **Date Received:** 02/28/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 89.9
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	190	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	28	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	21	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	19	ug/kg	
132-64-9	Dibenzofuran	ND	190	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	370	37	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	190	37	ug/kg	
84-66-2	Diethyl phthalate	ND	370	37	ug/kg	
131-11-3	Dimethyl phthalate	ND	190	37	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	370	37	ug/kg	
206-44-0	Fluoranthene	ND	190	19	ug/kg	
86-73-7	Fluorene	ND	190	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	19	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	19	ug/kg	
78-59-1	Isophorone [a]	ND	190	19	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	19	ug/kg	
88-74-4	2-Nitroaniline	ND	190	37	ug/kg	
99-09-2	3-Nitroaniline	ND	190	37	ug/kg	
100-01-6	4-Nitroaniline	ND	190	37	ug/kg	
91-20-3	Naphthalene	ND	190	19	ug/kg	
98-95-3	Nitrobenzene	ND	190	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	19	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	19	ug/kg	
85-01-8	Phenanthrene	ND	190	19	ug/kg	
129-00-0	Pyrene	ND	190	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	83%		40-102%
4165-62-2	Phenol-d5	82%		41-100%
118-79-6	2,4,6-Tribromophenol	79%		42-108%

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:	DPT-30 (7-9)		
Lab Sample ID:	FA12854-2	**Date Sampled:**	02/27/14
Matrix:	SO - Soil	**Date Received:**	02/28/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	89.9
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	87%		40-105%
321-60-8	2-Fluorobiphenyl	77%		43-107%
1718-51-0	Terphenyl-d14	99%		45-119%

(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: DPT-30 (7-9)
Lab Sample ID: FA12854-2
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 89.9

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.082 U	0.82	0.082	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	0.82	0.41	0.082	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.021 U	0.21	0.021	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.021 U	0.16	0.021	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	17.9	0.41	0.041	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	0.81 J	1.0	0.041	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	3.5	0.82	0.066	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.0070 J	0.043	0.0043	mg/kg	1	03/06/14	03/06/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	0.28 J	1.6	0.021	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.19 J	0.82	0.12	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.027 U	0.41	0.027	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.062 U	0.41	0.062	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	0.44 J	0.82	0.12	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11433
(2) Instrument QC Batch: MA11436
(3) Prep QC Batch: MP26900
(4) Prep QC Batch: MP26913

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: DPT-30 (7-9)
Lab Sample ID: FA12854-2
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 89.9

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	1.4 J	2.2	0.95	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	89.9			%	1	02/28/14 15:44	LE	SM19 2540G
pH	4.40			su	1	03/05/14 13:01	LE	SW846 9045D

(a) Associated insoluble XCR spike recovery outside control limits.

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: DPT-31 (5-7)
Lab Sample ID: FA12854-3
Matrix: SO - Soil
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 86.0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0063784.D	1	03/01/14	AH	n/a	n/a	VF2084
Run #2 [a]	F0063773.D	1	02/28/14	AH	n/a	n/a	VF2083

	Initial Weight
Run #1	9.42 g
Run #2	7.67 g

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	11.3	31	9.3	ug/kg	J
71-43-2	Benzene	ND	3.1	0.62	ug/kg	
75-27-4	Bromodichloromethane	ND	3.1	0.62	ug/kg	
75-25-2	Bromoform	ND	3.1	0.67	ug/kg	
108-90-7	Chlorobenzene	ND	3.1	0.62	ug/kg	
75-00-3	Chloroethane	ND	3.1	1.4	ug/kg	
67-66-3	Chloroform	ND	3.1	0.70	ug/kg	
75-15-0	Carbon disulfide	ND	3.1	0.62	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.1	0.86	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.1	0.62	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.1	0.62	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.1	0.62	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.1	0.62	ug/kg	
124-48-1	Dibromochloromethane	ND	3.1	0.62	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.1	0.62	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.1	0.62	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.1	0.83	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.1	0.62	ug/kg	
100-41-4	Ethylbenzene	ND	3.1	0.62	ug/kg	
591-78-6	2-Hexanone	ND	15	3.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	15	3.1	ug/kg	
74-83-9	Methyl bromide	ND	3.1	1.2	ug/kg	
74-87-3	Methyl chloride	ND	3.1	1.2	ug/kg	
75-09-2	Methylene chloride	ND	6.2	2.5	ug/kg	
78-93-3	Methyl ethyl ketone	ND	15	4.6	ug/kg	
100-42-5	Styrene	ND	3.1	0.62	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.1	0.62	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.1	0.87	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.1	0.99	ug/kg	
127-18-4	Tetrachloroethylene	1.7	3.1	0.78	ug/kg	J
108-88-3	Toluene	ND	3.1	0.62	ug/kg	
79-01-6	Trichloroethylene	ND	3.1	0.63	ug/kg	

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:	DPT-31 (5-7)		
Lab Sample ID:	FA12854-3	**Date Sampled:**	02/27/14
Matrix:	SO - Soil	**Date Received:**	02/28/14
Method:	SW846 8260B	**Percent Solids:**	86.0
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.1	0.63	ug/kg	
1330-20-7	Xylene (total)	ND	9.3	1.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	105%	75-124%
2037-26-5	Toluene-D8	99%	98%	75-126%
460-00-4	4-Bromofluorobenzene	111%	113%	71-133%
17060-07-0	1,2-Dichloroethane-D4	115%	121%	72-135%

(a) Confirmation run for internal standard areas.

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: DPT-31 (5-7)
Lab Sample ID: FA12854-3 **Date Sampled:** 02/27/14
Matrix: SO - Soil **Date Received:** 02/28/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 86.0
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T011847.D	1	03/06/14	FS	03/04/14	OP50690	ST562
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	950	190	ug/kg	
95-57-8	2-Chlorophenol	ND	190	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	20	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	ND	190	21	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	950	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	380	76	ug/kg	
95-48-7	2-Methylphenol	ND	190	19	ug/kg	
	3&4-Methylphenol	ND	190	38	ug/kg	
88-75-5	2-Nitrophenol	ND	190	19	ug/kg	
100-02-7	4-Nitrophenol	ND	950	150	ug/kg	
87-86-5	Pentachlorophenol	ND	950	150	ug/kg	
108-95-2	Phenol	ND	190	19	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	19	ug/kg	
83-32-9	Acenaphthene	ND	190	24	ug/kg	
208-96-8	Acenaphthylene	ND	190	19	ug/kg	
120-12-7	Anthracene	ND	190	19	ug/kg	
56-55-3	Benzo(a)anthracene [a]	ND	190	19	ug/kg	
50-32-8	Benzo(a)pyrene [a]	ND	190	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	21	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	190	38	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	19	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	23	ug/kg	
106-47-8	4-Chloroaniline	ND	190	19	ug/kg	
86-74-8	Carbazole	ND	190	19	ug/kg	
218-01-9	Chrysene [a]	ND	190	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	19	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	19	ug/kg	

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: DPT-31 (5-7)
Lab Sample ID: FA12854-3 **Date Sampled:** 02/27/14
Matrix: SO - Soil **Date Received:** 02/28/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 86.0
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	190	20	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	28	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	22	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	21	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	19	ug/kg	
132-64-9	Dibenzofuran	ND	190	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	380	38	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	190	38	ug/kg	
84-66-2	Diethyl phthalate	ND	380	38	ug/kg	
131-11-3	Dimethyl phthalate	ND	190	38	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	380	38	ug/kg	
206-44-0	Fluoranthene	ND	190	19	ug/kg	
86-73-7	Fluorene	ND	190	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	19	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	19	ug/kg	
78-59-1	Isophorone [a]	ND	190	19	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	19	ug/kg	
88-74-4	2-Nitroaniline	ND	190	38	ug/kg	
99-09-2	3-Nitroaniline	ND	190	38	ug/kg	
100-01-6	4-Nitroaniline	ND	190	38	ug/kg	
91-20-3	Naphthalene	ND	190	19	ug/kg	
98-95-3	Nitrobenzene	ND	190	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	19	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	19	ug/kg	
85-01-8	Phenanthrene	ND	190	19	ug/kg	
129-00-0	Pyrene	ND	190	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	106% [b]		40-102%
4165-62-2	Phenol-d5	108% [b]		41-100%
118-79-6	2,4,6-Tribromophenol	107%		42-108%

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:	DPT-31 (5-7)		
Lab Sample ID:	FA12854-3	**Date Sampled:**	02/27/14
Matrix:	SO - Soil	**Date Received:**	02/28/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	86.0
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	106% [b]		40-105%
321-60-8	2-Fluorobiphenyl	95%		43-107%
1718-51-0	Terphenyl-d14	123% [b]		45-119%

(a) Associated BS recovery outside control limits.
(b) Outside control limits. However, sample was ND.

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: DPT-31 (5-7)
Lab Sample ID: FA12854-3
Matrix: SO - Soil
Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 86.0
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.11 U	1.1	0.11	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	1.3	0.53	0.11	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.037 J	0.27	0.027	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.027 U	0.21	0.027	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	23.0	0.53	0.053	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	1.7	1.3	0.053	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	4.5	1.1	0.085	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.030 J	0.043	0.0043	mg/kg	1	03/06/14	03/06/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	1.1 J	2.1	0.027	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.42 J	1.1	0.16	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.053 J	0.53	0.035	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.080 U	0.53	0.080	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	2.4	1.1	0.16	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11433
(2) Instrument QC Batch: MA11436
(3) Prep QC Batch: MP26900
(4) Prep QC Batch: MP26913

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: DPT-31 (5-7)
Lab Sample ID: FA12854-3
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 86.0

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	0.99 U	2.3	0.99	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	86			%	1	02/28/14 15:44	LE	SM19 2540G
pH	4.59			su	1	03/05/14 13:01	LE	SW846 9045D

(a) Associated insoluble XCR spike recovery outside control limits.

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: DPT-29 (2-4)
Lab Sample ID: FA12854-4 **Date Sampled:** 02/27/14
Matrix: SO - Soil **Date Received:** 02/28/14
Method: SW846 8260B **Percent Solids:** 89.6
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0063774.D	1	02/28/14	AH	n/a	n/a	VF2083
Run #2							

	Initial Weight
Run #1	8.46 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	33	9.9	ug/kg	
71-43-2	Benzene	ND	3.3	0.66	ug/kg	
75-27-4	Bromodichloromethane	ND	3.3	0.66	ug/kg	
75-25-2	Bromoform	ND	3.3	0.71	ug/kg	
108-90-7	Chlorobenzene	ND	3.3	0.66	ug/kg	
75-00-3	Chloroethane	ND	3.3	1.5	ug/kg	
67-66-3	Chloroform	ND	3.3	0.75	ug/kg	
75-15-0	Carbon disulfide	ND	3.3	0.66	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.3	0.92	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.3	0.66	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.3	0.66	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.3	0.66	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.3	0.66	ug/kg	
124-48-1	Dibromochloromethane	ND	3.3	0.66	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.3	0.66	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.3	0.66	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.3	0.88	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.3	0.66	ug/kg	
100-41-4	Ethylbenzene	ND	3.3	0.66	ug/kg	
591-78-6	2-Hexanone	ND	16	3.2	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	16	3.3	ug/kg	
74-83-9	Methyl bromide	ND	3.3	1.2	ug/kg	
74-87-3	Methyl chloride	ND	3.3	1.3	ug/kg	
75-09-2	Methylene chloride	ND	6.6	2.6	ug/kg	
78-93-3	Methyl ethyl ketone	ND	16	4.9	ug/kg	
100-42-5	Styrene	ND	3.3	0.66	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.3	0.66	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.3	0.93	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.3	1.1	ug/kg	
127-18-4	Tetrachloroethylene	ND	3.3	0.83	ug/kg	
108-88-3	Toluene	ND	3.3	0.66	ug/kg	
79-01-6	Trichloroethylene	ND	3.3	0.67	ug/kg	

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:	DPT-29 (2-4)		
Lab Sample ID:	FA12854-4	**Date Sampled:**	02/27/14
Matrix:	SO - Soil	**Date Received:**	02/28/14
Method:	SW846 8260B	**Percent Solids:**	89.6
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.3	0.67	ug/kg	
1330-20-7	Xylene (total)	ND	9.9	1.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		75-124%
2037-26-5	Toluene-D8	100%		75-126%
460-00-4	4-Bromofluorobenzene	112%		71-133%
17060-07-0	1,2-Dichloroethane-D4	127%		72-135%

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: DPT-29 (2-4)
Lab Sample ID: FA12854-4 **Date Sampled:** 02/27/14
Matrix: SO - Soil **Date Received:** 02/28/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 89.6
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T011848.D	1	03/06/14	FS	03/04/14	OP50690	ST562
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	920	180	ug/kg	
95-57-8	2-Chlorophenol	ND	180	18	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	18	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	19	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	ND	180	20	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	920	180	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	370	73	ug/kg	
95-48-7	2-Methylphenol	ND	180	18	ug/kg	
	3&4-Methylphenol	ND	180	37	ug/kg	
88-75-5	2-Nitrophenol	ND	180	18	ug/kg	
100-02-7	4-Nitrophenol	ND	920	150	ug/kg	
87-86-5	Pentachlorophenol	ND	920	150	ug/kg	
108-95-2	Phenol	ND	180	18	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	24	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	18	ug/kg	
83-32-9	Acenaphthene	ND	180	23	ug/kg	
208-96-8	Acenaphthylene	ND	180	18	ug/kg	
120-12-7	Anthracene	ND	180	18	ug/kg	
56-55-3	Benzo(a)anthracene [a]	ND	180	18	ug/kg	
50-32-8	Benzo(a)pyrene [a]	ND	180	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	180	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	180	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	180	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	180	18	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	180	37	ug/kg	
100-51-6	Benzyl Alcohol	ND	180	18	ug/kg	
91-58-7	2-Chloronaphthalene	ND	180	22	ug/kg	
106-47-8	4-Chloroaniline	ND	180	18	ug/kg	
86-74-8	Carbazole	ND	180	18	ug/kg	
218-01-9	Chrysene [a]	ND	180	18	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	180	18	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	180	18	ug/kg	

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: DPT-29 (2-4)
Lab Sample ID: FA12854-4 **Date Sampled:** 02/27/14
Matrix: SO - Soil **Date Received:** 02/28/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 89.6
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	180	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	180	27	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	180	18	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	180	18	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	180	18	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	180	21	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	180	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	180	18	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	180	18	ug/kg	
132-64-9	Dibenzofuran	ND	180	18	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	370	37	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	180	37	ug/kg	
84-66-2	Diethyl phthalate	ND	370	37	ug/kg	
131-11-3	Dimethyl phthalate	ND	180	37	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	370	37	ug/kg	
206-44-0	Fluoranthene	ND	180	18	ug/kg	
86-73-7	Fluorene	ND	180	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	180	18	ug/kg	
87-68-3	Hexachlorobutadiene	ND	180	18	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	180	18	ug/kg	
67-72-1	Hexachloroethane	ND	180	18	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	180	18	ug/kg	
78-59-1	Isophorone [a]	ND	180	18	ug/kg	
91-57-6	2-Methylnaphthalene	ND	180	18	ug/kg	
88-74-4	2-Nitroaniline	ND	180	37	ug/kg	
99-09-2	3-Nitroaniline	ND	180	37	ug/kg	
100-01-6	4-Nitroaniline	ND	180	37	ug/kg	
91-20-3	Naphthalene	ND	180	18	ug/kg	
98-95-3	Nitrobenzene	ND	180	18	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	180	18	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	18	ug/kg	
85-01-8	Phenanthrene	ND	180	18	ug/kg	
129-00-0	Pyrene	ND	180	18	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	180	18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	95%		40-102%
4165-62-2	Phenol-d5	97%		41-100%
118-79-6	2,4,6-Tribromophenol	88%		42-108%

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:	DPT-29 (2-4)		
Lab Sample ID:	FA12854-4	**Date Sampled:**	02/27/14
Matrix:	SO - Soil	**Date Received:**	02/28/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	89.6
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	102%		40-105%
321-60-8	2-Fluorobiphenyl	96%		43-107%
1718-51-0	Terphenyl-d14	112%		45-119%

(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: DPT-29 (2-4)
Lab Sample ID: FA12854-4
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 89.6

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.098 U	0.98	0.098	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	0.73	0.49	0.098	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.039 J	0.24	0.024	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.024 U	0.20	0.024	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	18.7	0.49	0.049	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	0.65 J	1.2	0.049	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	3.3	0.98	0.078	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.019 J	0.042	0.0042	mg/kg	1	03/06/14	03/06/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	0.75 J	2.0	0.024	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.23 J	0.98	0.15	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.032 U	0.49	0.032	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.073 U	0.49	0.073	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	0.89 J	0.98	0.15	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11433
(2) Instrument QC Batch: MA11436
(3) Prep QC Batch: MP26900
(4) Prep QC Batch: MP26913

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: DPT-29 (2-4)
Lab Sample ID: FA12854-4
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 89.6

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	3.8	2.2	0.95	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	89.6			%	1	03/05/14 13:39	LE	SM19 2540G
pH	4.56			su	1	03/05/14 13:01	LE	SW846 9045D

(a) Associated insoluble XCR spike recovery outside control limits.

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: DPT-32 (8-10)
Lab Sample ID: FA12854-5
Matrix: SO - Soil
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 86.9

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0063785.D	1	03/01/14	AH	n/a	n/a	VF2084
Run #2							

	Initial Weight
Run #1	9.26 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	31	9.3	ug/kg	
71-43-2	Benzene	ND	3.1	0.62	ug/kg	
75-27-4	Bromodichloromethane	ND	3.1	0.62	ug/kg	
75-25-2	Bromoform	ND	3.1	0.67	ug/kg	
108-90-7	Chlorobenzene	ND	3.1	0.62	ug/kg	
75-00-3	Chloroethane	ND	3.1	1.4	ug/kg	
67-66-3	Chloroform	ND	3.1	0.70	ug/kg	
75-15-0	Carbon disulfide	ND	3.1	0.62	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.1	0.86	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.1	0.62	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.1	0.62	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.1	0.62	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.1	0.62	ug/kg	
124-48-1	Dibromochloromethane	ND	3.1	0.62	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.1	0.62	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.1	0.62	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.1	0.83	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.1	0.62	ug/kg	
100-41-4	Ethylbenzene	ND	3.1	0.62	ug/kg	
591-78-6	2-Hexanone	ND	16	3.0	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	16	3.1	ug/kg	
74-83-9	Methyl bromide	ND	3.1	1.2	ug/kg	
74-87-3	Methyl chloride	ND	3.1	1.2	ug/kg	
75-09-2	Methylene chloride	ND	6.2	2.5	ug/kg	
78-93-3	Methyl ethyl ketone	ND	16	4.7	ug/kg	
100-42-5	Styrene	ND	3.1	0.62	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.1	0.62	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.1	0.88	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.1	1.0	ug/kg	
127-18-4	Tetrachloroethylene	ND	3.1	0.78	ug/kg	
108-88-3	Toluene	ND	3.1	0.62	ug/kg	
79-01-6	Trichloroethylene	ND	3.1	0.63	ug/kg	

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:	DPT-32 (8-10)		
Lab Sample ID:	FA12854-5	**Date Sampled:**	02/27/14
Matrix:	SO - Soil	**Date Received:**	02/28/14
Method:	SW846 8260B	**Percent Solids:**	86.9
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.1	0.63	ug/kg	
1330-20-7	Xylene (total)	ND	9.3	1.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		75-124%
2037-26-5	Toluene-D8	97%		75-126%
460-00-4	4-Bromofluorobenzene	118%		71-133%
17060-07-0	1,2-Dichloroethane-D4	115%		72-135%

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: DPT-32 (8-10)
Lab Sample ID: FA12854-5 **Date Sampled:** 02/27/14
Matrix: SO - Soil **Date Received:** 02/28/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 86.9
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T011849.D	1	03/06/14	FS	03/04/14	OP50690	ST562
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	950	190	ug/kg	
95-57-8	2-Chlorophenol	ND	190	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	20	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	ND	190	21	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	950	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	380	76	ug/kg	
95-48-7	2-Methylphenol	ND	190	19	ug/kg	
	3&4-Methylphenol	ND	190	38	ug/kg	
88-75-5	2-Nitrophenol	ND	190	19	ug/kg	
100-02-7	4-Nitrophenol	ND	950	150	ug/kg	
87-86-5	Pentachlorophenol	ND	950	150	ug/kg	
108-95-2	Phenol	ND	190	19	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	24	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	19	ug/kg	
83-32-9	Acenaphthene	ND	190	24	ug/kg	
208-96-8	Acenaphthylene	ND	190	19	ug/kg	
120-12-7	Anthracene	ND	190	19	ug/kg	
56-55-3	Benzo(a)anthracene [a]	ND	190	19	ug/kg	
50-32-8	Benzo(a)pyrene [a]	ND	190	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	21	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	190	38	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	19	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	23	ug/kg	
106-47-8	4-Chloroaniline	ND	190	19	ug/kg	
86-74-8	Carbazole	ND	190	19	ug/kg	
218-01-9	Chrysene [a]	ND	190	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	19	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	19	ug/kg	

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: DPT-32 (8-10)
Lab Sample ID: FA12854-5 **Date Sampled:** 02/27/14
Matrix: SO - Soil **Date Received:** 02/28/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 86.9
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	190	20	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	28	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	22	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	21	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	19	ug/kg	
132-64-9	Dibenzofuran	ND	190	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	380	38	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	190	38	ug/kg	
84-66-2	Diethyl phthalate	ND	380	38	ug/kg	
131-11-3	Dimethyl phthalate	ND	190	38	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	380	38	ug/kg	
206-44-0	Fluoranthene	ND	190	19	ug/kg	
86-73-7	Fluorene	ND	190	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	19	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	19	ug/kg	
78-59-1	Isophorone [a]	ND	190	19	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	19	ug/kg	
88-74-4	2-Nitroaniline	ND	190	38	ug/kg	
99-09-2	3-Nitroaniline	ND	190	38	ug/kg	
100-01-6	4-Nitroaniline	ND	190	38	ug/kg	
91-20-3	Naphthalene	ND	190	19	ug/kg	
98-95-3	Nitrobenzene	ND	190	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	19	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	19	ug/kg	
85-01-8	Phenanthrene	ND	190	19	ug/kg	
129-00-0	Pyrene	ND	190	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	76%		40-102%
4165-62-2	Phenol-d5	79%		41-100%
118-79-6	2,4,6-Tribromophenol	79%		42-108%

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:	DPT-32 (8-10)		
Lab Sample ID:	FA12854-5	**Date Sampled:**	02/27/14
Matrix:	SO - Soil	**Date Received:**	02/28/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	86.9
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	93%		40-105%
321-60-8	2-Fluorobiphenyl	82%		43-107%
1718-51-0	Terphenyl-d14	104%		45-119%

(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: DPT-32 (8-10)
Lab Sample ID: FA12854-5
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 86.9

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.081 U	0.81	0.081	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	0.58	0.41	0.081	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.020 J	0.20	0.020	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.020 U	0.16	0.020	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	13.2	0.41	0.041	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	0.88 J	1.0	0.041	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	4.1	0.81	0.065	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.012 J	0.046	0.0046	mg/kg	1	03/06/14	03/06/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	0.91 J	1.6	0.020	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.12 U	0.81	0.12	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.026 U	0.41	0.026	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.061 U	0.41	0.061	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	1.1	0.81	0.12	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11433
(2) Instrument QC Batch: MA11436
(3) Prep QC Batch: MP26900
(4) Prep QC Batch: MP26913

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: DPT-32 (8-10)
Lab Sample ID: FA12854-5
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 86.9

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	2.9	2.3	0.99	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	86.9			%	1	02/28/14 15:44	LE	SM19 2540G
pH	4.68			su	1	03/05/14 13:01	LE	SW846 9045D

(a) Associated insoluble XCR spike recovery outside control limits.

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: DPT-33 (6-8)
Lab Sample ID: FA12854-6
Matrix: SO - Soil
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 87.1

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0063786.D	1	03/01/14	AH	n/a	n/a	VF2084
Run #2							

	Initial Weight
Run #1	7.89 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	36	11	ug/kg	
71-43-2	Benzene	ND	3.6	0.73	ug/kg	
75-27-4	Bromodichloromethane	ND	3.6	0.73	ug/kg	
75-25-2	Bromoform	ND	3.6	0.79	ug/kg	
108-90-7	Chlorobenzene	ND	3.6	0.73	ug/kg	
75-00-3	Chloroethane	ND	3.6	1.6	ug/kg	
67-66-3	Chloroform	ND	3.6	0.82	ug/kg	
75-15-0	Carbon disulfide	ND	3.6	0.73	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.6	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.6	0.73	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.6	0.73	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.6	0.73	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.6	0.73	ug/kg	
124-48-1	Dibromochloromethane	ND	3.6	0.73	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.6	0.73	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.6	0.73	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.6	0.97	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.6	0.73	ug/kg	
100-41-4	Ethylbenzene	ND	3.6	0.73	ug/kg	
591-78-6	2-Hexanone	ND	18	3.6	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	18	3.6	ug/kg	
74-83-9	Methyl bromide	ND	3.6	1.4	ug/kg	
74-87-3	Methyl chloride	ND	3.6	1.5	ug/kg	
75-09-2	Methylene chloride	ND	7.3	2.9	ug/kg	
78-93-3	Methyl ethyl ketone	ND	18	5.4	ug/kg	
100-42-5	Styrene	ND	3.6	0.73	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.6	0.73	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.6	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.6	1.2	ug/kg	
127-18-4	Tetrachloroethylene	22.8	3.6	0.92	ug/kg	
108-88-3	Toluene	ND	3.6	0.73	ug/kg	
79-01-6	Trichloroethylene	ND	3.6	0.74	ug/kg	

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:	DPT-33 (6-8)		
Lab Sample ID:	FA12854-6	**Date Sampled:**	02/27/14
Matrix:	SO - Soil	**Date Received:**	02/28/14
Method:	SW846 8260B	**Percent Solids:**	87.1
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.6	0.74	ug/kg	
1330-20-7	Xylene (total)	ND	11	1.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		75-124%
2037-26-5	Toluene-D8	97%		75-126%
460-00-4	4-Bromofluorobenzene	109%		71-133%
17060-07-0	1,2-Dichloroethane-D4	120%		72-135%

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: DPT-33 (6-8)
Lab Sample ID: FA12854-6 **Date Sampled:** 02/27/14
Matrix: SO - Soil **Date Received:** 02/28/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 87.1
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T011850.D	1	03/06/14	FS	03/04/14	OP50690	ST562
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	960	190	ug/kg	
95-57-8	2-Chlorophenol	ND	190	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	20	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	ND	190	21	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	960	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	380	77	ug/kg	
95-48-7	2-Methylphenol	ND	190	19	ug/kg	
	3&4-Methylphenol	ND	190	38	ug/kg	
88-75-5	2-Nitrophenol	ND	190	19	ug/kg	
100-02-7	4-Nitrophenol	ND	960	150	ug/kg	
87-86-5	Pentachlorophenol	ND	960	150	ug/kg	
108-95-2	Phenol	ND	190	19	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	19	ug/kg	
83-32-9	Acenaphthene	ND	190	24	ug/kg	
208-96-8	Acenaphthylene	ND	190	19	ug/kg	
120-12-7	Anthracene	ND	190	19	ug/kg	
56-55-3	Benzo(a)anthracene [a]	ND	190	19	ug/kg	
50-32-8	Benzo(a)pyrene [a]	ND	190	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	21	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	190	38	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	19	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	23	ug/kg	
106-47-8	4-Chloroaniline	ND	190	19	ug/kg	
86-74-8	Carbazole	ND	190	19	ug/kg	
218-01-9	Chrysene [a]	ND	190	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	19	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	19	ug/kg	

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: DPT-33 (6-8)
Lab Sample ID: FA12854-6 **Date Sampled:** 02/27/14
Matrix: SO - Soil **Date Received:** 02/28/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 87.1
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	190	20	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	29	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	22	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	21	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	19	ug/kg	
132-64-9	Dibenzofuran	ND	190	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	380	38	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	190	38	ug/kg	
84-66-2	Diethyl phthalate	ND	380	38	ug/kg	
131-11-3	Dimethyl phthalate	ND	190	38	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	380	38	ug/kg	
206-44-0	Fluoranthene	ND	190	19	ug/kg	
86-73-7	Fluorene	ND	190	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	19	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	19	ug/kg	
78-59-1	Isophorone [a]	ND	190	19	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	19	ug/kg	
88-74-4	2-Nitroaniline	ND	190	38	ug/kg	
99-09-2	3-Nitroaniline	ND	190	38	ug/kg	
100-01-6	4-Nitroaniline	ND	190	38	ug/kg	
91-20-3	Naphthalene	ND	190	19	ug/kg	
98-95-3	Nitrobenzene	ND	190	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	19	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	19	ug/kg	
85-01-8	Phenanthrene	ND	190	19	ug/kg	
129-00-0	Pyrene	ND	190	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	90%		40-102%
4165-62-2	Phenol-d5	97%		41-100%
118-79-6	2,4,6-Tribromophenol	90%		42-108%

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:	DPT-33 (6-8)		
Lab Sample ID:	FA12854-6	**Date Sampled:**	02/27/14
Matrix:	SO - Soil	**Date Received:**	02/28/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	87.1
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	101%		40-105%
321-60-8	2-Fluorobiphenyl	89%		43-107%
1718-51-0	Terphenyl-d14	111%		45-119%

(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: DPT-33 (6-8)
Lab Sample ID: FA12854-6
Matrix: SO - Soil
Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 87.1
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.083 U	0.83	0.083	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	1.3	0.41	0.083	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.037 J	0.21	0.021	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.037 J	0.17	0.021	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	27.5	0.41	0.041	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	266	1.0	0.041	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	3.0	0.83	0.066	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.017 J	0.046	0.0046	mg/kg	1	03/06/14	03/06/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	1.7	1.7	0.021	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.21 J	0.83	0.12	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.033 J	0.41	0.027	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.062 U	0.41	0.062	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	92.9	0.83	0.12	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11433
(2) Instrument QC Batch: MA11436
(3) Prep QC Batch: MP26900
(4) Prep QC Batch: MP26913

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: DPT-33 (6-8)
Lab Sample ID: FA12854-6
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 87.1

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	3.8	2.3	0.97	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	87.1			%	1	02/28/14 15:44	LE	SM19 2540G
pH	4.21			su	1	03/05/14 13:01	LE	SW846 9045D

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-5 (12-13)
Lab Sample ID: FA12854-7
Matrix: SO - Soil
Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 85.4
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.10 U	1.0	0.10	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	0.36 J	0.50	0.10	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.025 U	0.25	0.025	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.025 U	0.20	0.025	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	4.2	0.50	0.050	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	0.57 J	1.3	0.050	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	1.9	1.0	0.080	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.0044 U	0.044	0.0044	mg/kg	1	03/06/14	03/06/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	0.45 J	2.0	0.025	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.15 U	1.0	0.15	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.033 U	0.50	0.033	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.075 U	0.50	0.075	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	1.2	1.0	0.15	mg/kg	1	03/04/14	03/04/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11433
(2) Instrument QC Batch: MA11436
(3) Prep QC Batch: MP26900
(4) Prep QC Batch: MP26913

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: BG-5 (12-13)
Lab Sample ID: FA12854-7
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 85.4

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	2.8	2.3	1.0	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	85.4			%	1	03/10/14 10:10	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-5 (1-3)
Lab Sample ID: FA12854-8
Matrix: SO - Soil
Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 87.3
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	0.36 U	1.9	0.36	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic [a]	1.6	0.93	0.36	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium [a]	0.14 J	0.47	0.10	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium [a]	0.80	0.37	0.10	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium [a]	14.4	0.93	0.20	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper [a]	1.4 J	2.3	0.20	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead [a]	4.2	1.9	0.30	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.050	0.043	0.0043	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel [a]	1.7 J	3.7	0.10	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium [a]	0.60 U	1.9	0.60	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver [a]	0.12 U	0.93	0.12	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium [a]	0.28 U	0.93	0.28	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc [a]	2.6	1.9	0.56	mg/kg	2	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11435
(2) Instrument QC Batch: MA11440
(3) Prep QC Batch: MP26900
(4) Prep QC Batch: MP26919

(a) Elevated reporting limit(s) 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: BG-5 (1-3)
Lab Sample ID: FA12854-8
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 87.3

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	1.4 J	2.3	0.97	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	87.3			%	1	02/28/14 15:44	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-5 (3-5)
Lab Sample ID: FA12854-9
Matrix: SO - Soil
Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 87.0
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.11 U	1.1	0.11	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	0.39 J	0.54	0.11	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.054 J	0.27	0.027	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.027 U	0.22	0.027	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	14.4	0.54	0.054	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	0.86 J	1.4	0.054	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	3.8	1.1	0.087	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.014 J	0.046	0.0046	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	0.43 J	2.2	0.027	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.29 J	1.1	0.16	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.035 U	0.54	0.035	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.081 U	0.54	0.081	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	0.54 J	1.1	0.16	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11435
(2) Instrument QC Batch: MA11440
(3) Prep QC Batch: MP26903
(4) Prep QC Batch: MP26919

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: BG-5 (3-5)
Lab Sample ID: FA12854-9
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 87.0

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	0.98 U	2.3	0.98	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	87			%	1	02/28/14 15:44	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-5 (6-7.5)
Lab Sample ID: FA12854-10
Matrix: SO - Soil
Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 82.5
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.12 U	1.2	0.12	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [4]
Arsenic	3.2	0.59	0.12	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [4]
Beryllium [a]	0.076 J	0.59	0.12	mg/kg	2	03/04/14	03/06/14	LM	SW846 6010C [2]	SW846 3050B [4]
Cadmium	0.029 U	0.24	0.029	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [4]
Chromium	36.7	0.59	0.059	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [4]
Copper	0.39 J	1.5	0.059	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [4]
Lead	7.8	1.2	0.094	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [4]
Mercury	0.024 J	0.045	0.0045	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [3]	SW846 7471B [5]
Nickel	0.26 J	2.4	0.029	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [4]
Selenium	0.50 J	1.2	0.18	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [4]
Silver	0.19 J	0.59	0.038	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [4]
Thallium [b]	0.88 U	1.2	0.88	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [4]
Zinc	0.66 J	1.2	0.18	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [4]

(1) Instrument QC Batch: MA11435
(2) Instrument QC Batch: MA11438
(3) Instrument QC Batch: MA11440
(4) Prep QC Batch: MP26903
(5) Prep QC Batch: MP26919

(a) Elevated reporting limit(s) due to matrix interference.
(b) Elevated reporting limit(s) due to matrix interference. Manually elevated.

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:	BG-5 (6-7.5)		
Lab Sample ID:	FA12854-10	**Date Sampled:**	02/27/14
Matrix:	SO - Soil	**Date Received:**	02/28/14
		Percent Solids:	82.5
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	1.0 U	2.4	1.0	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	82.5			%	1	02/28/14 15:44	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-5 (8-9)
Lab Sample ID: FA12854-11
Matrix: SO - Soil
Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 84.3
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	0.44 U	4.4	0.44	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic [a]	1.5 J	2.2	0.44	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium [a]	0.11 U	1.1	0.11	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium [a]	0.11 U	0.87	0.11	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium [a]	16.3	2.2	0.22	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper [a]	0.62 J	5.4	0.22	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead [a]	10.4	4.4	0.35	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.056	0.045	0.0045	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel [a]	0.39 J	8.7	0.11	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium [a]	0.65 U	4.4	0.65	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver [a]	0.14 U	2.2	0.14	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium [a]	0.33 U	2.2	0.33	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc [a]	1.5 J	4.4	0.65	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11438
(2) Instrument QC Batch: MA11440
(3) Prep QC Batch: MP26903
(4) Prep QC Batch: MP26919

(a) Elevated reporting limit(s) 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:	BG-5 (8-9)		
Lab Sample ID:	FA12854-11	**Date Sampled:**	02/27/14
Matrix:	SO - Soil	**Date Received:**	02/28/14
		Percent Solids:	84.3
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	1.5 J	2.3	1.0	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	84.3			%	1	02/28/14 15:44	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-5 (16-17)
Lab Sample ID: FA12854-12
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 71.7

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	0.52 U	5.2	0.52	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic [a]	1.3 J	2.6	0.52	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium [a]	0.13 U	1.3	0.13	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium [a]	0.13 U	1.0	0.13	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium [a]	14.6	2.6	0.26	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper [a]	1.3 J	6.5	0.26	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead [a]	8.2	5.2	0.41	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.0054 U	0.054	0.0054	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel [a]	0.81 J	10	0.13	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium [a]	0.77 U	5.2	0.77	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver [a]	0.17 U	2.6	0.17	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium [a]	0.39 U	2.6	0.39	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc [a]	3.5 J	5.2	0.77	mg/kg	4	03/04/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11438
(2) Instrument QC Batch: MA11440
(3) Prep QC Batch: MP26903
(4) Prep QC Batch: MP26919

(a) Elevated reporting limit(s) 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: BG-5 (16-17)
Lab Sample ID: FA12854-12
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 71.7

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	2.5 J	2.8	1.2	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	71.7			%	1	02/28/14 15:44	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-4 (1-3)
Lab Sample ID: FA12854-13
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 86.8

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.10 U	1.0	0.10	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	0.88	0.51	0.10	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.11 J	0.25	0.025	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.025 U	0.20	0.025	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	12.4	0.51	0.051	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	0.99 J	1.3	0.051	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	5.7	1.0	0.081	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.042 J	0.044	0.0044	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	1.8 J	2.0	0.025	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.21 J	1.0	0.15	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.033 U	0.51	0.033	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.076 U	0.51	0.076	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	2.3	1.0	0.15	mg/kg	1	03/04/14	03/05/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11435
(2) Instrument QC Batch: MA11440
(3) Prep QC Batch: MP26903
(4) Prep QC Batch: MP26919

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:	BG-4 (1-3)		
Lab Sample ID:	FA12854-13	**Date Sampled:**	02/27/14
Matrix:	SO - Soil	**Date Received:**	02/28/14
		Percent Solids:	86.8
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	4.7	2.3	0.99	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	86.8			%	1	03/07/14 14:47	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-4 (5-7)
Lab Sample ID: FA12854-14
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 91.4

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.10 U	1.0	0.10	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	0.39 J	0.52	0.10	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.026 U	0.26	0.026	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.026 U	0.21	0.026	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	6.8	0.52	0.052	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	0.61 J	1.3	0.052	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	4.6	1.0	0.083	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.011 J	0.041	0.0041	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	0.67 J	2.1	0.026	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.16 U	1.0	0.16	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.034 U	0.52	0.034	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.078 U	0.52	0.078	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	0.78 J	1.0	0.16	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11438
(2) Instrument QC Batch: MA11440
(3) Prep QC Batch: MP26909
(4) Prep QC Batch: MP26919

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:	BG-4 (5-7)		
Lab Sample ID:	FA12854-14	**Date Sampled:**	02/27/14
Matrix:	SO - Soil	**Date Received:**	02/28/14
		Percent Solids:	91.4
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	0.93 U	2.2	0.93	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	91.4			%	1	02/28/14 15:44	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

RL = Reporting Limit
MDL = Method Detection Limit

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

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA12854

AECOM — Chain of Custody and Analytical Request

Page: of
Project Number: 60269713 (603.4%)
Chain of Custody Number [1]: 022714-1
LIMS Number:

Project Name/Location: UTC Delavan Spray Technologies Site RI
Client Name: UTC
Collected by: LAlexander & RMorgan
Project Manager: Walter Gerald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.)	VOCs (8260B)	Sulfur (8270D)	Metals (6010B)	Hex Chrom. (7196)	pH (9045D)	COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
DPT-28(3-5)	27-FEB-2014	1000	X	X		3-5Ft	X	X	X	X	X	S	1
DPT-30(7-9)		1035	X	X		7-9 Ft	X	X	X	X	X	S	2
DPT-31(5-7)		1055	X	X		5-7Ft	X	X	X	X	X	S	3
DPT-29(2-4)		1200	X	X		2-4 Ft	X	X	X	X	X	S	4
DPT-32(8-10)		1330	X	X		8-10Ft	X	X	X	X	X	S	5
DPT-33(6-8)		1440	X	X		6-8Ft	X	X	X	X	X	S	6
B6-5(12-13)	27-FEB-2014	1638	X			12-13Ft			X	X		S	7
B6-5(1-3)		1610	X			1-3 Ft			X	X		S	8
B6-5(3-5		1615	X			3-5 Ft			X	X		S	9
B6-5(6-7.5)		1625	X			6-7.5Ft			X	X		S	10
B6-5(8-9)		1630	X			8-9Ft			X	X		S	11
B6-5(16-17)		1645	X			16-17Ft			X	X		S	12
B6-5(16-17)mdmsd		1645	X			16-17Ft			X	X		S	13
B6-4(1-3)		1715	X			1-3Ft			X	X		S	14
B6-4(5-7)		1720	X			5-7Ft			X	X		S	15

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	LAlexander/AECOM	2/27/14	1800	FE		
2.	FE	02-28-14	1000	RWilliams	022814	1000
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:
Method of Shipment: FedEx
Analytical Lab: Accutest
Lab Recipient:
Shipped: X
Airbill #: 804734756268
Location: Orlando FL
Date: Time:

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

VOCs are grab, remainder is composited
3 vials for VOCs & rest in 1 8 oz jar

2.2

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

FA12854: Chain of Custody
Page 1 of 3

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA12854 CLIENT: AEcom PROJECT: UTC Delaware

DATE/TIME RECEIVED: 02-28-14 1050 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

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

AIRBILL NUMBERS: 8047 3475 6268

COOLER INFORMATION

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

TRIP BLANK INFORMATION

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

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.4
- [ ] OBSERVED TEMPS: 2.6
- [ ] CORRECTED TEMPS: 2.2

SAMPLE INFORMATION

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

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

MISC. INFORMATION

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

NUMBER OF 5035 FIELD KITS ? 6

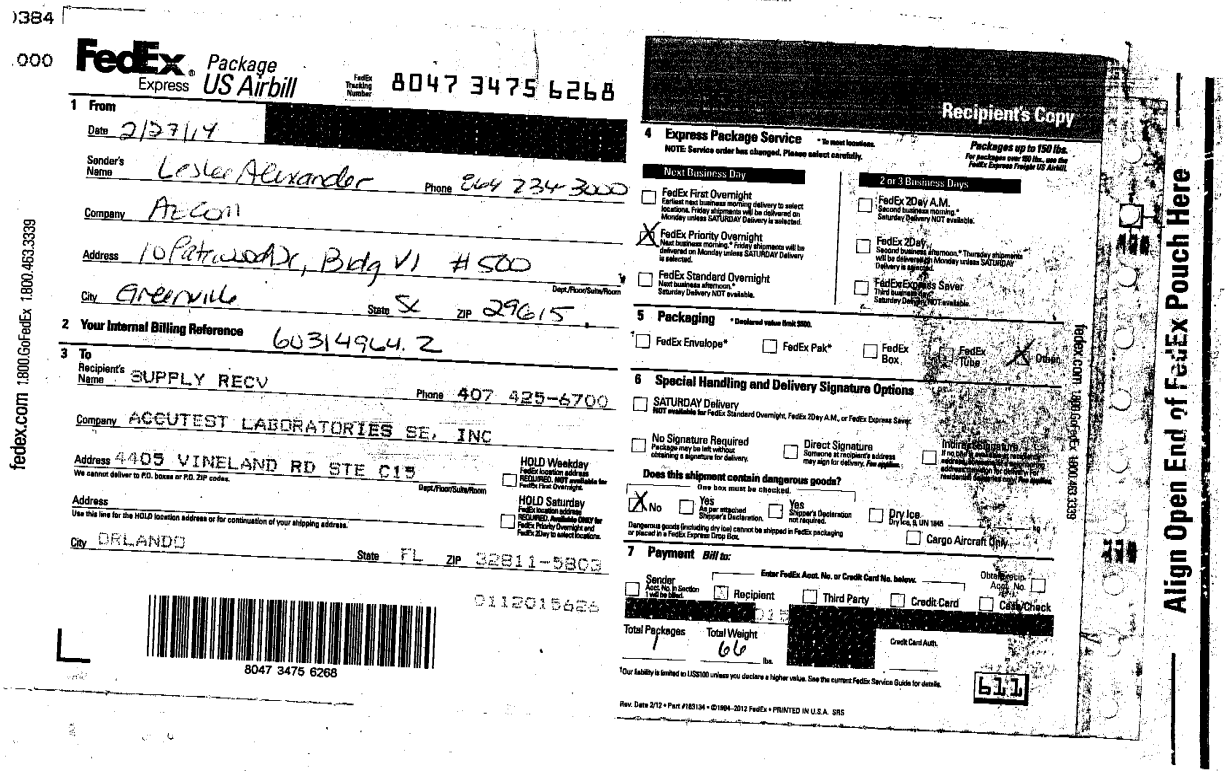
NUMBER OF LAB FILTERED METALS ? ____

SUMMARY OF COMMENTS: Samples 1-6 Soil Vial Have Extra labels, RECEIVED 1 EXTRA SAMPLE 1 SOIL JAR WITH ID BG 4(1-3) @ of 17:15 WILL BE SAMPLE #15 - Sample listed twice on COC #w 3-3-14

TECHNICIAN SIGNATURE/DATE RMiller 03-28-14 REVIEWER SIGNATURE/DATE 03/28/14

NF 12/10

receipt confirmation 122910.xls



FA12854: Chain of Custody

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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: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF2083-MB	F0063770.D	1	02/28/14	AH	n/a	n/a	VF2083

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

FA12854-1, FA12854-2, FA12854-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	15	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.1	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.3	ug/kg	
67-66-3	Chloroform	ND	5.0	1.1	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	1.0	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.4	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.3	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	
591-78-6	2-Hexanone	ND	25	4.9	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	5.0	ug/kg	
74-83-9	Methyl bromide	ND	5.0	1.9	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.0	ug/kg	
75-09-2	Methylene chloride	ND	10	4.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.4	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.6	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/kg	
108-88-3	Toluene	ND	5.0	1.0	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.7	ug/kg	

Method Blank Summary

Job Number: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF2083-MB	F0063770.D	1	02/28/14	AH	n/a	n/a	VF2083

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

FA12854-1, FA12854-2, FA12854-4

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	107%	75-124%
2037-26-5	Toluene-D8	95%	75-126%
460-00-4	4-Bromofluorobenzene	107%	71-133%
17060-07-0	1,2-Dichloroethane-D4	112%	72-135%

Method Blank Summary

Job Number: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF2084-MB	F0063783.D	1	03/01/14	AH	n/a	n/a	VF2084

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

FA12854-3, FA12854-5, FA12854-6

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	15	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.1	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.3	ug/kg	
67-66-3	Chloroform	ND	5.0	1.1	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	1.0	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.4	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.3	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	
591-78-6	2-Hexanone	ND	25	4.9	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	5.0	ug/kg	
74-83-9	Methyl bromide	ND	5.0	1.9	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.0	ug/kg	
75-09-2	Methylene chloride	ND	10	4.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.4	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.6	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/kg	
108-88-3	Toluene	ND	5.0	1.0	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.7	ug/kg	

Method Blank Summary

Job Number: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF2084-MB	F0063783.D	1	03/01/14	AH	n/a	n/a	VF2084

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

FA12854-3, FA12854-5, FA12854-6

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	75-124%
2037-26-5	Toluene-D8	97%	75-126%
460-00-4	4-Bromofluorobenzene	111%	71-133%
17060-07-0	1,2-Dichloroethane-D4	104%	72-135%

Blank Spike Summary

Job Number: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF2083-BS	F0063769.D	1	02/28/14	AH	n/a	n/a	VF2083

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

FA12854-1, FA12854-2, FA12854-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	280	112	61-152
71-43-2	Benzene	50	56.2	112	76-126
75-27-4	Bromodichloromethane	50	59.6	119	74-130
75-25-2	Bromoform	50	58.2	116	76-127
108-90-7	Chlorobenzene	50	58.6	117	81-129
75-00-3	Chloroethane	50	64.4	129	68-133
67-66-3	Chloroform	50	56.1	112	72-123
75-15-0	Carbon disulfide	50	48.9	98	72-122
56-23-5	Carbon tetrachloride	50	56.1	112	78-133
75-34-3	1,1-Dichloroethane	50	56.6	113	73-125
75-35-4	1,1-Dichloroethylene	50	56.2	112	81-136
107-06-2	1,2-Dichloroethane	50	57.4	115	74-128
78-87-5	1,2-Dichloropropane	50	58.8	118	74-125
124-48-1	Dibromochloromethane	50	56.1	112	76-127
156-59-2	cis-1,2-Dichloroethylene	50	55.7	111	74-126
10061-01-5	cis-1,3-Dichloropropene	50	59.5	119	80-123
156-60-5	trans-1,2-Dichloroethylene	50	55.6	111	70-127
10061-02-6	trans-1,3-Dichloropropene	50	59.1	118	75-131
100-41-4	Ethylbenzene	50	55.6	111	77-123
591-78-6	2-Hexanone	250	276	110	72-133
108-10-1	4-Methyl-2-pentanone	250	257	103	76-132
74-83-9	Methyl bromide	50	58.1	116	65-139
74-87-3	Methyl chloride	50	59.4	119	71-144
75-09-2	Methylene chloride	50	54.4	109	74-137
78-93-3	Methyl ethyl ketone	250	291	116	75-137
100-42-5	Styrene	50	58.5	117	78-125
71-55-6	1,1,1-Trichloroethane	50	56.5	113	70-129
79-34-5	1,1,2,2-Tetrachloroethane	50	50.8	102	71-126
79-00-5	1,1,2-Trichloroethane	50	55.8	112	74-124
127-18-4	Tetrachloroethylene	50	49.3	99	79-130
108-88-3	Toluene	50	52.0	104	76-124
79-01-6	Trichloroethylene	50	54.4	109	75-128
75-01-4	Vinyl chloride	50	57.6	115	76-141
1330-20-7	Xylene (total)	150	170	113	80-129

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF2083-BS	F0063769.D	1	02/28/14	AH	n/a	n/a	VF2083

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

FA12854-1, FA12854-2, FA12854-4

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	75-124%
2037-26-5	Toluene-D8	96%	75-126%
460-00-4	4-Bromofluorobenzene	101%	71-133%
17060-07-0	1,2-Dichloroethane-D4	103%	72-135%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF2084-BS	F0063782.D	1	03/01/14	AH	n/a	n/a	VF2084

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

FA12854-3, FA12854-5, FA12854-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	262	105	61-152
71-43-2	Benzene	50	52.0	104	76-126
75-27-4	Bromodichloromethane	50	53.6	107	74-130
75-25-2	Bromoform	50	51.9	104	76-127
108-90-7	Chlorobenzene	50	52.7	105	81-129
75-00-3	Chloroethane	50	49.6	99	68-133
67-66-3	Chloroform	50	50.5	101	72-123
75-15-0	Carbon disulfide	50	44.6	89	72-122
56-23-5	Carbon tetrachloride	50	54.4	109	78-133
75-34-3	1,1-Dichloroethane	50	52.0	104	73-125
75-35-4	1,1-Dichloroethylene	50	49.5	99	81-136
107-06-2	1,2-Dichloroethane	50	51.2	102	74-128
78-87-5	1,2-Dichloropropane	50	52.4	105	74-125
124-48-1	Dibromochloromethane	50	50.2	100	76-127
156-59-2	cis-1,2-Dichloroethylene	50	52.0	104	74-126
10061-01-5	cis-1,3-Dichloropropene	50	56.4	113	80-123
156-60-5	trans-1,2-Dichloroethylene	50	52.3	105	70-127
10061-02-6	trans-1,3-Dichloropropene	50	53.3	107	75-131
100-41-4	Ethylbenzene	50	50.0	100	77-123
591-78-6	2-Hexanone	250	251	100	72-133
108-10-1	4-Methyl-2-pentanone	250	227	91	76-132
74-83-9	Methyl bromide	50	52.0	104	65-139
74-87-3	Methyl chloride	50	55.4	111	71-144
75-09-2	Methylene chloride	50	55.3	111	74-137
78-93-3	Methyl ethyl ketone	250	268	107	75-137
100-42-5	Styrene	50	55.0	110	78-125
71-55-6	1,1,1-Trichloroethane	50	53.0	106	70-129
79-34-5	1,1,2,2-Tetrachloroethane	50	47.8	96	71-126
79-00-5	1,1,2-Trichloroethane	50	50.1	100	74-124
127-18-4	Tetrachloroethylene	50	46.0	92	79-130
108-88-3	Toluene	50	46.9	94	76-124
79-01-6	Trichloroethylene	50	49.5	99	75-128
75-01-4	Vinyl chloride	50	51.2	102	76-141
1330-20-7	Xylene (total)	150	161	107	80-129

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF2084-BS	F0063782.D	1	03/01/14	AH	n/a	n/a	VF2084

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

FA12854-3, FA12854-5, FA12854-6

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	75-124%
2037-26-5	Toluene-D8	91%	75-126%
460-00-4	4-Bromofluorobenzene	104%	71-133%
17060-07-0	1,2-Dichloroethane-D4	97%	72-135%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12854-3MS	F0063777.D	1	02/28/14	AH	n/a	n/a	VF2083
FA12854-3MSD	F0063778.D	1	02/28/14	AH	n/a	n/a	VF2083
FA12854-3 [a]	F0063773.D	1	02/28/14	AH	n/a	n/a	VF2083

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

FA12854-1, FA12854-2, FA12854-4

CAS No.	Compound	FA12854-3 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		329	334	102	356	109	6	61-152/27
71-43-2	Benzene	ND		65.8	60.8	92	64.7	99	6	76-126/26
75-27-4	Bromodichloromethane	ND		65.8	67.2	102	69.5	106	3	74-130/25
75-25-2	Bromoform	ND		65.8	60.7	92	63.7	98	5	76-127/26
108-90-7	Chlorobenzene	ND		65.8	59.4	90	63.1	97	6	81-129/29
75-00-3	Chloroethane	ND		65.8	81.5	124	71.9	110	13	68-133/29
67-66-3	Chloroform	ND		65.8	60.8	92	68.0	104	11	72-123/26
75-15-0	Carbon disulfide	ND		65.8	56.7	86	57.8	88	2	72-122/29
56-23-5	Carbon tetrachloride	ND		65.8	60.8	92	66.1	101	8	78-133/29
75-34-3	1,1-Dichloroethane	ND		65.8	62.8	95	67.4	103	7	73-125/27
75-35-4	1,1-Dichloroethylene	ND		65.8	64.5	98	66.7	102	3	81-136/28
107-06-2	1,2-Dichloroethane	ND		65.8	70.3	107	74.0	113	5	74-128/23
78-87-5	1,2-Dichloropropane	ND		65.8	62.2	95	68.6	105	10	74-125/25
124-48-1	Dibromochloromethane	ND		65.8	57.1	87	60.0	92	5	76-127/27
156-59-2	cis-1,2-Dichloroethylene	ND		65.8	55.4	84	61.4	94	10	74-126/26
10061-01-5	cis-1,3-Dichloropropene	ND		65.8	65.4	99	69.6	107	6	80-123/26
156-60-5	trans-1,2-Dichloroethylene	ND		65.8	61.6	94	68.4	105	10	70-127/27
10061-02-6	trans-1,3-Dichloropropene	ND		65.8	62.6	95	66.8	102	6	75-131/28
100-41-4	Ethylbenzene	ND		65.8	57.4	87	60.8	93	6	77-123/31
591-78-6	2-Hexanone	ND		329	346	105	373	114	8	72-133/26
108-10-1	4-Methyl-2-pentanone	ND		329	321	98	352	108	9	76-132/26
74-83-9	Methyl bromide	ND		65.8	70.5	107	68.3	105	3	65-139/31
74-87-3	Methyl chloride	ND		65.8	71.7	109	74.1	113	3	71-144/27
75-09-2	Methylene chloride	ND		65.8	70.0	106	76.2	117	8	74-137/28
78-93-3	Methyl ethyl ketone	ND		329	364	111	394	121	8	75-137/25
100-42-5	Styrene	ND		65.8	61.2	93	63.7	98	4	78-125/30
71-55-6	1,1,1-Trichloroethane	ND		65.8	64.1	97	66.4	102	4	70-129/27
79-34-5	1,1,2,2-Tetrachloroethane	ND		65.8	65.6	100	67.3	103	3	71-126/30
79-00-5	1,1,2-Trichloroethane	ND		65.8	59.3	90	63.2	97	6	74-124/28
127-18-4	Tetrachloroethylene	ND		65.8	47.5	72*	51.0	78*	7	79-130/31
108-88-3	Toluene	ND		65.8	53.3	81	56.3	86	5	76-124/30
79-01-6	Trichloroethylene	ND		65.8	60.1	91	63.1	97	5	75-128/27
75-01-4	Vinyl chloride	ND		65.8	64.2	98	65.7	101	2	76-141/27
1330-20-7	Xylene (total)	ND		197	180	91	192	98	6	80-129/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12854-3MS	F0063777.D	1	02/28/14	AH	n/a	n/a	VF2083
FA12854-3MSD	F0063778.D	1	02/28/14	AH	n/a	n/a	VF2083
FA12854-3 [a]	F0063773.D	1	02/28/14	AH	n/a	n/a	VF2083

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

FA12854-1, FA12854-2, FA12854-4

CAS No.	Surrogate Recoveries	MS	MSD	FA12854-3	Limits
1868-53-7	Dibromofluoromethane	102%	104%	105%	75-124%
2037-26-5	Toluene-D8	92%	91%	98%	75-126%
460-00-4	4-Bromofluorobenzene	101%	99%	113%	71-133%
17060-07-0	1,2-Dichloroethane-D4	113%	114%	121%	72-135%

(a) Confirmation run for internal standard areas.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12884-1MS	F0063791.D	1	03/01/14	AH	n/a	n/a	VF2084
FA12884-1MSD	F0063792.D	1	03/01/14	AH	n/a	n/a	VF2084
FA12884-1 [a]	F0063787.D	1	03/01/14	AH	n/a	n/a	VF2084

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

FA12854-3, FA12854-5, FA12854-6

CAS No.	Compound	FA12884-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	63 U		383	372	97	397	103	7	61-152/27
71-43-2	Benzene	6.3 U		76.6	73.3	96	71.4	93	3	76-126/26
75-27-4	Bromodichloromethane	6.3 U		76.6	77.4	101	76.6	99	1	74-130/25
75-25-2	Bromoform	6.3 U		76.6	67.2	88	69.8	90	4	76-127/26
108-90-7	Chlorobenzene	6.3 U		76.6	73.2	96	73.6	95	1	81-129/29
75-00-3	Chloroethane	6.3 U		76.6	84.0	110	88.6	115	5	68-133/29
67-66-3	Chloroform	6.3 U		76.6	74.1	97	71.8	93	3	72-123/26
75-15-0	Carbon disulfide	6.3 U		76.6	60.7	79	61.7	80	2	72-122/29
56-23-5	Carbon tetrachloride	6.3 U		76.6	76.0	99	73.5	95	3	78-133/29
75-34-3	1,1-Dichloroethane	6.3 U		76.6	77.1	101	72.9	94	6	73-125/27
75-35-4	1,1-Dichloroethylene	6.3 U		76.6	72.5	95	72.1	93	1	81-136/28
107-06-2	1,2-Dichloroethane	6.3 U		76.6	81.7	107	80.0	104	2	74-128/23
78-87-5	1,2-Dichloropropane	6.3 U		76.6	74.2	97	75.9	98	2	74-125/25
124-48-1	Dibromochloromethane	6.3 U		76.6	67.3	88	68.6	89	2	76-127/27
156-59-2	cis-1,2-Dichloroethylene	6.3 U		76.6	67.9	89	65.9	85	3	74-126/26
10061-01-5	cis-1,3-Dichloropropene	6.3 U		76.6	73.5	96	78.8	102	7	80-123/26
156-60-5	trans-1,2-Dichloroethylene	6.3 U		76.6	75.0	98	71.7	93	4	70-127/27
10061-02-6	trans-1,3-Dichloropropene	6.3 U		76.6	74.5	97	76.3	99	2	75-131/28
100-41-4	Ethylbenzene	6.3 U		76.6	71.6	93	69.8	90	3	77-123/31
591-78-6	2-Hexanone	32 U		383	362	95	415	108	14	72-133/26
108-10-1	4-Methyl-2-pentanone	32 U		383	361	94	389	101	7	76-132/26
74-83-9	Methyl bromide	6.3 U		76.6	78.2	102	78.8	102	1	65-139/31
74-87-3	Methyl chloride	6.3 U		76.6	76.3	100	80.7	105	6	71-144/27
75-09-2	Methylene chloride	13 U		76.6	82.8	108	79.2	103	4	74-137/28
78-93-3	Methyl ethyl ketone	32 U		383	389	102	427	111	9	75-137/25
100-42-5	Styrene	6.3 U		76.6	72.9	95	73.5	95	1	78-125/30
71-55-6	1,1,1-Trichloroethane	6.3 U		76.6	77.6	101	73.7	96	5	70-129/27
79-34-5	1,1,2,2-Tetrachloroethane	6.3 U		76.6	71.9	94	79.8	103	10	71-126/30
79-00-5	1,1,2-Trichloroethane	6.3 U		76.6	69.6	91	70.9	92	2	74-124/28
127-18-4	Tetrachloroethylene	6.3 U		76.6	60.0	78*	58.7	76*	2	79-130/31
108-88-3	Toluene	6.3 U		76.6	65.6	86	65.7	85	0	76-124/30
79-01-6	Trichloroethylene	6.3 U		76.6	73.0	95	71.5	93	2	75-128/27
75-01-4	Vinyl chloride	6.3 U		76.6	70.0	91	71.0	92	1	76-141/27
1330-20-7	Xylene (total)	19 U		230	223	97	221	95	1	80-129/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12884-1MS	F0063791.D	1	03/01/14	AH	n/a	n/a	VF2084
FA12884-1MSD	F0063792.D	1	03/01/14	AH	n/a	n/a	VF2084
FA12884-1 [a]	F0063787.D	1	03/01/14	AH	n/a	n/a	VF2084

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

FA12854-3, FA12854-5, FA12854-6

CAS No.	Surrogate Recoveries	MS	MSD	FA12884-1	Limits
1868-53-7	Dibromofluoromethane	103%	101%	106%	75-124%
2037-26-5	Toluene-D8	93%	93%	98%	75-126%
460-00-4	4-Bromofluorobenzene	102%	107%	108%	71-133%
17060-07-0	1,2-Dichloroethane-D4	114%	111%	125%	72-135%

(a) Confirmation run.

* = 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: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-MB	T011838.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	830	170	ug/kg	
95-57-8	2-Chlorophenol	ND	170	17	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	17	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	17	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	18	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	830	170	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	67	ug/kg	
95-48-7	2-Methylphenol	ND	170	17	ug/kg	
	3&4-Methylphenol	ND	170	33	ug/kg	
88-75-5	2-Nitrophenol	ND	170	17	ug/kg	
100-02-7	4-Nitrophenol	ND	830	130	ug/kg	
87-86-5	Pentachlorophenol	ND	830	130	ug/kg	
108-95-2	Phenol	ND	170	17	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	21	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	17	ug/kg	
83-32-9	Acenaphthene	ND	170	21	ug/kg	
208-96-8	Acenaphthylene	ND	170	17	ug/kg	
120-12-7	Anthracene	ND	170	17	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	18	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	17	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	17	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	20	ug/kg	
106-47-8	4-Chloroaniline	ND	170	17	ug/kg	
86-74-8	Carbazole	ND	170	17	ug/kg	
218-01-9	Chrysene	ND	170	17	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	17	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	17	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	17	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	25	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	170	17	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	17	ug/kg	

Method Blank Summary

Job Number: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-MB	T011838.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	170	17	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	19	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	18	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	170	17	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	17	ug/kg	
132-64-9	Dibenzofuran	ND	170	17	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	330	33	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	170	33	ug/kg	
84-66-2	Diethyl phthalate	ND	330	33	ug/kg	
131-11-3	Dimethyl phthalate	ND	170	33	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	33	ug/kg	
206-44-0	Fluoranthene	ND	170	17	ug/kg	
86-73-7	Fluorene	ND	170	17	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	17	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	17	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	17	ug/kg	
67-72-1	Hexachloroethane	ND	170	17	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	17	ug/kg	
78-59-1	Isophorone	ND	170	17	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	17	ug/kg	
88-74-4	2-Nitroaniline	ND	170	33	ug/kg	
99-09-2	3-Nitroaniline	ND	170	33	ug/kg	
100-01-6	4-Nitroaniline	ND	170	33	ug/kg	
91-20-3	Naphthalene	ND	170	17	ug/kg	
98-95-3	Nitrobenzene	ND	170	17	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	17	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	17	ug/kg	
85-01-8	Phenanthrene	ND	170	17	ug/kg	
129-00-0	Pyrene	ND	170	17	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	170	17	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	98%	40-102%
4165-62-2	Phenol-d5	98%	41-100%

Method Blank Summary

Job Number: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-MB	T011838.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	94%	42-108%
4165-60-0	Nitrobenzene-d5	102%	40-105%
321-60-8	2-Fluorobiphenyl	98%	43-107%
1718-51-0	Terphenyl-d14	124%* [a]	45-119%

(a) Outside control limits.

Blank Spike Summary

Job Number: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-BS	T011837.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
65-85-0	Benzoic Acid	3330	3560	107	36-118
95-57-8	2-Chlorophenol	1670	1590	95	48-104
59-50-7	4-Chloro-3-methyl phenol	1670	1710	103	52-108
120-83-2	2,4-Dichlorophenol	1670	1680	101	51-105
105-67-9	2,4-Dimethylphenol	1670	1780	107*	43-96
51-28-5	2,4-Dinitrophenol	3330	3860	116	40-119
534-52-1	4,6-Dinitro-o-cresol	3330	3300	99	64-121
95-48-7	2-Methylphenol	1670	1590	95	46-107
	3&4-Methylphenol	3330	3260	98	44-111
88-75-5	2-Nitrophenol	1670	1660	100	49-104
100-02-7	4-Nitrophenol	3330	3450	104	56-116
87-86-5	Pentachlorophenol	3330	3700	111	61-114
108-95-2	Phenol	1670	1610	97	45-110
95-95-4	2,4,5-Trichlorophenol	1670	1670	100	58-112
88-06-2	2,4,6-Trichlorophenol	1670	1730	104	56-109
83-32-9	Acenaphthene	1670	1700	102	56-109
208-96-8	Acenaphthylene	1670	1700	102	56-106
120-12-7	Anthracene	1670	1720	103	61-110
56-55-3	Benzo(a)anthracene	1670	1880	113*	66-111
50-32-8	Benzo(a)pyrene	1670	1850	111*	59-104
205-99-2	Benzo(b)fluoranthene	1670	1810	109	67-113
191-24-2	Benzo(g,h,i)perylene	1670	1760	106	67-113
207-08-9	Benzo(k)fluoranthene	1670	1770	106	67-114
101-55-3	4-Bromophenyl phenyl ether	1670	1390	83	62-110
85-68-7	Butyl benzyl phthalate	1670	1720	103	65-113
100-51-6	Benzyl Alcohol	1670	1700	102	53-108
91-58-7	2-Chloronaphthalene	1670	1620	97	53-106
106-47-8	4-Chloroaniline	1670	1530	92	30-115
86-74-8	Carbazole	1670	1780	107	60-111
218-01-9	Chrysene	1670	1900	114*	65-112
111-91-1	bis(2-Chloroethoxy)methane	1670	1630	98	48-105
111-44-4	bis(2-Chloroethyl)ether	1670	1450	87	46-103
108-60-1	bis(2-Chloroisopropyl)ether	1670	1490	89	40-110
7005-72-3	4-Chlorophenyl phenyl ether	1670	1640	98	58-106
95-50-1	1,2-Dichlorobenzene	1670	1310	79	44-102
541-73-1	1,3-Dichlorobenzene	1670	1300	78	42-100

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-BS	T011837.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
106-46-7	1,4-Dichlorobenzene	1670	1440	86	40-106
121-14-2	2,4-Dinitrotoluene	1670	1710	103	59-109
606-20-2	2,6-Dinitrotoluene	1670	1670	100	61-107
91-94-1	3,3'-Dichlorobenzidine	1670	1620	97	36-114
53-70-3	Dibenzo(a,h)anthracene	1670	1690	101	68-115
132-64-9	Dibenzofuran	1670	1650	99	57-108
84-74-2	Di-n-butyl phthalate	1670	1570	94	63-108
117-84-0	Di-n-octyl phthalate	1670	1620	97	64-119
84-66-2	Diethyl phthalate	1670	1590	95	61-109
131-11-3	Dimethyl phthalate	1670	1480	89	59-108
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1720	103	64-115
206-44-0	Fluoranthene	1670	1700	102	60-108
86-73-7	Fluorene	1670	1740	104	58-109
118-74-1	Hexachlorobenzene	1670	1650	99	59-111
87-68-3	Hexachlorobutadiene	1670	1530	92	41-108
77-47-4	Hexachlorocyclopentadiene	1670	1420	85	49-110
67-72-1	Hexachloroethane	1670	1350	81	40-105
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1770	106	66-116
78-59-1	Isophorone	1670	1560	94*	42-89
91-57-6	2-Methylnaphthalene	1670	1570	94	47-106
88-74-4	2-Nitroaniline	1670	1770	106	56-123
99-09-2	3-Nitroaniline	1670	1610	97	41-111
100-01-6	4-Nitroaniline	1670	1730	104	54-113
91-20-3	Naphthalene	1670	1580	95	44-104
98-95-3	Nitrobenzene	1670	1530	92	43-108
621-64-7	N-Nitroso-di-n-propylamine	1670	1660	100	48-108
86-30-6	N-Nitrosodiphenylamine	1670	1730	104	62-110
85-01-8	Phenanthrene	1670	1750	105	63-111
129-00-0	Pyrene	1670	1870	112	65-115
120-82-1	1,2,4-Trichlorobenzene	1670	1460	88	45-100

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	95%	40-102%
4165-62-2	Phenol-d5	103%* [a]	41-100%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-BS	T011837.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6

CAS No.	Surrogate Recoveries	BSP	Limits
118-79-6	2,4,6-Tribromophenol	101%	42-108%
4165-60-0	Nitrobenzene-d5	93%	40-105%
321-60-8	2-Fluorobiphenyl	97%	43-107%
1718-51-0	Terphenyl-d14	131%* [a]	45-119%

(a) Outside control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-MS	T011843.D	1	03/06/14	FS	03/04/14	OP50690	ST562
OP50690-MSD	T011844.D	1	03/06/14	FS	03/04/14	OP50690	ST562
FA12790-12R	T011842.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6

CAS No.	Compound	FA12790-12R ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		3680	3770	102	3820	104	1	36-118/41
95-57-8	2-Chlorophenol	ND		1840	1810	98	1780	97	2	48-104/26
59-50-7	4-Chloro-3-methyl phenol	ND		1840	1920	104	1920	105	0	52-108/21
120-83-2	2,4-Dichlorophenol	ND		1840	1890	103	1960	107*	4	51-105/27
105-67-9	2,4-Dimethylphenol	ND		1840	1990	108*	2050	112*	3	43-96/23
51-28-5	2,4-Dinitrophenol	ND		3680	3710	101	4120	112	10	40-119/32
534-52-1	4,6-Dinitro-o-cresol	ND		3680	3410	93	3510	96	3	64-121/29
95-48-7	2-Methylphenol	ND		1840	1740	95	1800	98	3	46-107/24
	3&4-Methylphenol	ND		3680	3720	101	3850	105	3	44-111/24
88-75-5	2-Nitrophenol	ND		1840	1920	104	1940	106*	1	49-104/27
100-02-7	4-Nitrophenol	ND		3680	4300	117*	4090	112	5	56-116/23
87-86-5	Pentachlorophenol	ND		3680	4090	111	4310	118*	5	61-114/23
108-95-2	Phenol	ND		1840	1810	98	1850	101	2	45-110/24
95-95-4	2,4,5-Trichlorophenol	ND		1840	1820	99	2030	111	11	58-112/22
88-06-2	2,4,6-Trichlorophenol	ND		1840	1950	106	2130	116*	9	56-109/25
83-32-9	Acenaphthene	ND		1840	1900	103	1950	106	3	56-109/23
208-96-8	Acenaphthylene	ND		1840	1970	107*	2080	113*	5	56-106/23
120-12-7	Anthracene	ND		1840	1820	99	1920	105	5	61-110/21
56-55-3	Benzo(a)anthracene	ND		1840	2030	110	2070	113*	2	66-111/23
50-32-8	Benzo(a)pyrene	ND		1840	1910	104	2000	109*	5	59-104/23
205-99-2	Benzo(b)fluoranthene	ND		1840	1950	106	1890	103	3	67-113/24
191-24-2	Benzo(g,h,i)perylene	ND		1840	1790	97	1950	106	9	67-113/21
207-08-9	Benzo(k)fluoranthene	ND		1840	1740	95	1890	103	8	67-114/22
101-55-3	4-Bromophenyl phenyl ether	ND		1840	1700	92	1660	91	2	62-110/21
85-68-7	Butyl benzyl phthalate	ND		1840	1870	102	1950	106	4	65-113/20
100-51-6	Benzyl Alcohol	ND		1840	1940	105	2020	110*	4	53-108/24
91-58-7	2-Chloronaphthalene	ND		1840	1760	96	1920	105	9	53-106/23
106-47-8	4-Chloroaniline	ND		1840	1660	90	1710	93	3	30-115/30
86-74-8	Carbazole	ND		1840	2020	110	2030	111	0	60-111/19
218-01-9	Chrysene	ND		1840	1980	108	2020	110	2	65-112/25
111-91-1	bis(2-Chloroethoxy)methane	ND		1840	1810	98	1810	99	0	48-105/24
111-44-4	bis(2-Chloroethyl)ether	ND		1840	1620	88	1670	91	3	46-103/27
108-60-1	bis(2-Chloroisopropyl)ether	ND		1840	1660	90	1800	98	8	40-110/25
7005-72-3	4-Chlorophenyl phenyl ether	ND		1840	1810	98	1840	100	2	58-106/21
95-50-1	1,2-Dichlorobenzene	ND		1840	1380	75	1490	81	8	44-102/28
541-73-1	1,3-Dichlorobenzene	ND		1840	1440	78	1460	80	1	42-100/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-MS	T011843.D	1	03/06/14	FS	03/04/14	OP50690	ST562
OP50690-MSD	T011844.D	1	03/06/14	FS	03/04/14	OP50690	ST562
FA12790-12R	T011842.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6

CAS No.	Compound	FA12790-12R ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
106-46-7	1,4-Dichlorobenzene	ND		1840	1590	86	1540	84	3	40-106/29
121-14-2	2,4-Dinitrotoluene	ND		1840	1800	98	1920	105	6	59-109/20
606-20-2	2,6-Dinitrotoluene	ND		1840	1880	102	2000	109*	6	61-107/22
91-94-1	3,3'-Dichlorobenzidine	ND		1840	1680	91	1630	89	3	36-114/28
53-70-3	Dibenzo(a,h)anthracene	ND		1840	1810	98	1920	105	6	68-115/23
132-64-9	Dibenzofuran	ND		1840	1840	100	1970	107	7	57-108/22
84-74-2	Di-n-butyl phthalate	ND		1840	1770	96	1790	98	1	63-108/19
117-84-0	Di-n-octyl phthalate	ND		1840	1770	96	1830	100	3	64-119/21
84-66-2	Diethyl phthalate	ND		1840	1710	93	1790	98	5	61-109/20
131-11-3	Dimethyl phthalate	ND		1840	1610	88	1770	97	9	59-108/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		1840	1890	103	1920	105	2	64-115/23
206-44-0	Fluoranthene	ND		1840	1910	104	1980	108	4	60-108/25
86-73-7	Fluorene	ND		1840	1960	107	1990	109	2	58-109/21
118-74-1	Hexachlorobenzene	ND		1840	1830	99	1790	98	2	59-111/21
87-68-3	Hexachlorobutadiene	ND		1840	1780	97	1790	98	1	41-108/27
77-47-4	Hexachlorocyclopentadiene	ND		1840	1290	70	1460	80	12	49-110/31
67-72-1	Hexachloroethane	ND		1840	1440	78	1520	83	5	40-105/32
193-39-5	Indeno(1,2,3-cd)pyrene	ND		1840	1800	98	2010	110	11	66-116/22
78-59-1	Isophorone	ND		1840	1800	98*	1870	102*	4	42-89/22
91-57-6	2-Methylnaphthalene	ND		1840	1730	94	1820	99	5	47-106/27
88-74-4	2-Nitroaniline	ND		1840	1940	105	2190	119	12	56-123/24
99-09-2	3-Nitroaniline	ND		1840	1860	101	1950	106	5	41-111/25
100-01-6	4-Nitroaniline	ND		1840	1930	105	1860	101	4	54-113/22
91-20-3	Naphthalene	ND		1840	1800	98	1800	98	0	44-104/27
98-95-3	Nitrobenzene	ND		1840	1710	93	1830	100	7	43-108/25
621-64-7	N-Nitroso-di-n-propylamine	ND		1840	1880	102	1990	109*	6	48-108/27
86-30-6	N-Nitrosodiphenylamine	ND		1840	1990	108	2030	111*	2	62-110/21
85-01-8	Phenanthrene	ND		1840	1910	104	1920	105	1	63-111/22
129-00-0	Pyrene	ND		1840	1830	99	1910	104	4	65-115/25
120-82-1	1,2,4-Trichlorobenzene	ND		1840	1590	86	1690	92	6	45-100/26

CAS No.	Surrogate Recoveries	MS	MSD	FA12790-12R	Limits
367-12-4	2-Fluorophenol	99%	104%*	83%	40-102%
4165-62-2	Phenol-d5	103%*	104%*	89%	41-100%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12854
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-MS	T011843.D	1	03/06/14	FS	03/04/14	OP50690	ST562
OP50690-MSD	T011844.D	1	03/06/14	FS	03/04/14	OP50690	ST562
FA12790-12R	T011842.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6

CAS No.	Surrogate Recoveries	MS	MSD	FA12790-12R	Limits
118-79-6	2,4,6-Tribromophenol	105%	114%*	93%	42-108%
4165-60-0	Nitrobenzene-d5	92%	102%	94%	40-105%
321-60-8	2-Fluorobiphenyl	94%	106%	81%	43-107%
1718-51-0	Terphenyl-d14	107%	119%	95%	45-119%

* = 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: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26900
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/04/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.75	1.6		
Antimony	1.0	.1	.1	-0.015	<1.0
Arsenic	0.50	.1	.1	-0.070	<0.50
Barium	10	.05	.05		
Beryllium	0.25	.025	.025	0.0	<0.25
Cadmium	0.20	.025	.025	-0.0050	<0.20
Calcium	250	2.5	2.5		
Chromium	0.50	.05	.05	0.015	<0.50
Cobalt	2.5	.025	.025		
Copper	1.3	.05	.05	0.015	<1.3
Iron	15	.85	1.3		
Lead	1.0	.055	.08	0.025	<1.0
Magnesium	250	2.5	2.5		
Manganese	0.75	.025	.025		
Molybdenum	2.5	.025	.03		
Nickel	2.0	.025	.025	0.015	<2.0
Potassium	500	10	10		
Selenium	1.0	.12	.15	0.030	<1.0
Silver	0.50	.033	.033	-0.010	<0.50
Sodium	500	25	25		
Strontium	0.50	.02	.025		
Thallium	0.50	.075	.075	-0.055	<0.50
Tin	2.5	.035	.035		
Titanium	0.50	.045	.045		
Vanadium	2.5	.025	.025		
Zinc	1.0	.15	.15	0.13	<1.0

Associated samples MP26900: FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6, FA12854-7, FA12854-8

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: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26900
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date:			03/04/14					03/04/14	
Metal	FA12814-11 Original	DUP	RPD	QC Limits	FA12814-11 Original	MS	Spikelot MPFLICP2 % Rec		QC Limits
Aluminum									
Antimony	0.0	0.0	NC	0-20	0.0	7.7	26.9	28.6N(b)	80-120
Arsenic	1.7	1.3	26.7 (a)	0-20	1.7	83.1	108	75.5N(b)	80-120
Barium									
Beryllium	0.065	0.054	18.5	0-20	0.065	2.5	2.69	90.4	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	2.3	2.69	85.4	80-120
Calcium									
Chromium	12.9	11.3	13.2	0-20	12.9	19.3	10.8	59.4N(b)	80-120
Cobalt									
Copper	3.7	3.0	20.9 (a)	0-20	3.7	15.0	13.5	83.9	80-120
Iron									
Lead	4.9	4.3	13.0	0-20	4.9	28.6	26.9	87.9	80-120
Magnesium									
Manganese									
Molybdenum									
Nickel	1.1	1.0	9.5	0-20	1.1	24.7	26.9	87.6	80-120
Potassium									
Selenium	0.36	0.34	5.7	0-20	0.36	81.7	108	75.5N(b)	80-120
Silver	0.060	0.0	200.0(a)	0-20	0.060	2.4	2.69	86.8	80-120
Sodium									
Strontium									
Thallium	0.0	0.0	NC	0-20	0.0	95.7	108	88.8	80-120
Tin									
Titanium									
Vanadium									
Zinc	1.6	1.8	11.8	0-20	1.6	24.9	26.9	86.5	80-120

Associated samples MP26900: FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6, FA12854-7, FA12854-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.
(b) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26900 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/04/14

Metal	FA12814-11 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.0	5.7	26	21.9N(a)	29.9 (b)	20
Arsenic	1.7	70.1	104	65.8N(a)	17.0	20
Barium						
Beryllium	0.065	2.4	2.6	89.9	4.1	20
Cadmium	0.0	2.2	2.6	84.7	4.4	20
Calcium						
Chromium	12.9	25.9	10.4	125.1N(a	29.2 (b)	20
Cobalt						
Copper	3.7	16.9	13	101.6	11.9	20
Iron						
Lead	4.9	28.5	26	90.8	0.4	20
Magnesium						
Manganese						
Molybdenum						
Nickel	1.1	23.5	26	86.2	5.0	20
Potassium						
Selenium	0.36	63.1	104	60.4N(a)	25.7 (b)	20
Silver	0.060	2.3	2.6	86.2	4.3	20
Sodium						
Strontium						
Thallium	0.0	88.8	104	85.4	7.5	20
Tin						
Titanium						
Vanadium						
Zinc	1.6	23.5	26	84.3	5.8	20

Associated samples MP26900: FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6, FA12854-7, FA12854-8

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) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.
(b) High RPD due to possible sample non-homogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26900
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/04/14

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum				
Antimony	25.5	25	102.0	80-120
Arsenic	97.6	100	97.6	80-120
Barium				
Beryllium	2.5	2.5	100.0	80-120
Cadmium	2.4	2.5	96.0	80-120
Calcium				
Chromium	9.9	10	99.0	80-120
Cobalt				
Copper	13.1	12.5	104.8	80-120
Iron				
Lead	23.3	25	93.2	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel	25.5	25	102.0	80-120
Potassium				
Selenium	97.3	100	97.3	80-120
Silver	2.4	2.5	96.0	80-120
Sodium				
Strontium				
Thallium	92.7	100	92.7	80-120
Tin				
Titanium				
Vanadium				
Zinc	23.9	25	95.6	80-120

Associated samples MP26900: FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6, FA12854-7, FA12854-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26900
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/04/14

Metal	FA12814-11 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	0.00	0.00	NC	0-10
Arsenic	33.9	39.9	17.7 (a)	0-10
Barium				
Beryllium	1.30	0.00	100.0(a)	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	260	296	13.6*(b)	0-10
Cobalt				
Copper	75.2	87.5	16.4*(b)	0-10
Iron				
Lead	97.9	102	4.5	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	22.6	26.2	15.9 (a)	0-10
Potassium				
Selenium	7.20	13.6	88.9 (a)	0-10
Silver	1.20	0.00	100.0(a)	0-10
Sodium				
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium				
Zinc	32.0	40.8	27.5 (a)	0-10

Associated samples MP26900: FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6, FA12854-7, FA12854-8

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).
(b) Serial dilution indicates possible matrix interference.

POST DIGESTATE SPIKE SUMMARY

Login Number: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26900
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/04/14

Metal	Sample ml	Final ml	FA12814-11 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10			90.8	0.2	5	100	90.8	80-120
Arsenic	9.8	10	33.9	33.222	126	0.2	5	100	92.8	80-120
Barium										
Beryllium	9.8	10	1.3	1.274	50.5	0.2	2.5	50	98.5	80-120
Cadmium	9.8	10			46.5	0.2	2.5	50	93.0	80-120
Calcium										
Chromium	9.8	10	260.1	254.898	302.2	0.2	2.5	50	94.6	80-120
Cobalt										
Copper	9.8	10	75.2	73.696	176.7	0.2	5	100	103.0	80-120
Iron										
Lead	9.8	10	97.9	95.942	146.1	0.2	2.5	50	100.3	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel	9.8	10	22.6	22.148	117.2	0.2	5	100	95.1	80-120
Potassium										
Selenium	9.8	10	7.2	7.056	97	0.2	5	100	89.9	80-120
Silver	9.8	10	1.2	1.176	48.3	0.2	2.5	50	94.2	80-120
Sodium										
Strontium										
Thallium	9.8	10			87.5	0.2	5	100	87.5	80-120
Tin										
Titanium										
Vanadium										
Zinc	9.8	10	32	31.36	261.5	0.2	12.5	250	92.1	80-120

Associated samples MP26900: FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6, FA12854-7, FA12854-8

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26903 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/04/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.75	1.6		
Antimony	1.0	.1	.1	0.16	<1.0
Arsenic	0.50	.1	.1	-0.20	<0.50
Barium	10	.05	.05		
Beryllium	0.25	.025	.025	-0.0050	<0.25
Cadmium	0.20	.025	.025	-0.010	<0.20
Calcium	250	2.5	2.5		
Chromium	0.50	.05	.05	0.040	<0.50
Cobalt	2.5	.025	.025		
Copper	1.3	.05	.05	0.015	<1.3
Iron	15	.85	1.3		
Lead	1.0	.055	.08	-0.020	<1.0
Magnesium	250	2.5	2.5		
Manganese	0.75	.025	.025		
Molybdenum	2.5	.025	.03		
Nickel	2.0	.025	.025	0.015	<2.0
Potassium	500	10	10		
Selenium	1.0	.12	.15	0.0	<1.0
Silver	0.50	.033	.033	-0.0050	<0.50
Sodium	500	25	25		
Strontium	0.50	.02	.025		
Thallium	0.50	.075	.075	-0.22	<0.50
Tin	2.5	.035	.035		
Titanium	0.50	.045	.045		
Vanadium	2.5	.025	.025		
Zinc	1.0	.15	.15	0.23	<1.0

Associated samples MP26903: FA12854-9, FA12854-10, FA12854-11, FA12854-12, FA12854-13

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: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26903
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/04/14 03/04/14

Metal	FA12829-1 Original	DUP	RPD	QC Limits	FA12829-1 Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr								
Antimony	0.0	0.0 (a)	NC	0-20	0.0	6.0 (a)	29.6	20.2N(d)	80-120
Arsenic	22.3	14.1 (a)	45.1*(b)	0-20	22.3	89.9 (a)	119	57.0N(d)	80-120
Barium									
Beryllium	0.75	0.98 (a)	26.6 (c)	0-20	0.75	3.6 (a)	2.96	96.2	80-120
Cadmium	0.0	0.0 (a)	NC	0-20	0.0	2.7 (a)	2.96	91.1	80-120
Calcium									
Chromium	29.8	34.2 (a)	13.8	0-20	29.8	37.3 (a)	11.9	63.3N(d)	80-120
Cobalt									
Copper	2.6	3.4 (a)	26.7 (c)	0-20	2.6	16.3 (a)	14.8	92.4	80-120
Iron	anr								
Lead	14.0	16.6 (a)	17.0	0-20	14.0	43.2 (a)	29.6	98.5	80-120
Magnesium									
Manganese	anr								
Molybdenum									
Nickel	6.6	7.5 (a)	12.8	0-20	6.6	34.8 (a)	29.6	95.1	80-120
Potassium									
Selenium	0.0	0.0 (a)	NC	0-20	0.0	87.1 (a)	119	73.5N(d)	80-120
Silver	0.0	0.0 (a)	NC	0-20	0.0	2.8 (a)	2.96	94.5	80-120
Sodium									
Strontium									
Thallium	0.0	0.0 (a)	NC	0-20	0.0	108 (a)	119	91.1	80-120
Tin									
Titanium									
Vanadium									
Zinc	16.2	16.8 (a)	3.6	0-20	16.2	41.6 (a)	29.6	85.7	80-120

Associated samples MP26903: FA12854-9, FA12854-10, FA12854-11, FA12854-12, FA12854-13

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) Elevated reporting limit(s) due to matrix interference.
(b) High RPD due to possible sample non-homogeneity.
(c) RPD acceptable due to low duplicate and sample concentrations.
(d) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26903 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/04/14

Metal	FA12829-1 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	0.0	4.8 (a)	27.3	17.6N(b)	22.2 (c)	20
Arsenic	22.3	95.9 (a)	109	67.4N(b)	6.5	20
Barium						
Beryllium	0.75	3.2 (a)	2.73	89.8	11.8	20
Cadmium	0.0	2.4 (a)	2.73	88.0	11.8	20
Calcium						
Chromium	29.8	34.6 (a)	10.9	44.0N(b)	7.5	20
Cobalt						
Copper	2.6	14.9 (a)	13.6	90.2	9.0	20
Iron	anr					
Lead	14.0	39.8 (a)	27.3	94.6	8.2	20
Magnesium						
Manganese	anr					
Molybdenum						
Nickel	6.6	30.7 (a)	27.3	88.3	12.5	20
Potassium						
Selenium	0.0	79.1 (a)	109	72.5N(b)	9.6	20
Silver	0.0	2.6 (a)	2.73	95.3	7.4	20
Sodium						
Strontium						
Thallium	0.0	97.0 (a)	109	88.9	10.7	20
Tin						
Titanium						
Vanadium						
Zinc	16.2	39.0 (a)	27.3	83.6	6.5	20

Associated samples MP26903: FA12854-9, FA12854-10, FA12854-11, FA12854-12, FA12854-13

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) Elevated reporting limit(s) due to matrix interference.
(b) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.
(c) High RPD due to possible sample non-homogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26903
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/04/14

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr			
Antimony	23.8	25	95.2	80-120
Arsenic	94.8	100	94.8	80-120
Barium				
Beryllium	2.5	2.5	100.0	80-120
Cadmium	2.4	2.5	96.0	80-120
Calcium				
Chromium	10.1	10	101.0	80-120
Cobalt				
Copper	12.2	12.5	97.6	80-120
Iron	anr			
Lead	23.6	25	94.4	80-120
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	24.5	25	98.0	80-120
Potassium				
Selenium	90.8	100	90.8	80-120
Silver	2.3	2.5	92.0	80-120
Sodium				
Strontium				
Thallium	90.7	100	90.7	80-120
Tin				
Titanium				
Vanadium				
Zinc	24.4	25	97.6	80-120

Associated samples MP26903: FA12854-9, FA12854-10, FA12854-11, FA12854-12, FA12854-13

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26903
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/04/14

Metal	FA12829-1 Original	SDL 5:25	%DIF	QC Limits
Aluminum	anr			
Antimony	0.00	0.00	NC	0-10
Arsenic	369	405	9.8	0-10
Barium				
Beryllium	12.4	13.3	7.3	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	493	526	6.7	0-10
Cobalt				
Copper	42.2	28.3	32.9 (a)	0-10
Iron	anr			
Lead	231	241	4.4	0-10
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	110	114	4.0	0-10
Potassium				
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium				
Zinc	269	292	8.6	0-10

Associated samples MP26903: FA12854-9, FA12854-10, FA12854-11, FA12854-12, FA12854-13

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: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26903
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/04/14

Metal	Sample ml	Final ml	FA12829-1 Raw	FA12829-1 Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10			90.6	0.2	5	100	90.6	80-120
Arsenic	9.8	10	369.1	361.718	460.4	0.2	5	100	98.7	80-120
Barium										
Beryllium	9.8	10	12.4	12.152	56.3	0.2	2.5	50	88.3	80-120
Cadmium	9.8	10			43.4	0.2	2.5	50	86.8	80-120
Calcium										
Chromium	9.8	10	492.9	483.042	521.8	0.2	2.5	50	77.5*(a)	80-120
Cobalt										
Copper	9.8	10	42.2	41.356	131.6	0.2	5	100	90.2	80-120
Iron										
Lead	9.8	10	231.3	226.674	271.1	0.2	2.5	50	88.9	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel	9.8	10	110	107.8	196.4	0.2	5	100	88.6	80-120
Potassium										
Selenium	9.8	10			89.1	0.2	5	100	89.1	80-120
Silver	9.8	10			44.1	0.2	2.5	50	88.2	80-120
Sodium										
Strontium										
Thallium	9.8	10			81.5	0.2	5	100	81.5	80-120
Tin										
Titanium										
Vanadium										
Zinc	9.8	10	268.8	263.424	479.2	0.2	12.5	250	86.3	80-120

Associated samples MP26903: FA12854-9, FA12854-10, FA12854-11, FA12854-12, FA12854-13

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.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26909
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/05/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.75	1.6		
Antimony	1.0	.1	.1	0.030	<1.0
Arsenic	0.50	.1	.1	-0.065	<0.50
Barium	10	.05	.05		
Beryllium	0.25	.025	.025	0.0	<0.25
Cadmium	0.20	.025	.025	-0.0050	<0.20
Calcium	250	2.5	2.5		
Chromium	0.50	.05	.05	0.010	<0.50
Cobalt	2.5	.025	.025		
Copper	1.3	.05	.05	0.040	<1.3
Iron	15	.85	1.3		
Lead	1.0	.055	.08	0.0050	<1.0
Magnesium	250	2.5	2.5		
Manganese	0.75	.025	.025		
Molybdenum	2.5	.025	.03		
Nickel	2.0	.025	.025	0.030	<2.0
Potassium	500	10	10		
Selenium	1.0	.12	.15	0.065	<1.0
Silver	0.50	.033	.033	0.0050	<0.50
Sodium	500	25	25		
Strontium	0.50	.02	.025		
Thallium	0.50	.075	.075	-0.065	<0.50
Tin	2.5	.035	.035		
Titanium	0.50	.045	.045		
Vanadium	2.5	.025	.025		
Zinc	1.0	.15	.15	0.17	<1.0

Associated samples MP26909: FA12854-14

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: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26909
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/05/14 03/05/14

Metal	FA12829-4 Original	DUP	RPD	QC Limits	FA12829-4 Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr								
Antimony	0.0	0.0 (a)	NC	0-20	0.0	1.3 (a)	25.4	5.1N (c)	80-120
Arsenic	12.3	11.5 (a)	6.7	0-20	12.3	89.2 (a)	102	75.6N(c)	80-120
Barium	anr								
Beryllium	1.2	1.0 (a)	18.2	0-20	1.2	3.5 (a)	2.54	90.5	80-120
Cadmium	0.40	0.34 (a)	16.2	0-20	0.40	2.7 (a)	2.54	90.5	80-120
Calcium	anr								
Chromium	31.2	28.9 (a)	7.7	0-20	31.2	38.1 (a)	10.2	67.9N(c)	80-120
Cobalt									
Copper	4.2	5.8 (a)	32.0 (b)	0-20	4.2	19.5 (a)	12.7	120.4N(c	80-120
Iron	anr								
Lead	20.3	19.3 (a)	5.1	0-20	20.3	47.9 (a)	25.4	108.6	80-120
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	8.4	7.4 (a)	12.7	0-20	8.4	32.6 (a)	25.4	95.2	80-120
Potassium	anr								
Selenium	0.0	0.0 (a)	NC	0-20	0.0	76.0 (a)	102	74.8N(c)	80-120
Silver	0.0	0.0 (a)	NC	0-20	0.0	2.3 (a)	2.54	90.5	80-120
Sodium	anr								
Strontium									
Thallium	0.0	0.0 (a)	NC	0-20	0.0	101 (a)	102	99.4	80-120
Tin									
Titanium									
Vanadium									
Zinc	15.6	17.8 (a)	13.2	0-20	15.6	44.5 (a)	25.4	113.7	80-120

Associated samples MP26909: FA12854-14

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) Elevated reporting limit(s) due to matrix interference.
(b) RPD acceptable due to low duplicate and sample concentrations.
(c) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26909 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/05/14

Metal	FA12829-4 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	0.0	1.9 (a)	28.7	6.6N (b)	37.5 (c)	20
Arsenic	12.3	93.9 (a)	115	71.0N(b)	5.1	20
Barium	anr					
Beryllium	1.2	3.8 (a)	2.87	90.5	8.2	20
Cadmium	0.40	3.0 (a)	2.87	90.5	10.5	20
Calcium	anr					
Chromium	31.2	39.2 (a)	11.5	69.6N(b)	2.8	20
Cobalt						
Copper	4.2	19.3 (a)	14.4	105.1	1.0	20
Iron	anr					
Lead	20.3	48.5 (a)	28.7	98.1	1.2	20
Magnesium	anr					
Manganese	anr					
Molybdenum	anr					
Nickel	8.4	35.0 (a)	28.7	92.6	7.1	20
Potassium	anr					
Selenium	0.0	82.8 (a)	115	72.0N(b)	8.6	20
Silver	0.0	2.5 (a)	2.87	87.0	8.3	20
Sodium	anr					
Strontium						
Thallium	0.0	109 (a)	115	94.8	7.6	20
Tin						
Titanium						
Vanadium						
Zinc	15.6	45.3 (a)	28.7	103.3	1.8	20

Associated samples MP26909: FA12854-14

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) Elevated reporting limit(s) due to matrix interference.
(b) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.
(c) High RPD due to possible sample non-homogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26909
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/05/14

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr			
Antimony	27.2	25	108.8	80-120
Arsenic	99.8	100	99.8	80-120
Barium	anr			
Beryllium	2.8	2.5	112.0	80-120
Cadmium	2.6	2.5	104.0	80-120
Calcium	anr			
Chromium	11.1	10	111.0	80-120
Cobalt				
Copper	14.5	12.5	116.0	80-120
Iron	anr			
Lead	26.1	25	104.4	80-120
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	26.3	25	105.2	80-120
Potassium	anr			
Selenium	98.3	100	98.3	80-120
Silver	2.5	2.5	100.0	80-120
Sodium	anr			
Strontium				
Thallium	103	100	103.0	80-120
Tin				
Titanium				
Vanadium				
Zinc	26.3	25	105.2	80-120

Associated samples MP26909: FA12854-14

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26909
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/05/14

Metal	FA12829-4 Original	SDL 5:25	%DIF	QC Limits
Aluminum	anr			
Antimony	0.00	0.00	NC	0-10
Arsenic	226	244	8.0	0-10
Barium	anr			
Beryllium	22.2	24.2	9.0	0-10
Cadmium	7.30	0.00	100.0(a)	0-10
Calcium	anr			
Chromium	574	640	11.6*(b)	0-10
Cobalt				
Copper	77.5	72.3	6.7	0-10
Iron	anr			
Lead	374	356	4.7	0-10
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	154	166	7.5	0-10
Potassium	anr			
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium	anr			
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium				
Zinc	286	333	16.5 (a)	0-10

Associated samples MP26909: FA12854-14

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).
(b) Serial dilution indicates possible matrix interference.

POST DIGESTATE SPIKE SUMMARY

Login Number: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26909
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/05/14

Metal	Sample ml	Final ml	FA12829-4 Raw	FA12829-4 Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10			77.3	0.2	5	100	77.3*(a)	80-120
Arsenic	9.8	10	225.6	221.088	308.9	0.2	5	100	87.8	80-120
Barium										
Beryllium	9.8	10	22.2	21.756	71.1	0.2	2.5	50	98.7	80-120
Cadmium	9.8	10	7.3	7.154	56.9	0.2	2.5	50	99.5	80-120
Calcium										
Chromium	9.8	10	573.9	562.422	607.7	0.2	2.5	50	90.6	80-120
Cobalt										
Copper	9.8	10	77.5	75.95	165.2	0.2	5	100	89.3	80-120
Iron										
Lead	9.8	10	373.5	366.03	406.7	0.2	2.5	50	81.3	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel	9.8	10	154.2	151.116	242.8	0.2	5	100	91.7	80-120
Potassium										
Selenium	9.8	10			97.9	0.2	5	100	97.9	80-120
Silver	9.8	10			46.5	0.2	2.5	50	93.0	80-120
Sodium										
Strontium										
Thallium	9.8	10			101.1	0.2	5	100	101.1	80-120
Tin										
Titanium										
Vanadium										
Zinc	9.8	10	286.2	280.476	521.8	0.2	12.5	250	96.5	80-120

Associated samples MP26909: FA12854-14

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.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26913 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/06/14

Metal	RL	IDL	MDL	MB raw	MB final
Mercury	0.042	.0025	.0042	-0.0030	<0.042

Associated samples MP26913: FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6, FA12854-7

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: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26913
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 03/06/14 03/06/14

Metal	FA12814-11 Original	DUP	RPD	QC Limits	FA12814-11 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.032	0.031	3.2	0-20	0.032	0.30	0.261	102.8	80-120

Associated samples MP26913: FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6, FA12854-7

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: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26913 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/06/14

Metal	FA12814-11 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.032	0.33	0.273	109.2	9.5	20

Associated samples MP26913: FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6, FA12854-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26913
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 03/06/14

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.23	0.25	92.0	80-120

Associated samples MP26913: FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6, FA12854-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26913 Methods: SW846 7471B
Matrix Type: SOLID Units: ug/l

Prep Date: 03/06/14

Metal	FA12814-11 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.345	0.00	100.0(a)	0-10

Associated samples MP26913: FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6, FA12854-7

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).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/14

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.042	.0025	.0042	0.00021	<0.042

Associated samples MP26919: FA12854-8, FA12854-9, FA12854-10, FA12854-11, FA12854-12, FA12854-13, FA12854-14

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: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 03/07/14 03/07/14

Metal	FA12977-7 Original	DUP	RPD	QC Limits	FA12977-7 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.025	0.027	7.7	0-20	0.025	0.55	0.462	113.7	80-120

Associated samples MP26919: FA12854-8, FA12854-9, FA12854-10, FA12854-11, FA12854-12, FA12854-13, FA12854-14

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: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/14

Metal	FA12977-7 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.025	0.57	0.455	119.8	3.6	20

Associated samples MP26919: FA12854-8, FA12854-9, FA12854-10, FA12854-11, FA12854-12, FA12854-13, FA12854-14

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 03/07/14

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.26	0.25	104.0	80-120

Associated samples MP26919: FA12854-8, FA12854-9, FA12854-10, FA12854-11, FA12854-12, FA12854-13, FA12854-14

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.5.3

8

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12854
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919
Matrix Type: SOLID

Methods: SW846 7471B
Units: ug/l

Prep Date: 03/07/14

Metal	FA12977-7 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.156	0.00	100.0(a)	0-10

Associated samples MP26919: FA12854-8, FA12854-9, FA12854-10, FA12854-11, FA12854-12, FA12854-13, FA12854-14

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).

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: FA12854
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
Chromium, Hexavalent	GN60732	2.0	0.0	mg/kg	20.0	19.5	97.6	75-125%

Associated Samples:
Batch GN60732: FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6, FA12854-7, FA12854-8, FA12854-9, FA12854-10, FA12854-11, FA12854-12, FA12854-13, FA12854-14
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA12854
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
Chromium, Hexavalent	GN60732	FA12854-12	mg/kg	2.5	2.3	10.9	0-20%
Solids, Percent	GN60391	FA12854-14	%	91.4	90.9	0.5	0-5%
Solids, Percent	GN60430	FA12854-4	%	89.6	90.1	0.6	0-5%
Solids, Percent	GN60461	FA13023-1	%	71.8	72.8	1.4	0-5%
Solids, Percent	GN60485	FA12854-7	%	85.4	84.9	0.6	0-5%
pH	GN60429	FA12235-2AT	su	4.29	4.28	0.2	0-10%

Associated Samples:
Batch GN60391: FA12854-1, FA12854-2, FA12854-3, FA12854-5, FA12854-6, FA12854-8, FA12854-9, FA12854-10, FA12854-11, FA12854-12, FA12854-14
Batch GN60429: FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6
Batch GN60430: FA12854-4
Batch GN60461: FA12854-13
Batch GN60485: FA12854-7
Batch GN60732: FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6, FA12854-7, FA12854-8, FA12854-9, FA12854-10, FA12854-11, FA12854-12, FA12854-13, FA12854-14
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA12854
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
Chromium, Hexavalent	GN60732	FA12854-12	mg/kg	2.5	676.8	1510	222.9*(a)	75-125%
Chromium, Hexavalent	GN60732	FA12854-12	mg/kg	2.5	27.8	29.0	95.3	75-125%

Associated Samples:
Batch GN60732: FA12854-1, FA12854-2, FA12854-3, FA12854-4, FA12854-5, FA12854-6, FA12854-7, FA12854-8, FA12854-9, FA12854-10, FA12854-11, FA12854-12, FA12854-13, FA12854-14
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) High recovery on insoluble XCR matrix spike (Out of control Limits).

Southeast
ACCUTEST LABORATORIES

Reissue #1
04/15/14

Technical Report for

United Technologies Corporation

AECOMSCG: Delavan Spray Technologies; Bamberg, SC

60314964

Accutest Job Number: FA12855

Sampling Date: 02/27/14

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: **70**

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

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: 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 (04226CA), TX (T104704404), PA (68-03573), VA (460177), AK, AR, GA, KY, MA, NV, OK, UT, WA

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April 15, 2014

Ms. Doria Cullom
AECOM
3820 Faber Place Dr.
Charleston,SC
RE: Accutest job FA12855 Re-Issue

Dear Ms. Cullom,

The final report for job number FA12855 has been edited to reflect requested corrections. These edits have been incorporated into the revised report.

The report has been revised to omit results for SVOC for 2,3,4.

Accutest apologies for any inconvenience this may have caused. Please feel free to contact us if we can be of further assistance.

Sincerely,

Accutest Laboratories, SE

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Sample Summary

United Technologies Corporation

Job No: FA12855

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA12855-1	02/27/14	11:40	LA	02/28/14	AQ	Water	DPT-29-(2-4)-D
FA12855-2	02/27/14	17:25	LA	02/28/14	SO	Soil	BG-4 (9-11)
FA12855-3	02/27/14	17:40	LA	02/28/14	SO	Soil	BG-4 (14-16)
FA12855-4	02/27/14	17:50	LA	02/28/14	SO	Soil	BG-4 (17-19)

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

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: United Technologies Corporation **Job No:** FA12855

Site: AECOMSCG: Delavan Spray Technologies; Bamberg, SC **Report Date** 3/19/2014 1:22:47 PM

4 Samples were collected on 02/27/2014 and were received at Accutest SE on 02/28/2014 properly preserved, at 2.2 Deg. C and intact. These Samples received an Accutest job number of FA12855. 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:** VZ924

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12912-1MS, FA12912-1MSD were used as the QC samples indicated.

FA12855-1: Sample was not preserved to a pH < 2.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ **Batch ID:** OP50725

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) FA12855-1MS, FA12855-1MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Benzoic Acid are outside control limits. Sporadic marginal failure.

FA12855-1 for Benzoic Acid: Associated BS recovery outside control limits.

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** MP26894

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) FA12853-1DUP, FA12853-1MS, FA12853-1MSD, FA12853-1PS, FA12853-1SDL were used as the QC samples for metals.

RPD(s) for Duplicate for Copper are outside control limits for sample MP26894-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Copper, Zinc are outside control limits for sample MP26894-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 6010C

Matrix: SO **Batch ID:** MP26909

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) FA12829-4DUP, FA12829-4MS, FA12829-4MSD, FA12829-4PS, FA12829-4SDL were used as the QC samples for metals.

Matrix Spike Recovery(s) for Antimony, Arsenic, Chromium, Copper, Selenium are outside control limits. Spike recovery indicates possible matrix interference and/or sample non-homogeneity. For method performance in a clean matrix, refer to Blank Spike.

Matrix Spike Duplicate Recovery(s) for Arsenic, Chromium, Selenium, Antimony are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

RPD(s) for Duplicate for Copper are outside control limits for sample MP26909-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for MSD for Antimony are outside control limits for sample MP26909-S2. High RPD due to possible sample non-homogeneity.

RPD(s) for Serial Dilution for Cadmium, Zinc are outside control limits for sample MP26909-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP26909-SD1 for Chromium: Serial dilution indicates possible matrix interference.

MP26909-PS1 for Antimony: 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:** MP26905

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) FA12934-1DUP, FA12934-1MS, FA12934-1MSD, FA12934-1SDL were used as the QC samples for metals.

Metals By Method SW846 7471B

Matrix: SO **Batch ID:** MP26919

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) FA12977-7DUP, FA12977-7MS, FA12977-7MSD, FA12977-7SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Mercury are outside control limits for sample MP26919-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Wet Chemistry By Method SM19 2540G

Matrix: SO **Batch ID:** GN60391

Sample(s) FA12855-3DUP was used as the QC samples for Solids, Percent.

Matrix: SO **Batch ID:** GN60484

Sample(s) FA12855-2DUP was used as the QC samples for Solids, Percent.

Wet Chemistry By Method SW846 3060A/7196A

Matrix: SO **Batch ID:** GN60625

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12814-11DUP, FA12814-11MS were used as the QC samples for Chromium, Hexavalent.

Wet Chemistry By Method SW846 7196A

Matrix: AQ **Batch ID:** GN60385

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12855-1MS, FA12855-1MSD were used as the QC samples for Chromium, Hexavalent.

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: March 19, 2014

Lovelie Metzgar, QA Officer (signature on file)

Narrative revised by:

_____ Date: April 15, 2014

Lovelie Metzgar, QA Officer (signature on file)

Summary of Hits

Job Number: FA12855
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 02/27/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA12855-1	**DPT-29-(2-4)-D**					
Zinc		4.7 J	20	3.0	ug/l	SW846 6010C
FA12855-2	**BG-4 (9-11)**					
Arsenic		0.35 J	0.56	0.11	mg/kg	SW846 6010C
Chromium		11.3	0.56	0.056	mg/kg	SW846 6010C
Copper		0.36 J	1.4	0.056	mg/kg	SW846 6010C
Lead		4.7	1.1	0.089	mg/kg	SW846 6010C
Mercury		0.053	0.044	0.0044	mg/kg	SW846 7471B
Nickel		0.54 J	2.2	0.028	mg/kg	SW846 6010C
Zinc		1.2	1.1	0.17	mg/kg	SW846 6010C
FA12855-3	**BG-4 (14-16)**					
Arsenic		0.45 J	0.52	0.10	mg/kg	SW846 6010C
Chromium		5.1	0.52	0.052	mg/kg	SW846 6010C
Copper		0.42 J	1.3	0.052	mg/kg	SW846 6010C
Lead		3.4	1.0	0.082	mg/kg	SW846 6010C
Mercury		0.0077 J	0.047	0.0047	mg/kg	SW846 7471B
Nickel		0.32 J	2.1	0.026	mg/kg	SW846 6010C
Zinc		0.58 J	1.0	0.15	mg/kg	SW846 6010C
FA12855-4	**BG-4 (17-19)**					
Arsenic		0.27 J	0.56	0.11	mg/kg	SW846 6010C
Chromium		4.3	0.56	0.056	mg/kg	SW846 6010C
Copper		0.45 J	1.4	0.056	mg/kg	SW846 6010C
Lead		1.3	1.1	0.089	mg/kg	SW846 6010C
Nickel		0.27 J	2.2	0.028	mg/kg	SW846 6010C
Zinc		0.61 J	1.1	0.17	mg/kg	SW846 6010C

Southeast ACCUTEST LABORATORIES

4

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: DPT-29-(2-4)-D
Lab Sample ID: FA12855-1 **Date Sampled:** 02/27/14
Matrix: AQ - Water **Date Received:** 02/28/14
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]	Z23258.D	1	03/05/14	CP	n/a	n/a	VZ924
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
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:	DPT-29-(2-4)-D		
Lab Sample ID:	FA12855-1	**Date Sampled:**	02/27/14
Matrix:	AQ - Water	**Date Received:**	02/28/14
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	100%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	98%		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: DPT-29-(2-4)-D
Lab Sample ID: FA12855-1 **Date Sampled:** 02/27/14
Matrix: AQ - Water **Date Received:** 02/28/14
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	T011863.D	1	03/07/14	FS	03/06/14	OP50725	ST563
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid [a]	ND	48	9.6	ug/l	
95-57-8	2-Chlorophenol	ND	4.8	0.50	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.8	0.48	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.8	0.55	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	0.48	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	5.2	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.6	1.9	ug/l	
95-48-7	2-Methylphenol	ND	4.8	0.48	ug/l	
	3&4-Methylphenol	ND	4.8	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	0.57	ug/l	
100-02-7	4-Nitrophenol	ND	24	4.8	ug/l	
87-86-5	Pentachlorophenol	ND	24	4.8	ug/l	
108-95-2	Phenol	ND	4.8	0.48	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.8	0.94	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	0.53	ug/l	
83-32-9	Acenaphthene	ND	4.8	0.48	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.48	ug/l	
120-12-7	Anthracene	ND	4.8	0.59	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.62	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.63	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.69	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.77	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.49	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	4.8	0.64	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.8	0.78	ug/l	
100-51-6	Benzyl Alcohol	ND	4.8	0.96	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.8	0.53	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	0.48	ug/l	
86-74-8	Carbazole	ND	4.8	0.59	ug/l	
218-01-9	Chrysene	ND	4.8	0.69	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.8	0.53	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.8	0.66	ug/l	

ND = Not detected MDL = Method Detection Limit
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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: DPT-29-(2-4)-D
Lab Sample ID: FA12855-1 **Date Sampled:** 02/27/14
Matrix: AQ - Water **Date Received:** 02/28/14
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	4.8	0.56	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.8	0.52	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.8	0.48	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.8	0.48	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.8	0.48	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	4.8	0.55	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.8	0.60	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	4.8	0.87	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.78	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.51	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.8	0.96	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.8	0.96	ug/l	
84-66-2	Diethyl phthalate	ND	4.8	0.96	ug/l	
131-11-3	Dimethyl phthalate	ND	4.8	0.61	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.8	1.5	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.67	ug/l	
86-73-7	Fluorene	ND	4.8	0.48	ug/l	
118-74-1	Hexachlorobenzene	ND	4.8	0.64	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.8	0.48	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	4.8	0.96	ug/l	
67-72-1	Hexachloroethane	ND	4.8	0.48	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.60	ug/l	
78-59-1	Isophorone	ND	4.8	0.48	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.51	ug/l	
88-74-4	2-Nitroaniline	ND	4.8	1.1	ug/l	
99-09-2	3-Nitroaniline	ND	4.8	0.58	ug/l	
100-01-6	4-Nitroaniline	ND	4.8	0.73	ug/l	
91-20-3	Naphthalene	ND	4.8	0.48	ug/l	
98-95-3	Nitrobenzene	ND	4.8	0.48	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.8	0.48	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	0.51	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.57	ug/l	
129-00-0	Pyrene	ND	4.8	0.78	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	36%		14-67%
4165-62-2	Phenol-d5	22%		10-50%
118-79-6	2,4,6-Tribromophenol	71%		33-118%

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:	DPT-29-(2-4)-D		
Lab Sample ID:	FA12855-1	**Date Sampled:**	02/27/14
Matrix:	AQ - Water	**Date Received:**	02/28/14
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	75%		42-108%
321-60-8	2-Fluorobiphenyl	72%		40-106%
1718-51-0	Terphenyl-d14	95%		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: DPT-29-(2-4)-D
Lab Sample ID: FA12855-1
Matrix: AQ - Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	2.3 U	6.0	2.3	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Arsenic	2.4 U	10	2.4	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Beryllium	0.50 U	4.0	0.50	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Cadmium	0.50 U	5.0	0.50	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Chromium	2.0 U	10	2.0	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Copper	1.0 U	25	1.0	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Lead	1.1 U	5.0	1.1	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Mercury	0.030 U	0.50	0.030	ug/l	1	03/05/14	03/05/14	JL	SW846 7470A [2]	SW846 7470A [4]
Nickel	0.50 U	40	0.50	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Selenium	2.3 U	10	2.3	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Silver	0.77 U	5.0	0.77	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Thallium	2.0 U	10	2.0	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]
Zinc	4.7 J	20	3.0	ug/l	1	03/03/14	03/04/14	LM	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA11432
(2) Instrument QC Batch: MA11434
(3) Prep QC Batch: MP26894
(4) Prep QC Batch: MP26905

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: DPT-29-(2-4)-D
Lab Sample ID: FA12855-1
Matrix: AQ - Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.0080 U	0.010	0.0080	mg/l	1	02/28/14 11:15	KC	SW846 7196A

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: BG-4 (9-11)
Lab Sample ID: FA12855-2
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 87.0

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.11 U	1.1	0.11	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	0.35 J	0.56	0.11	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.028 U	0.28	0.028	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.028 U	0.22	0.028	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	11.3	0.56	0.056	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	0.36 J	1.4	0.056	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	4.7	1.1	0.089	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.053	0.044	0.0044	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	0.54 J	2.2	0.028	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.17 U	1.1	0.17	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.036 U	0.56	0.036	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.084 U	0.56	0.084	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	1.2	1.1	0.17	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11438
(2) Instrument QC Batch: MA11440
(3) Prep QC Batch: MP26909
(4) Prep QC Batch: MP26919

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: BG-4 (9-11)
Lab Sample ID: FA12855-2
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 87.0

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.98 U	2.3	0.98	mg/kg	1	03/14/14 10:45	FN	SW846 3060A/7196A
Solids, Percent	87			%	1	03/09/14 17:21	FN	SM19 2540G

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: BG-4 (14-16)
Lab Sample ID: FA12855-3
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 85.9

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.10 U	1.0	0.10	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	0.45 J	0.52	0.10	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.026 U	0.26	0.026	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.026 U	0.21	0.026	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	5.1	0.52	0.052	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	0.42 J	1.3	0.052	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	3.4	1.0	0.082	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.0077 J	0.047	0.0047	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	0.32 J	2.1	0.026	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.15 U	1.0	0.15	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.033 U	0.52	0.033	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.077 U	0.52	0.077	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	0.58 J	1.0	0.15	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11438
(2) Instrument QC Batch: MA11440
(3) Prep QC Batch: MP26909
(4) Prep QC Batch: MP26919

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: BG-4 (14-16)
Lab Sample ID: FA12855-3
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 85.9

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	1.0 U	2.3	1.0	mg/kg	1	03/14/14 10:45	FN	SW846 3060A/7196A
Solids, Percent	85.9			%	1	02/28/14 15:44	LE	SM19 2540G

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: BG-4 (17-19)
Lab Sample ID: FA12855-4
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 86.8

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.11 U	1.1	0.11	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Arsenic	0.27 J	0.56	0.11	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.028 U	0.28	0.028	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Cadmium	0.028 U	0.22	0.028	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Chromium	4.3	0.56	0.056	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Copper	0.45 J	1.4	0.056	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Lead	1.3	1.1	0.089	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Mercury	0.0043 U	0.043	0.0043	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [2]	SW846 7471B [4]
Nickel	0.27 J	2.2	0.028	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Selenium	0.17 U	1.1	0.17	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Silver	0.036 U	0.56	0.036	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Thallium	0.084 U	0.56	0.084	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]
Zinc	0.61 J	1.1	0.17	mg/kg	1	03/05/14	03/06/14	LM	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA11438
(2) Instrument QC Batch: MA11440
(3) Prep QC Batch: MP26909
(4) Prep QC Batch: MP26919

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: BG-4 (17-19)
Lab Sample ID: FA12855-4
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/27/14
Date Received: 02/28/14
Percent Solids: 86.8

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.99 U	2.3	0.99	mg/kg	1	03/14/14 10:45	FN	SW846 3060A/7196A
Solids, Percent	86.8			%	1	02/28/14 15:44	LE	SM19 2540G

RL = Reporting Limit
MDL = Method Detection Limit

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

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA12855

AECOM

Chain of Custody and Analytical Request

Page: 1 of 1
Project Number: ~~60269713~~ 60334147
Chain of Custody Number [1]: 022714-2
LIMS Number:

Project Name / Location: UTC Delavan Spray Technologies Site RI
Client Name: UTC
Collected by: L. Alexander & R. Morgan
Project Manager: Walter Gerald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.)	VOCs (8260B)	SVOCs (8270D)	metals (6010C/7470A)	Hex Chrom (7196A)	Water	COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
~~DPT-29(2-4)-d~~	~~27-FEB-2014~~	1140	X	X		LA							
DPT-28(3.5)-a	27-FEB-2014	1000		X			X					A X (2)	1
DPT-29(2-4)-d		1140		X			X	X	X	X		A (1)	1
BG-4(9-11)		1725	X			9-11ft	X	X	X	X		S 2	1
BG-4(14-16)		1740	X			14-16ft	X	X	X	X		S 3	1
BG-4(17-19)		1750	X			17-19ft	X	X	X	X		S 4	1
							X	X					
Temp blank													

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	L Alexander/AECOM	2/27/14	1800	[illegible]		
2.	FedEx	02.28.14	1000	[illegible]		
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: X
Method of Shipment: FedEx
Analytical Lab: Accutest
Lab Recipient:
Shipped:
Airbill #: 8047 3475 6268
Location: Orlando, FL
Date: Time:

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

22

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA12855 CLIENT: AECOM PROJECT: UTC

DATE/TIME RECEIVED: 02-28-14 1000 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

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

AIRBILL NUMBERS: 8047 3475 6268

COOLER INFORMATION

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

TRIP BLANK INFORMATION

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

MISC. INFORMATION

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

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.4
- [ ] OBSERVED TEMPS: 2.6
- [ ] CORRECTED TEMPS: 2.2

SAMPLE INFORMATION

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

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS: No Bottles Received For DPT-28-3-5-a 2-27-14 1000 Sample DPT-28(3-5) 2-27-14 @ 10:00 - received on another COC - FA12854 AJ

TECHNICIAN SIGNATURE/DATE RWill 02-28-14 REVIEWER SIGNATURE/DATE 02/28/14

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FedEx Express Package US Airbill

FedEx Tracking Number 8047 3475 6268

1 From

Date 2/27/14

Sender's Name Lester Alexander Phone 864 234 3000

Company AECOM

Address 10 Patewood Dr, Bldg VI #500

Dept./Floor/Suite/Room

City Greenville State SC ZIP 29615

2 Your Internal Billing Reference 60314964.2

3 To

Recipient's Name SUPPLY RECV Phone 407 425-6700

Company ACCUTEST LABORATORIES SE, INC

Address 4405 VINELAND RD STE C15

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Dept./Floor/Suite/Room

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City ORLANDO State FL ZIP 32811-5203

HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

0112015626

8047 3475 6268

Recipient's Copy

4 Express Package Service * To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. For packages over 150 lbs., use the FedEx Express Freight US Airbill.

Next Business Day

- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

- [ ] FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak*
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

6 Special Handling and Delivery Signature Options

- [ ] SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.
- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

- [ ] Cargo Aircraft Only

7 Payment Bill to:

Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [X] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check
- [ ] Obtain Recip. Acct. No.

[redacted] 015

Total Packages 1 Total Weight 66 lbs.

Credit Card Auth.

†Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

611

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Align Open End of FedEx Pouch Here

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA12855 CLIENT: AECOM PROJECT: JTC

DATE/TIME RECEIVED: 02-28-14 1000 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

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

AIRBILL NUMBERS: 8047 3475 6268

COOLER INFORMATION

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

TRIP BLANK INFORMATION

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

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.4
- [ ] OBSERVED TEMPS: 2.6
- [ ] CORRECTED TEMPS: 2.2

SAMPLE INFORMATION

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

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS: NO Bottles Received For DPT-28-3-5-a 2-27-14 1000 Sample DPT-28(3-5) 2-27-14 @ 10:00 - received on another COC - FA12854 #2

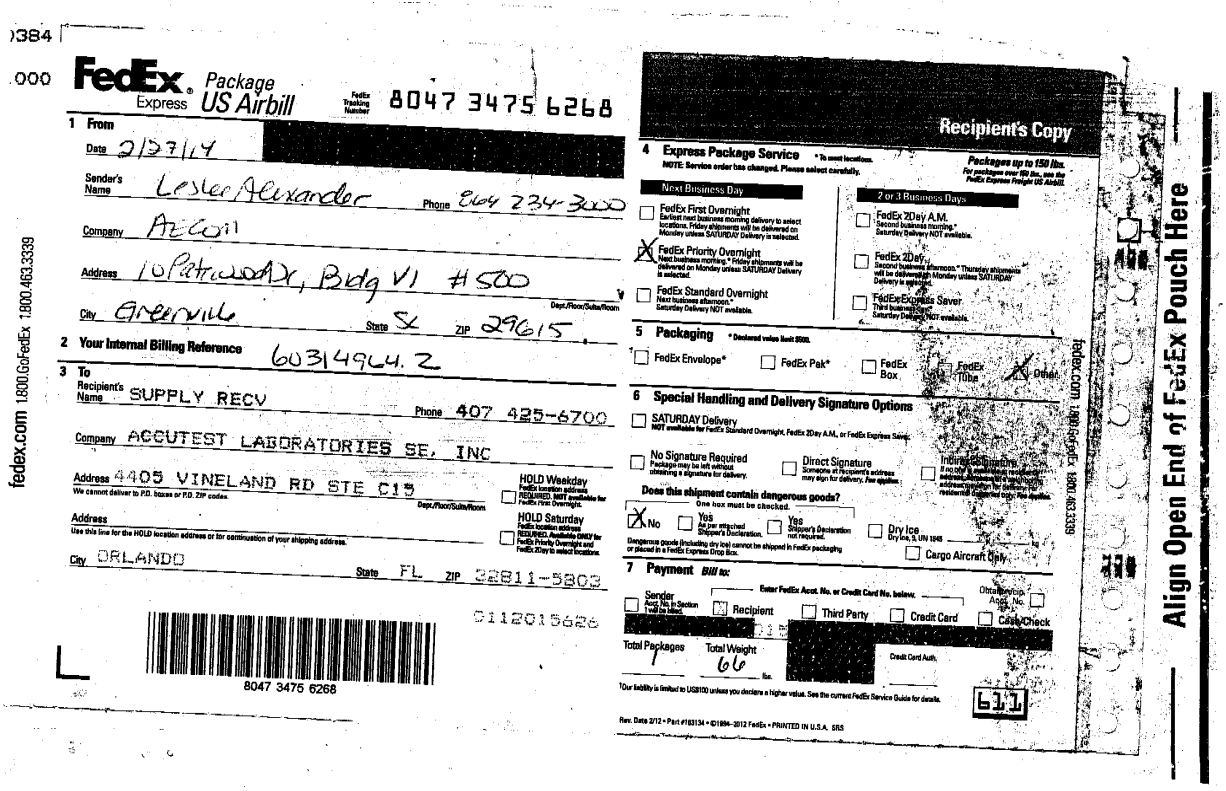
TECHNICIAN SIGNATURE/DATE: R Will 02-28-14 REVIEWER SIGNATURE/DATE: 02/28/14

NF 12/10

receipt confirmation 122910.xls

5.1 5

FA12855: Chain of Custody
Page 2 of 3



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FedEx Express Package US Airbill

FedEx Tracking Number 8047 3475 6268

1 From
Date 2/27/14
Sender's Name Lester Alexander Phone 864 234-3000
Company AECOM
Address 10 Patewood Dr, Bldg VI #500
City Greenville State SC ZIP 29615

2 Your Internal Billing Reference 60314964.2

3 To
Recipient's Name SUPPLY RECV Phone 407 425-6700
Company ACCUTEST LABORATORIES SE, INC
Address 4405 VINELAND RD STE C15
We cannot deliver to P.O. boxes or P.O. ZIP codes.
Address
Use this line for the HOLD location address or for continuation of your shipping address.
City ORLANDO State FL ZIP 32811-5803

HOLD Weekday
HOLD Saturday

8047 3475 6268

0112015626

Recipient's Copy

4 Express Package Service
NOTE: Service order has changed. Please select carefully.
Packages up to 150 lbs.
Next Business Day
FedEx First Overnight
FedEx Priority Overnight
FedEx Standard Overnight
2 or 3 Business Days
FedEx 2Day A.M.
FedEx 2Day
FedEx Express Saver

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

6 Special Handling and Delivery Signature Options
SATURDAY Delivery
No Signature Required
Direct Signature
Does this shipment contain dangerous goods?
One box must be checked.
No Yes Shipper's Declaration Yes Shipper's Declaration not required Dry Ice Cargo Aircraft Only

7 Payment Bill to:
Sender Recipient Third Party Credit Card Cash/Check
Total Packages 1 Total Weight 66 lbs.
Credit Card Auth.

Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

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FA12855: 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: FA12855
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ924-MB	Z23255.D	1	03/05/14	CP	n/a	n/a	VZ924

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

FA12855-1

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: FA12855
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ924-MB	Z23255.D	1	03/05/14	CP	n/a	n/a	VZ924

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

FA12855-1

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	79-125%
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

Blank Spike Summary

Job Number: FA12855
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ924-BS	Z23256.D	1	03/05/14	CP	n/a	n/a	VZ924

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

FA12855-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	105	84	50-147
71-43-2	Benzene	25	24.8	99	81-122
75-27-4	Bromodichloromethane	25	25.1	100	79-123
75-25-2	Bromoform	25	25.3	101	66-123
108-90-7	Chlorobenzene	25	27.5	110	82-124
75-00-3	Chloroethane	25	30.2	121	62-144
67-66-3	Chloroform	25	25.0	100	80-124
75-15-0	Carbon disulfide	25	28.3	113	66-148
56-23-5	Carbon tetrachloride	25	27.0	108	76-136
75-34-3	1,1-Dichloroethane	25	24.9	100	81-122
75-35-4	1,1-Dichloroethylene	25	26.7	107	78-137
107-06-2	1,2-Dichloroethane	25	27.5	110	75-125
78-87-5	1,2-Dichloropropane	25	25.2	101	76-124
124-48-1	Dibromochloromethane	25	27.4	110	78-122
156-59-2	cis-1,2-Dichloroethylene	25	25.4	102	78-120
10061-01-5	cis-1,3-Dichloropropene	25	26.1	104	75-118
156-60-5	trans-1,2-Dichloroethylene	25	25.3	101	76-127
10061-02-6	trans-1,3-Dichloropropene	25	28.3	113	80-120
100-41-4	Ethylbenzene	25	24.6	98	81-121
591-78-6	2-Hexanone	125	105	84	61-129
108-10-1	4-Methyl-2-pentanone	125	109	87	66-122
74-83-9	Methyl bromide	25	29.4	118	59-143
74-87-3	Methyl chloride	25	37.0	148	50-159
75-09-2	Methylene chloride	25	26.7	107	69-135
78-93-3	Methyl ethyl ketone	125	113	90	56-143
100-42-5	Styrene	25	23.6	94	78-119
71-55-6	1,1,1-Trichloroethane	25	26.3	105	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	24.8	99	72-120
79-00-5	1,1,2-Trichloroethane	25	26.4	106	76-119
127-18-4	Tetrachloroethylene	25	27.4	110	76-135
108-88-3	Toluene	25	28.6	114	80-120
79-01-6	Trichloroethylene	25	25.8	103	81-126
75-01-4	Vinyl chloride	25	36.7	147	69-159
1330-20-7	Xylene (total)	75	77.3	103	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12855
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ924-BS	Z23256.D	1	03/05/14	CP	n/a	n/a	VZ924

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

FA12855-1

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	105%	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	94%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12855
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12912-1MS	Z23277.D	1	03/05/14	CP	n/a	n/a	VZ924
FA12912-1MSD	Z23278.D	1	03/05/14	CP	n/a	n/a	VZ924
FA12912-1	Z23257.D	1	03/05/14	CP	n/a	n/a	VZ924

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

FA12855-1

CAS No.	Compound	FA12912-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	120	96	126	101	5	50-147/21
71-43-2	Benzene	ND		25	24.4	98	24.1	96	1	81-122/14
75-27-4	Bromodichloromethane	ND		25	24.9	100	22.4	90	11	79-123/19
75-25-2	Bromoform	ND		25	22.2	89	19.8	79	11	66-123/21
108-90-7	Chlorobenzene	ND		25	26.6	106	26.0	104	2	82-124/14
75-00-3	Chloroethane	ND		25	31.4	126	31.3	125	0	62-144/20
67-66-3	Chloroform	ND		25	25.1	100	24.6	98	2	80-124/15
75-15-0	Carbon disulfide	ND		25	24.8	99	21.1	84	16	66-148/23
56-23-5	Carbon tetrachloride	ND		25	25.8	103	23.0	92	11	76-136/23
75-34-3	1,1-Dichloroethane	ND		25	25.0	100	24.9	100	0	81-122/15
75-35-4	1,1-Dichloroethylene	ND		25	25.4	102	25.9	104	2	78-137/18
107-06-2	1,2-Dichloroethane	ND		25	28.0	112	27.6	110	1	75-125/14
78-87-5	1,2-Dichloropropane	ND		25	25.2	101	24.4	98	3	76-124/14
124-48-1	Dibromochloromethane	ND		25	25.5	102	23.5	94	8	78-122/19
156-59-2	cis-1,2-Dichloroethylene	ND		25	23.9	96	23.8	95	0	78-120/15
10061-01-5	cis-1,3-Dichloropropene	ND		25	21.9	88	19.6	78	11	75-118/23
156-60-5	trans-1,2-Dichloroethylene	ND		25	24.6	98	24.2	97	2	76-127/17
10061-02-6	trans-1,3-Dichloropropene	ND		25	26.4	106	23.8	95	10	80-120/22
100-41-4	Ethylbenzene	ND		25	24.6	98	24.2	97	2	81-121/14
591-78-6	2-Hexanone	ND		125	103	82	109	87	6	61-129/18
108-10-1	4-Methyl-2-pentanone	ND		125	108	86	112	90	4	66-122/16
74-83-9	Methyl bromide	ND		25	28.0	112	27.6	110	1	59-143/19
74-87-3	Methyl chloride	ND		25	38.8	155	38.6	154	1	50-159/19
75-09-2	Methylene chloride	ND		25	27.1	108	26.8	107	1	69-135/16
78-93-3	Methyl ethyl ketone	ND		125	93.5	75	98.4	79	5	56-143/18
100-42-5	Styrene	ND		25	22.4	90	21.0	84	6	78-119/23
71-55-6	1,1,1-Trichloroethane	ND		25	25.5	102	24.8	99	3	75-130/16
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	24.5	98	25.2	101	3	72-120/14
79-00-5	1,1,2-Trichloroethane	ND		25	25.8	103	26.0	104	1	76-119/14
127-18-4	Tetrachloroethylene	ND		25	25.7	103	25.4	102	1	76-135/16
108-88-3	Toluene	ND		25	27.7	111	27.8	111	0	80-120/14
79-01-6	Trichloroethylene	ND		25	24.7	99	24.1	96	2	81-126/15
75-01-4	Vinyl chloride	ND		25	38.6	154	37.7	151	2	69-159/18
1330-20-7	Xylene (total)	ND		75	74.1	99	73.4	98	1	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12855
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12912-1MS	Z23277.D	1	03/05/14	CP	n/a	n/a	VZ924
FA12912-1MSD	Z23278.D	1	03/05/14	CP	n/a	n/a	VZ924
FA12912-1	Z23257.D	1	03/05/14	CP	n/a	n/a	VZ924

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

FA12855-1

CAS No.	Surrogate Recoveries	MS	MSD	FA12912-1	Limits
1868-53-7	Dibromofluoromethane	105%	105%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	102%	99%	79-125%
2037-26-5	Toluene-D8	93%	94%	98%	85-112%
460-00-4	4-Bromofluorobenzene	92%	94%	96%	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: FA12855
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50725-MB	T011862.D	1	03/07/14	FS	03/06/14	OP50725	ST563

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12855-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	50	10	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.52	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	0.50	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	0.58	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	0.50	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	5.4	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	5.0	0.50	ug/l	
	3&4-Methylphenol	ND	5.0	1.2	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	0.60	ug/l	
100-02-7	4-Nitrophenol	ND	25	5.0	ug/l	
87-86-5	Pentachlorophenol	ND	25	5.0	ug/l	
108-95-2	Phenol	ND	5.0	0.50	ug/l	
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: FA12855
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50725-MB	T011862.D	1	03/07/14	FS	03/06/14	OP50725	ST563

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12855-1

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	42%	14-67%
4165-62-2	Phenol-d5	27%	10-50%

Method Blank Summary

Job Number: FA12855
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50725-MB	T011862.D	1	03/07/14	FS	03/06/14	OP50725	ST563

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12855-1

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	66%	33-118%
4165-60-0	Nitrobenzene-d5	86%	42-108%
321-60-8	2-Fluorobiphenyl	78%	40-106%
1718-51-0	Terphenyl-d14	95%	39-121%

Blank Spike Summary

Job Number: FA12855
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50725-BS	T011861.D	1	03/07/14	FS	03/06/14	OP50725	ST563

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12855-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	100	7.1	7* [a]	10-69
95-57-8	2-Chlorophenol	50	34.9	70	52-98
59-50-7	4-Chloro-3-methyl phenol	50	40.0	80	54-103
120-83-2	2,4-Dichlorophenol	50	39.5	79	53-103
105-67-9	2,4-Dimethylphenol	50	40.0	80	43-90
51-28-5	2,4-Dinitrophenol	100	87.7	88	44-112
534-52-1	4,6-Dinitro-o-cresol	100	82.7	83	66-121
95-48-7	2-Methylphenol	50	29.6	59	43-90
	3&4-Methylphenol	100	54.8	55	36-88
88-75-5	2-Nitrophenol	50	43.2	86	53-102
100-02-7	4-Nitrophenol	100	32.3	32	18-62
87-86-5	Pentachlorophenol	100	87.0	87	61-115
108-95-2	Phenol	50	14.9	30	19-56
95-95-4	2,4,5-Trichlorophenol	50	41.8	84	62-109
88-06-2	2,4,6-Trichlorophenol	50	42.7	85	59-107
83-32-9	Acenaphthene	50	41.4	83	61-107
208-96-8	Acenaphthylene	50	44.8	90	60-104
120-12-7	Anthracene	50	42.2	84	65-108
56-55-3	Benzo(a)anthracene	50	40.8	82	66-111
50-32-8	Benzo(a)pyrene	50	40.6	81	62-107
205-99-2	Benzo(b)fluoranthene	50	41.2	82	65-114
191-24-2	Benzo(g,h,i)perylene	50	47.0	94	66-116
207-08-9	Benzo(k)fluoranthene	50	40.1	80	65-114
101-55-3	4-Bromophenyl phenyl ether	50	35.9	72	65-109
85-68-7	Butyl benzyl phthalate	50	37.6	75	65-112
100-51-6	Benzyl Alcohol	50	32.4	65	46-94
91-58-7	2-Chloronaphthalene	50	42.4	85	57-103
106-47-8	4-Chloroaniline	50	40.5	81	49-105
86-74-8	Carbazole	50	43.5	87	59-113
218-01-9	Chrysene	50	44.3	89	66-111
111-91-1	bis(2-Chloroethoxy)methane	50	41.2	82	51-102
111-44-4	bis(2-Chloroethyl)ether	50	36.1	72	53-100
108-60-1	bis(2-Chloroisopropyl)ether	50	36.3	73	45-106
7005-72-3	4-Chlorophenyl phenyl ether	50	42.6	85	62-105
95-50-1	1,2-Dichlorobenzene	50	33.5	67	48-97
541-73-1	1,3-Dichlorobenzene	50	34.2	68	45-95

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12855
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50725-BS	T011861.D	1	03/07/14	FS	03/06/14	OP50725	ST563

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12855-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
106-46-7	1,4-Dichlorobenzene	50	34.5	69	45-98
121-14-2	2,4-Dinitrotoluene	50	42.0	84	61-110
606-20-2	2,6-Dinitrotoluene	50	43.7	87	63-108
91-94-1	3,3'-Dichlorobenzidine	50	39.5	79	46-117
53-70-3	Dibenzo(a,h)anthracene	50	42.6	85	66-119
132-64-9	Dibenzofuran	50	42.3	85	61-106
84-74-2	Di-n-butyl phthalate	50	37.3	75	65-107
117-84-0	Di-n-octyl phthalate	50	33.7	67	62-118
84-66-2	Diethyl phthalate	50	38.6	77	64-108
131-11-3	Dimethyl phthalate	50	38.7	77	63-106
117-81-7	bis(2-Ethylhexyl)phthalate	50	36.7	73	61-117
206-44-0	Fluoranthene	50	44.2	88	63-106
86-73-7	Fluorene	50	43.8	88	62-108
118-74-1	Hexachlorobenzene	50	39.8	80	63-108
87-68-3	Hexachlorobutadiene	50	40.6	81	42-102
77-47-4	Hexachlorocyclopentadiene	50	31.7	63	39-102
67-72-1	Hexachloroethane	50	35.6	71	42-100
193-39-5	Indeno(1,2,3-cd)pyrene	50	44.1	88	64-119
78-59-1	Isophorone	50	40.6	81	43-87
91-57-6	2-Methylnaphthalene	50	43.5	87	51-102
88-74-4	2-Nitroaniline	50	43.8	88	54-128
99-09-2	3-Nitroaniline	50	42.6	85	56-106
100-01-6	4-Nitroaniline	50	44.5	89	55-120
91-20-3	Naphthalene	50	41.6	83	47-100
98-95-3	Nitrobenzene	50	39.9	80	50-104
621-64-7	N-Nitroso-di-n-propylamine	50	40.7	81	52-104
86-30-6	N-Nitrosodiphenylamine	50	43.3	87	64-108
85-01-8	Phenanthrene	50	43.2	86	66-110
129-00-0	Pyrene	50	44.1	88	64-113
120-82-1	1,2,4-Trichlorobenzene	50	38.2	76	45-97

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	44%	14-67%
4165-62-2	Phenol-d5	27%	10-50%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12855
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50725-BS	T011861.D	1	03/07/14	FS	03/06/14	OP50725	ST563

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12855-1

CAS No.	Surrogate Recoveries	BSP	Limits
118-79-6	2,4,6-Tribromophenol	90%	33-118%
4165-60-0	Nitrobenzene-d5	85%	42-108%
321-60-8	2-Fluorobiphenyl	89%	40-106%
1718-51-0	Terphenyl-d14	102%	39-121%

(a) Sporadic marginal failure.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12855
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50725-MS	T011864.D	1	03/07/14	FS	03/06/14	OP50725	ST563
OP50725-MSD	T011865.D	1	03/07/14	FS	03/06/14	OP50725	ST563
FA12855-1	T011863.D	1	03/07/14	FS	03/06/14	OP50725	ST563

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12855-1

CAS No.	Compound	FA12855-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		192	44.1	23	64.5	34	38	10-69/39
95-57-8	2-Chlorophenol	ND		96.2	70.7	74	74.1	77	5	52-98/25
59-50-7	4-Chloro-3-methyl phenol	ND		96.2	79.2	82	86.5	90	9	54-103/23
120-83-2	2,4-Dichlorophenol	ND		96.2	78.5	82	84.1	87	7	53-103/26
105-67-9	2,4-Dimethylphenol	ND		96.2	79.0	82	77.8	81	2	43-90/27
51-28-5	2,4-Dinitrophenol	ND		192	184	96	191	99	4	44-112/25
534-52-1	4,6-Dinitro-o-cresol	ND		192	163	85	185	96	13	66-121/23
95-48-7	2-Methylphenol	ND		96.2	65.2	68	72.7	76	11	43-90/28
	3&4-Methylphenol	ND		192	129	67	142	74	10	36-88/28
88-75-5	2-Nitrophenol	ND		96.2	77.3	80	81.2	84	5	53-102/29
100-02-7	4-Nitrophenol	ND		192	89.8	47	114	59	24	18-62/33
87-86-5	Pentachlorophenol	ND		192	174	90	183	95	5	61-115/26
108-95-2	Phenol	ND		96.2	42.8	45	49.4	51	14	19-56/35
95-95-4	2,4,5-Trichlorophenol	ND		96.2	74.0	77	72.9	76	1	62-109/22
88-06-2	2,4,6-Trichlorophenol	ND		96.2	78.0	81	78.1	81	0	59-107/23
83-32-9	Acenaphthene	ND		96.2	80.6	84	85.4	89	6	61-107/22
208-96-8	Acenaphthylene	ND		96.2	82.4	86	85.0	88	3	60-104/22
120-12-7	Anthracene	ND		96.2	81.3	85	86.4	90	6	65-108/20
56-55-3	Benzo(a)anthracene	ND		96.2	80.5	84	83.7	87	4	66-111/22
50-32-8	Benzo(a)pyrene	ND		96.2	78.1	81	78.6	82	1	62-107/23
205-99-2	Benzo(b)fluoranthene	ND		96.2	79.7	83	76.2	79	4	65-114/23
191-24-2	Benzo(g,h,i)perylene	ND		96.2	79.1	82	85.4	89	8	66-116/23
207-08-9	Benzo(k)fluoranthene	ND		96.2	82.1	85	80.0	83	3	65-114/24
101-55-3	4-Bromophenyl phenyl ether	ND		96.2	69.1	72	76.9	80	11	65-109/23
85-68-7	Butyl benzyl phthalate	ND		96.2	70.1	73	69.0	72	2	65-112/24
100-51-6	Benzyl Alcohol	ND		96.2	71.8	75	81.6	85	13	46-94/27
91-58-7	2-Chloronaphthalene	ND		96.2	76.8	80	75.9	79	1	57-103/23
106-47-8	4-Chloroaniline	ND		96.2	79.5	83	81.7	85	3	49-105/27
86-74-8	Carbazole	ND		96.2	84.2	88	89.0	93	6	59-113/21
218-01-9	Chrysene	ND		96.2	89.2	93	90.3	94	1	66-111/22
111-91-1	bis(2-Chloroethoxy)methane	ND		96.2	76.1	79	80.3	84	5	51-102/28
111-44-4	bis(2-Chloroethyl)ether	ND		96.2	78.3	81	74.6	78	5	53-100/27
108-60-1	bis(2-Chloroisopropyl)ether	ND		96.2	75.1	78	74.2	77	1	45-106/26
7005-72-3	4-Chlorophenyl phenyl ether	ND		96.2	78.3	81	79.3	82	1	62-105/20
95-50-1	1,2-Dichlorobenzene	ND		96.2	65.7	68	70.1	73	6	48-97/24
541-73-1	1,3-Dichlorobenzene	ND		96.2	67.9	71	71.4	74	5	45-95/25

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12855
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50725-MS	T011864.D	1	03/07/14	FS	03/06/14	OP50725	ST563
OP50725-MSD	T011865.D	1	03/07/14	FS	03/06/14	OP50725	ST563
FA12855-1	T011863.D	1	03/07/14	FS	03/06/14	OP50725	ST563

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12855-1

CAS No.	Compound	FA12855-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
106-46-7	1,4-Dichlorobenzene	ND		96.2	71.4	74	74.0	77	4	45-98/25
121-14-2	2,4-Dinitrotoluene	ND		96.2	75.8	79	78.4	82	3	61-110/21
606-20-2	2,6-Dinitrotoluene	ND		96.2	82.6	86	80.9	84	2	63-108/21
91-94-1	3,3'-Dichlorobenzidine	ND		96.2	79.8	83	78.6	82	2	46-117/29
53-70-3	Dibenzo(a,h)anthracene	ND		96.2	78.9	82	78.0	81	1	66-119/24
132-64-9	Dibenzofuran	ND		96.2	81.6	85	83.2	87	2	61-106/21
84-74-2	Di-n-butyl phthalate	ND		96.2	67.1	70	75.0	78	11	65-107/21
117-84-0	Di-n-octyl phthalate	ND		96.2	59.7	62	59.7	62	0	62-118/24
84-66-2	Diethyl phthalate	ND		96.2	71.0	74	73.7	77	4	64-108/21
131-11-3	Dimethyl phthalate	ND		96.2	69.7	72	71.8	75	3	63-106/22
117-81-7	bis(2-Ethylhexyl)phthalate	ND		96.2	73.4	76	69.2	72	6	61-117/23
206-44-0	Fluoranthene	ND		96.2	79.9	83	88.4	92	10	63-106/21
86-73-7	Fluorene	ND		96.2	84.1	87	86.2	90	2	62-108/20
118-74-1	Hexachlorobenzene	ND		96.2	76.5	80	90.6	94	17	63-108/22
87-68-3	Hexachlorobutadiene	ND		96.2	83.9	87	78.8	82	6	42-102/28
77-47-4	Hexachlorocyclopentadiene	ND		96.2	57.3	60	52.6	55	9	39-102/29
67-72-1	Hexachloroethane	ND		96.2	67.9	71	71.8	75	6	42-100/29
193-39-5	Indeno(1,2,3-cd)pyrene	ND		96.2	77.9	81	80.3	84	3	64-119/24
78-59-1	Isophorone	ND		96.2	76.3	79	79.9	83	5	43-87/25
91-57-6	2-Methylnaphthalene	ND		96.2	80.0	83	81.4	85	2	51-102/26
88-74-4	2-Nitroaniline	ND		96.2	76.4	79	82.9	86	8	54-128/24
99-09-2	3-Nitroaniline	ND		96.2	77.7	81	83.3	87	7	56-106/27
100-01-6	4-Nitroaniline	ND		96.2	79.1	82	84.1	87	6	55-120/24
91-20-3	Naphthalene	ND		96.2	81.6	85	84.6	88	4	47-100/29
98-95-3	Nitrobenzene	ND		96.2	77.9	81	82.0	85	5	50-104/28
621-64-7	N-Nitroso-di-n-propylamine	ND		96.2	80.6	84	82.1	85	2	52-104/25
86-30-6	N-Nitrosodiphenylamine	ND		96.2	85.6	89	95.7	100	11	64-108/23
85-01-8	Phenanthrene	ND		96.2	84.6	88	88.3	92	4	66-110/21
129-00-0	Pyrene	ND		96.2	85.0	88	82.6	86	3	64-113/23
120-82-1	1,2,4-Trichlorobenzene	ND		96.2	75.9	79	77.8	81	2	45-97/28

CAS No.	Surrogate Recoveries	MS	MSD	FA12855-1	Limits
367-12-4	2-Fluorophenol	54%	61%	36%	14-67%
4165-62-2	Phenol-d5	40%	48%	22%	10-50%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12855
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50725-MS	T011864.D	1	03/07/14	FS	03/06/14	OP50725	ST563
OP50725-MSD	T011865.D	1	03/07/14	FS	03/06/14	OP50725	ST563
FA12855-1	T011863.D	1	03/07/14	FS	03/06/14	OP50725	ST563

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12855-1

CAS No.	Surrogate Recoveries	MS	MSD	FA12855-1	Limits
118-79-6	2,4,6-Tribromophenol	89%	100%	71%	33-118%
4165-60-0	Nitrobenzene-d5	81%	84%	75%	42-108%
321-60-8	2-Fluorobiphenyl	82%	77%	72%	40-106%
1718-51-0	Terphenyl-d14	98%	98%	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: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26894
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/03/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	15	15		
Antimony	6.0	2	2.3	0.50	<6.0
Arsenic	10	2	2.4	-1.9	<10
Barium	200	1	1		
Beryllium	4.0	.5	.5	0.10	<4.0
Cadmium	5.0	.5	.5	0.0	<5.0
Calcium	1000	50	50		
Chromium	10	1	2	-0.10	<10
Cobalt	50	.5	.5		
Copper	25	1	1	1.2	<25
Iron	300	17	17		
Lead	5.0	1.1	1.1	-0.70	<5.0
Magnesium	5000	50	56		
Manganese	15	.5	1		
Molybdenum	50	.5	.5		
Nickel	40	.5	.5	-0.20	<40
Potassium	10000	200	200		
Selenium	10	2.3	2.3	1.6	<10
Silver	10	.65	.77	-0.40	<10
Sodium	10000	500	500		
Strontium	10	.4	.4		
Thallium	10	1.5	2	-2.0	<10
Tin	50	.7	1		
Titanium	10	.9	1		
Vanadium	50	.5	.5		
Zinc	20	3	3	1.7	<20

Associated samples MP26894: FA12855-1

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: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26894
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:			03/03/14					03/03/14	
Metal	FA12853-1 Original	DUP	RPD	QC Limits	FA12853-1 Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum									
Antimony	0.0	0.0	NC	0-20	0.0	496	500	99.2	80-120
Arsenic	0.0	0.0	NC	0-20	0.0	1970	2000	98.5	80-120
Barium	anr								
Beryllium	0.0	0.0	NC	0-20	0.0	52.6	50	105.2	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	49.1	50	98.2	80-120
Calcium									
Chromium	0.0	0.0	NC	0-20	0.0	210	200	105.0	80-120
Cobalt									
Copper	1.6	1.1	37.0 (a)	0-20	1.6	259	250	103.0	80-120
Iron	anr								
Lead	0.0	0.0	NC	0-20	0.0	487	500	97.4	80-120
Magnesium									
Manganese	anr								
Molybdenum									
Nickel	0.0	0.0	NC	0-20	0.0	513	500	102.6	80-120
Potassium									
Selenium	0.0	0.0	NC	0-20	0.0	1960	2000	98.0	80-120
Silver	0.0	0.0	NC	0-20	0.0	49.1	50	98.2	80-120
Sodium									
Strontium									
Thallium	0.0	0.0	NC	0-20	0.0	1940	2000	97.0	80-120
Tin									
Titanium									
Vanadium									
Zinc	6.4	7.1	10.4	0-20	6.4	507	500	100.1	80-120

Associated samples MP26894: FA12855-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26894
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/03/14

Metal	FA12853-1 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.0	509	500	101.8	2.6	20
Arsenic	0.0	2020	2000	101.0	2.5	20
Barium	anr					
Beryllium	0.0	53.6	50	107.2	1.9	20
Cadmium	0.0	50.1	50	100.2	2.0	20
Calcium						
Chromium	0.0	213	200	106.5	1.4	20
Cobalt						
Copper	1.6	264	250	105.0	1.9	20
Iron	anr					
Lead	0.0	494	500	98.8	1.4	20
Magnesium						
Manganese	anr					
Molybdenum						
Nickel	0.0	523	500	104.6	1.9	20
Potassium						
Selenium	0.0	2010	2000	100.5	2.5	20
Silver	0.0	49.9	50	99.8	1.6	20
Sodium						
Strontium						
Thallium	0.0	1980	2000	99.0	2.0	20
Tin						
Titanium						
Vanadium						
Zinc	6.4	517	500	102.1	2.0	20

Associated samples MP26894: FA12855-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26894
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/03/14

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum				
Antimony	492	500	98.4	80-120
Arsenic	1960	2000	98.0	80-120
Barium	anr			
Beryllium	51.9	50	103.8	80-120
Cadmium	48.8	50	97.6	80-120
Calcium				
Chromium	208	200	104.0	80-120
Cobalt				
Copper	256	250	102.4	80-120
Iron	anr			
Lead	484	500	96.8	80-120
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	510	500	102.0	80-120
Potassium				
Selenium	1960	2000	98.0	80-120
Silver	48.6	50	97.2	80-120
Sodium				
Strontium				
Thallium	1930	2000	96.5	80-120
Tin				
Titanium				
Vanadium				
Zinc	500	500	100.0	80-120

Associated samples MP26894: FA12855-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26894
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/03/14

Metal	FA12853-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	0.00	0.00	NC	0-10
Arsenic	0.00	0.00	NC	0-10
Barium	anr			
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	0.00	0.00	NC	0-10
Cobalt				
Copper	1.60	0.00	100.0(a)	0-10
Iron	anr			
Lead	0.00	0.00	NC	0-10
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	0.00	0.00	NC	0-10
Potassium				
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium				
Zinc	6.40	0.00	100.0(a)	0-10

Associated samples MP26894: FA12855-1

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: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26894
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/03/14

Metal	Sample ml	Final ml	FA12853-1 Raw	FA12853-1 Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10			103.4	0.2	5	100	103.4	80-120
Arsenic	9.8	10			102.2	0.2	5	100	102.2	80-120
Barium										
Beryllium	9.8	10			54.4	0.2	2.5	50	108.8	80-120
Cadmium	9.8	10			52.6	0.2	2.5	50	105.2	80-120
Calcium										
Chromium	9.8	10			55.2	0.2	2.5	50	110.4	80-120
Cobalt										
Copper	9.8	10	1.6	1.568	105.3	0.2	5	100	103.7	80-120
Iron										
Lead	9.8	10			49.3	0.2	2.5	50	98.6	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel	9.8	10			107.2	0.2	5	100	107.2	80-120
Potassium										
Selenium	9.8	10			100.8	0.2	5	100	100.8	80-120
Silver	9.8	10			52.6	0.2	2.5	50	105.2	80-120
Sodium										
Strontium										
Thallium	9.8	10			97.1	0.2	5	100	97.1	80-120
Tin										
Titanium										
Vanadium										
Zinc	9.8	10	6.4	6.272	275.4	0.2	12.5	250	107.7	80-120

Associated samples MP26894: FA12855-1

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26905 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/05/14

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	0.012	<0.50

Associated samples MP26905: FA12855-1

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: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26905
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/05/14 03/05/14

Metal	FA12934-1 Original	DUP	RPD	QC Limits	FA12934-1 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	2.9	3	96.7	80-120

Associated samples MP26905: FA12855-1

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: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26905 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/05/14

Metal	FA12934-1 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.0	3	100.0	3.4	20

Associated samples MP26905: FA12855-1

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

8.2.2
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26905
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/05/14

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	80-120

Associated samples MP26905: FA12855-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.2.3

8

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26905
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/05/14

Metal	FA12934-1 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP26905: FA12855-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26909
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/05/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.75	1.6		
Antimony	1.0	.1	.1	0.030	<1.0
Arsenic	0.50	.1	.1	-0.065	<0.50
Barium	10	.05	.05		
Beryllium	0.25	.025	.025	0.0	<0.25
Cadmium	0.20	.025	.025	-0.0050	<0.20
Calcium	250	2.5	2.5		
Chromium	0.50	.05	.05	0.010	<0.50
Cobalt	2.5	.025	.025		
Copper	1.3	.05	.05	0.040	<1.3
Iron	15	.85	1.3		
Lead	1.0	.055	.08	0.0050	<1.0
Magnesium	250	2.5	2.5		
Manganese	0.75	.025	.025		
Molybdenum	2.5	.025	.03		
Nickel	2.0	.025	.025	0.030	<2.0
Potassium	500	10	10		
Selenium	1.0	.12	.15	0.065	<1.0
Silver	0.50	.033	.033	0.0050	<0.50
Sodium	500	25	25		
Strontium	0.50	.02	.025		
Thallium	0.50	.075	.075	-0.065	<0.50
Tin	2.5	.035	.035		
Titanium	0.50	.045	.045		
Vanadium	2.5	.025	.025		
Zinc	1.0	.15	.15	0.17	<1.0

Associated samples MP26909: FA12855-2, FA12855-3, FA12855-4

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: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26909
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date:			03/05/14					03/05/14	
Metal	FA12829-4 Original	DUP	RPD	QC Limits	FA12829-4 Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr								
Antimony	0.0	0.0 (a)	NC	0-20	0.0	1.3 (a)	25.4	5.1N (c)	80-120
Arsenic	12.3	11.5 (a)	6.7	0-20	12.3	89.2 (a)	102	75.6N(c)	80-120
Barium	anr								
Beryllium	1.2	1.0 (a)	18.2	0-20	1.2	3.5 (a)	2.54	90.5	80-120
Cadmium	0.40	0.34 (a)	16.2	0-20	0.40	2.7 (a)	2.54	90.5	80-120
Calcium	anr								
Chromium	31.2	28.9 (a)	7.7	0-20	31.2	38.1 (a)	10.2	67.9N(c)	80-120
Cobalt									
Copper	4.2	5.8 (a)	32.0 (b)	0-20	4.2	19.5 (a)	12.7	120.4N(c	80-120
Iron	anr								
Lead	20.3	19.3 (a)	5.1	0-20	20.3	47.9 (a)	25.4	108.6	80-120
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	8.4	7.4 (a)	12.7	0-20	8.4	32.6 (a)	25.4	95.2	80-120
Potassium	anr								
Selenium	0.0	0.0 (a)	NC	0-20	0.0	76.0 (a)	102	74.8N(c)	80-120
Silver	0.0	0.0 (a)	NC	0-20	0.0	2.3 (a)	2.54	90.5	80-120
Sodium	anr								
Strontium									
Thallium	0.0	0.0 (a)	NC	0-20	0.0	101 (a)	102	99.4	80-120
Tin									
Titanium									
Vanadium									
Zinc	15.6	17.8 (a)	13.2	0-20	15.6	44.5 (a)	25.4	113.7	80-120

Associated samples MP26909: FA12855-2, FA12855-3, FA12855-4

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) Elevated reporting limit(s) due to matrix interference.
(b) RPD acceptable due to low duplicate and sample concentrations.
(c) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26909 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/05/14

Metal	FA12829-4 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	0.0	1.9 (a)	28.7	6.6N (b)	37.5 (c)	20
Arsenic	12.3	93.9 (a)	115	71.0N(b)	5.1	20
Barium	anr					
Beryllium	1.2	3.8 (a)	2.87	90.5	8.2	20
Cadmium	0.40	3.0 (a)	2.87	90.5	10.5	20
Calcium	anr					
Chromium	31.2	39.2 (a)	11.5	69.6N(b)	2.8	20
Cobalt						
Copper	4.2	19.3 (a)	14.4	105.1	1.0	20
Iron	anr					
Lead	20.3	48.5 (a)	28.7	98.1	1.2	20
Magnesium	anr					
Manganese	anr					
Molybdenum	anr					
Nickel	8.4	35.0 (a)	28.7	92.6	7.1	20
Potassium	anr					
Selenium	0.0	82.8 (a)	115	72.0N(b)	8.6	20
Silver	0.0	2.5 (a)	2.87	87.0	8.3	20
Sodium	anr					
Strontium						
Thallium	0.0	109 (a)	115	94.8	7.6	20
Tin						
Titanium						
Vanadium						
Zinc	15.6	45.3 (a)	28.7	103.3	1.8	20

Associated samples MP26909: FA12855-2, FA12855-3, FA12855-4

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) Elevated reporting limit(s) due to matrix interference.
(b) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.
(c) High RPD due to possible sample non-homogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26909
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/05/14

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr			
Antimony	27.2	25	108.8	80-120
Arsenic	99.8	100	99.8	80-120
Barium	anr			
Beryllium	2.8	2.5	112.0	80-120
Cadmium	2.6	2.5	104.0	80-120
Calcium	anr			
Chromium	11.1	10	111.0	80-120
Cobalt				
Copper	14.5	12.5	116.0	80-120
Iron	anr			
Lead	26.1	25	104.4	80-120
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	26.3	25	105.2	80-120
Potassium	anr			
Selenium	98.3	100	98.3	80-120
Silver	2.5	2.5	100.0	80-120
Sodium	anr			
Strontium				
Thallium	103	100	103.0	80-120
Tin				
Titanium				
Vanadium				
Zinc	26.3	25	105.2	80-120

Associated samples MP26909: FA12855-2, FA12855-3, FA12855-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26909
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/05/14

Metal	FA12829-4 Original	SDL 5:25	%DIF	QC Limits
Aluminum	anr			
Antimony	0.00	0.00	NC	0-10
Arsenic	226	244	8.0	0-10
Barium	anr			
Beryllium	22.2	24.2	9.0	0-10
Cadmium	7.30	0.00	100.0(a)	0-10
Calcium	anr			
Chromium	574	640	11.6*(b)	0-10
Cobalt				
Copper	77.5	72.3	6.7	0-10
Iron	anr			
Lead	374	356	4.7	0-10
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	154	166	7.5	0-10
Potassium	anr			
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium	anr			
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium				
Zinc	286	333	16.5 (a)	0-10

Associated samples MP26909: FA12855-2, FA12855-3, FA12855-4

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).
(b) Serial dilution indicates possible matrix interference.

POST DIGESTATE SPIKE SUMMARY

Login Number: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26909
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/05/14

Metal	Sample ml	Final ml	FA12829-4 Raw	FA12829-4 Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10			77.3	0.2	5	100	77.3*(a)	80-120
Arsenic	9.8	10	225.6	221.088	308.9	0.2	5	100	87.8	80-120
Barium										
Beryllium	9.8	10	22.2	21.756	71.1	0.2	2.5	50	98.7	80-120
Cadmium	9.8	10	7.3	7.154	56.9	0.2	2.5	50	99.5	80-120
Calcium										
Chromium	9.8	10	573.9	562.422	607.7	0.2	2.5	50	90.6	80-120
Cobalt										
Copper	9.8	10	77.5	75.95	165.2	0.2	5	100	89.3	80-120
Iron										
Lead	9.8	10	373.5	366.03	406.7	0.2	2.5	50	81.3	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel	9.8	10	154.2	151.116	242.8	0.2	5	100	91.7	80-120
Potassium										
Selenium	9.8	10			97.9	0.2	5	100	97.9	80-120
Silver	9.8	10			46.5	0.2	2.5	50	93.0	80-120
Sodium										
Strontium										
Thallium	9.8	10			101.1	0.2	5	100	101.1	80-120
Tin										
Titanium										
Vanadium										
Zinc	9.8	10	286.2	280.476	521.8	0.2	12.5	250	96.5	80-120

Associated samples MP26909: FA12855-2, FA12855-3, FA12855-4

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.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/14

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.042	.0025	.0042	0.00021	<0.042

Associated samples MP26919: FA12855-2, FA12855-3, FA12855-4

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: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/14 03/07/14

Metal	FA12977-7 Original	DUP	RPD	QC Limits	FA12977-7 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.025	0.027	7.7	0-20	0.025	0.55	0.462	113.7	80-120

Associated samples MP26919: FA12855-2, FA12855-3, FA12855-4

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: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/14

Metal	FA12977-7 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.025	0.57	0.455	119.8	3.6	20

Associated samples MP26919: FA12855-2, FA12855-3, FA12855-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 03/07/14

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.26	0.25	104.0	80-120

Associated samples MP26919: FA12855-2, FA12855-3, FA12855-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12855
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919 Methods: SW846 7471B
Matrix Type: SOLID Units: ug/l

Prep Date: 03/07/14

Metal	FA12977-7 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.156	0.00	100.0(a)	0-10

Associated samples MP26919: FA12855-2, FA12855-3, FA12855-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Southeast ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

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

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA12855
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
Chromium, Hexavalent	GN60385	0.010	0.0	mg/l	.100	0.098	97.7	85-115%
Chromium, Hexavalent	GN60625	2.0	0.0	mg/kg	20.0	19.7	98.3	75-125%

Associated Samples:
Batch GN60385: FA12855-1
Batch GN60625: FA12855-2, FA12855-3, FA12855-4
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA12855
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
Chromium, Hexavalent	GN60625	FA12814-11	mg/kg	1.4	1.2	12.1	0-20%
Solids, Percent	GN60391	FA12855-3	%	85.9	85.8	0.1	0-5%
Solids, Percent	GN60484	FA12855-2	%	87	86.7	0.3	0-5%

Associated Samples:
Batch GN60391: FA12855-3, FA12855-4
Batch GN60484: FA12855-2
Batch GN60625: FA12855-2, FA12855-3, FA12855-4
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA12855
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
Chromium, Hexavalent	GN60385	FA12855-1	mg/l	0.0080 U	.100	0.10	98.9	85-115%
Chromium, Hexavalent	GN60625	FA12814-11	mg/kg	1.4	23.3	27.7	113.2	75-125%
Chromium, Hexavalent	GN60625	FA12814-11	mg/kg	1.4	657.6	740	112.4	75-125%

Associated Samples:
Batch GN60385: FA12855-1
Batch GN60625: FA12855-2, FA12855-3, FA12855-4
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA12855
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
Chromium, Hexavalent	GN60385	FA12855-1	mg/l	0.0080 U	.100	0.100	1.0	20%

Associated Samples:
Batch GN60385: FA12855-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Southeast
ACCUTEST LABORATORIES

03/19/14

Technical Report for

United Technologies Corporation

AECOMSCG: Delavan Spray Technologies; Bamberg, SC

60314964

Accutest Job Number: FA12909

Sampling Date: 02/28/14

Report to:

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Greenville, SC 29615
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ATTN: Doria Cullom

Total number of pages in report: **58**

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

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: 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 (04226CA), TX (T104704404), PA (68-03573), VA (460177), AK, AR, GA, KY, MA, NV, OK, UT, WA

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Sample Summary

United Technologies Corporation

Job No: FA12909

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA12909-1	02/28/14	12:40	LA	03/01/14	SO	Soil	DPT-46 (1.5-3.5)
FA12909-2	02/28/14	12:40	LA	03/01/14	SO	Soil	DPT-46 (1.5-3.5)-A

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

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: United Technologies Corporation **Job No:** FA12909

Site: AECOMSCG: Delavan Spray Technologies; Bamberg, SC **Report Date** 3/19/2014 1:54:20 PM

2 Samples were collected on 02/28/2014 and were received at Accutest SE on 03/01/2014 properly preserved, at 2.6 Deg. C and intact. These Samples received an Accutest job number of FA12909. 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: SO **Batch ID:** VY586

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12909-2MS, FA12909-2MSD were used as the QC samples indicated.

FA12909-1: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12909-2: Pre-weighed vials were altered in the field; sample weights are estimated.

Extractables by GCMS By Method SW846 8270D

Matrix: SO **Batch ID:** OP50690

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) FA12790-12RMS, FA12790-12RMSD were used as the QC samples indicated.

Blank Spike Recovery(s) for 2,4-Dimethylphenol, Benzo(a)anthracene, Benzo(a)pyrene, Chrysene, Isophorone are outside control limits. Blank Spike recoveries are biased high. Analytes are non-detect in associated samples; therefore data integrity is not compromised.

Matrix Spike Recovery(s) for 2,4-Dimethylphenol, 4-Nitrophenol, Acenaphthylene, Isophorone are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 2,4,6-Trichlorophenol, 2,4-Dichlorophenol, 2,4-Dimethylphenol, 2,6-Dinitrotoluene, 2-Nitrophenol, Acenaphthylene, Benzo(a)anthracene, Benzo(a)pyrene, Benzyl Alcohol, Isophorone, N-Nitroso-di-n-propylamine, N-Nitrosodiphenylamine, Pentachlorophenol are outside control limits. Probable cause is due to matrix interference.

Sample(s) OP50690-MB, OP50690-BS have surrogates outside control limits.

OP50690-MB for Terphenyl-d14: Outside control limits.

OP50690-BS for Phenol-d5: Outside control limits.

OP50690-BS for Terphenyl-d14: Outside control limits.

Sample(s) OP50690-MS, OP50690-MSD have surrogates outside control limits. Probable cause is due to matrix interference.

FA12909-1 for 2,4-Dimethylphenol: Associated BS recovery outside control limits.

FA12909-1 for Benzo(a)anthracene: Associated BS recovery outside control limits.

FA12909-1 for Benzo(a)pyrene: Associated BS recovery outside control limits.

FA12909-1 for Chrysene: Associated BS recovery outside control limits.

FA12909-1 for Isophorone: Associated BS recovery outside control limits.

FA12909-2 for 2,4-Dimethylphenol: Associated BS recovery outside control limits.

FA12909-2 for Benzo(a)anthracene: Associated BS recovery outside control limits.

FA12909-2 for Benzo(a)pyrene: Associated BS recovery outside control limits.

FA12909-2 for Chrysene: Associated BS recovery outside control limits.

FA12909-2 for Isophorone: Associated BS recovery outside control limits.

Metals By Method SW846 6010C

Matrix: SO **Batch ID:** MP26915

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) FA12978-1DUP, FA12978-1MS, FA12978-1MSD, FA12978-1PS, FA12978-1SDL were used as the QC samples for metals.

RPD(s) for Duplicate for Copper, Nickel, Selenium, Zinc are outside control limits for sample MP26915-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Chromium, Copper, Lead, Nickel, Selenium, Zinc are outside control limits for sample MP26915-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 7471B

Matrix: SO **Batch ID:** MP26919

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) FA12977-7DUP, FA12977-7MS, FA12977-7MSD, FA12977-7SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Mercury are outside control limits for sample MP26919-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Wet Chemistry By Method SM19 2540G

Matrix: SO **Batch ID:** GN60416

Sample(s) FA12909-2DUP was used as the QC samples for Solids, Percent.

Wet Chemistry By Method SW846 3060A/7196A

Matrix: SO **Batch ID:** GN60625

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12814-11DUP, FA12814-11MS were used as the QC samples for Chromium, Hexavalent.

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:

_____

Lovelie Metzgar, QA Officer (signature on file)

Date: March 19, 2014

Summary of Hits

Job Number: FA12909
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 02/28/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA12909-1	**DPT-46 (1.5-3.5)**					
Acetone [a]		10.4 J	32	9.5	ug/kg	SW846 8260B
Tetrachloroethylene [a]		4.2	3.2	0.80	ug/kg	SW846 8260B
Arsenic		0.90	0.56	0.11	mg/kg	SW846 6010C
Beryllium		0.084 J	0.28	0.028	mg/kg	SW846 6010C
Chromium		13.9	0.56	0.056	mg/kg	SW846 6010C
Copper		1.5	1.4	0.056	mg/kg	SW846 6010C
Lead		8.0	1.1	0.089	mg/kg	SW846 6010C
Mercury		0.043 J	0.048	0.0048	mg/kg	SW846 7471B
Nickel		1.6 J	2.2	0.028	mg/kg	SW846 6010C
Selenium		0.48 J	1.1	0.17	mg/kg	SW846 6010C
Zinc		2.1	1.1	0.17	mg/kg	SW846 6010C
FA12909-2	**DPT-46 (1.5-3.5)-A**					
Acetone [a]		26.6 J	39	12	ug/kg	SW846 8260B
Tetrachloroethylene [a]		7.7	3.9	0.97	ug/kg	SW846 8260B
Arsenic		0.69	0.46	0.091	mg/kg	SW846 6010C
Beryllium		0.087 J	0.23	0.023	mg/kg	SW846 6010C
Chromium		12.0	0.46	0.046	mg/kg	SW846 6010C
Copper		1.7	1.1	0.046	mg/kg	SW846 6010C
Lead		8.4	0.91	0.073	mg/kg	SW846 6010C
Mercury		0.053	0.049	0.0049	mg/kg	SW846 7471B
Nickel		1.6 J	1.8	0.023	mg/kg	SW846 6010C
Selenium		0.42 J	0.91	0.14	mg/kg	SW846 6010C
Zinc		2.2	0.91	0.14	mg/kg	SW846 6010C
Chromium, Hexavalent		1.8 J	2.5	1.1	mg/kg	SW846 3060A/7196A

(a) Pre-weighed vials were altered in the field; sample weights are estimated.

Southeast ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: DPT-46 (1.5-3.5)
Lab Sample ID: FA12909-1 **Date Sampled:** 02/28/14
Matrix: SO - Soil **Date Received:** 03/01/14
Method: SW846 8260B **Percent Solids:** 82.8
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Y13117.D	1	03/03/14	EP	n/a	n/a	VY586
Run #2							

	Initial Weight
Run #1	9.56 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	10.4	32	9.5	ug/kg	J
71-43-2	Benzene	ND	3.2	0.63	ug/kg	
75-27-4	Bromodichloromethane	ND	3.2	0.63	ug/kg	
75-25-2	Bromoform	ND	3.2	0.68	ug/kg	
108-90-7	Chlorobenzene	ND	3.2	0.63	ug/kg	
75-00-3	Chloroethane	ND	3.2	1.4	ug/kg	
67-66-3	Chloroform	ND	3.2	0.71	ug/kg	
75-15-0	Carbon disulfide	ND	3.2	0.63	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.2	0.88	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.2	0.63	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.2	0.63	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.2	0.63	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.2	0.63	ug/kg	
124-48-1	Dibromochloromethane	ND	3.2	0.63	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.2	0.63	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.2	0.63	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.2	0.85	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.2	0.63	ug/kg	
100-41-4	Ethylbenzene	ND	3.2	0.63	ug/kg	
591-78-6	2-Hexanone	ND	16	3.1	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	16	3.2	ug/kg	
74-83-9	Methyl bromide	ND	3.2	1.2	ug/kg	
74-87-3	Methyl chloride	ND	3.2	1.3	ug/kg	
75-09-2	Methylene chloride	ND	6.3	2.5	ug/kg	
78-93-3	Methyl ethyl ketone	ND	16	4.7	ug/kg	
100-42-5	Styrene	ND	3.2	0.63	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.2	0.63	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.2	0.89	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.2	1.0	ug/kg	
127-18-4	Tetrachloroethylene	4.2	3.2	0.80	ug/kg	
108-88-3	Toluene	ND	3.2	0.63	ug/kg	
79-01-6	Trichloroethylene	ND	3.2	0.64	ug/kg	

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:	DPT-46 (1.5-3.5)		
Lab Sample ID:	FA12909-1	**Date Sampled:**	02/28/14
Matrix:	SO - Soil	**Date Received:**	03/01/14
Method:	SW846 8260B	**Percent Solids:**	82.8
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.2	0.64	ug/kg	
1330-20-7	Xylene (total)	ND	9.5	1.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		75-124%
2037-26-5	Toluene-D8	91%		75-126%
460-00-4	4-Bromofluorobenzene	99%		71-133%
17060-07-0	1,2-Dichloroethane-D4	97%		72-135%

(a) Pre-weighed vials were altered in the field; sample weights are estimated.

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: DPT-46 (1.5-3.5)
Lab Sample ID: FA12909-1 **Date Sampled:** 02/28/14
Matrix: SO - Soil **Date Received:** 03/01/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 82.8
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T011851.D	1	03/06/14	FS	03/04/14	OP50690	ST562
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	1000	200	ug/kg	
95-57-8	2-Chlorophenol	ND	200	20	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	200	20	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	200	21	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	ND	200	22	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1000	200	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	400	80	ug/kg	
95-48-7	2-Methylphenol	ND	200	20	ug/kg	
	3&4-Methylphenol	ND	200	40	ug/kg	
88-75-5	2-Nitrophenol	ND	200	20	ug/kg	
100-02-7	4-Nitrophenol	ND	1000	160	ug/kg	
87-86-5	Pentachlorophenol	ND	1000	160	ug/kg	
108-95-2	Phenol	ND	200	20	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	200	26	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	200	20	ug/kg	
83-32-9	Acenaphthene	ND	200	25	ug/kg	
208-96-8	Acenaphthylene	ND	200	20	ug/kg	
120-12-7	Anthracene	ND	200	20	ug/kg	
56-55-3	Benzo(a)anthracene [a]	ND	200	20	ug/kg	
50-32-8	Benzo(a)pyrene [a]	ND	200	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	200	20	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	200	20	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	200	22	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	200	20	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	200	40	ug/kg	
100-51-6	Benzyl Alcohol	ND	200	20	ug/kg	
91-58-7	2-Chloronaphthalene	ND	200	24	ug/kg	
106-47-8	4-Chloroaniline	ND	200	20	ug/kg	
86-74-8	Carbazole	ND	200	20	ug/kg	
218-01-9	Chrysene [a]	ND	200	20	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	200	20	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	200	20	ug/kg	

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: DPT-46 (1.5-3.5)
Lab Sample ID: FA12909-1 **Date Sampled:** 02/28/14
Matrix: SO - Soil **Date Received:** 03/01/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 82.8
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	200	21	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	200	30	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	200	20	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	200	20	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	200	20	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	200	23	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	200	22	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	200	20	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	200	20	ug/kg	
132-64-9	Dibenzofuran	ND	200	20	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	400	40	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	200	40	ug/kg	
84-66-2	Diethyl phthalate	ND	400	40	ug/kg	
131-11-3	Dimethyl phthalate	ND	200	40	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	400	40	ug/kg	
206-44-0	Fluoranthene	ND	200	20	ug/kg	
86-73-7	Fluorene	ND	200	20	ug/kg	
118-74-1	Hexachlorobenzene	ND	200	20	ug/kg	
87-68-3	Hexachlorobutadiene	ND	200	20	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	200	20	ug/kg	
67-72-1	Hexachloroethane	ND	200	20	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	200	20	ug/kg	
78-59-1	Isophorone [a]	ND	200	20	ug/kg	
91-57-6	2-Methylnaphthalene	ND	200	20	ug/kg	
88-74-4	2-Nitroaniline	ND	200	40	ug/kg	
99-09-2	3-Nitroaniline	ND	200	40	ug/kg	
100-01-6	4-Nitroaniline	ND	200	40	ug/kg	
91-20-3	Naphthalene	ND	200	20	ug/kg	
98-95-3	Nitrobenzene	ND	200	20	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	200	20	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	200	20	ug/kg	
85-01-8	Phenanthrene	ND	200	20	ug/kg	
129-00-0	Pyrene	ND	200	20	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	200	20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	78%		40-102%
4165-62-2	Phenol-d5	80%		41-100%
118-79-6	2,4,6-Tribromophenol	80%		42-108%

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:	DPT-46 (1.5-3.5)		
Lab Sample ID:	FA12909-1	**Date Sampled:**	02/28/14
Matrix:	SO - Soil	**Date Received:**	03/01/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	82.8
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	73%		40-105%
321-60-8	2-Fluorobiphenyl	75%		43-107%
1718-51-0	Terphenyl-d14	98%		45-119%

(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: DPT-46 (1.5-3.5)
Lab Sample ID: FA12909-1
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 82.8

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.11 U	1.1	0.11	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Arsenic	0.90	0.56	0.11	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.084 J	0.28	0.028	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Cadmium	0.028 U	0.22	0.028	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Chromium	13.9	0.56	0.056	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Copper	1.5	1.4	0.056	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Lead	8.0	1.1	0.089	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Mercury	0.043 J	0.048	0.0048	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [1]	SW846 7471B [4]
Nickel	1.6 J	2.2	0.028	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Selenium	0.48 J	1.1	0.17	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Silver	0.036 U	0.56	0.036	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Thallium	0.084 U	0.56	0.084	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Zinc	2.1	1.1	0.17	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA11440
(2) Instrument QC Batch: MA11442
(3) Prep QC Batch: MP26915
(4) Prep QC Batch: MP26919

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: DPT-46 (1.5-3.5)
Lab Sample ID: FA12909-1
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 82.8

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	1.0 U	2.4	1.0	mg/kg	1	03/14/14 10:45	FN	SW846 3060A/7196A
Solids, Percent	82.8			%	1	03/04/14 13:45	LE	SM19 2540G

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: DPT-46 (1.5-3.5)-A
Lab Sample ID: FA12909-2 **Date Sampled:** 02/28/14
Matrix: SO - Soil **Date Received:** 03/01/14
Method: SW846 8260B **Percent Solids:** 79.5
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Y13118.D	1	03/03/14	EP	n/a	n/a	VY586
Run #2							

	Initial Weight
Run #1	8.13 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	26.6	39	12	ug/kg	J
71-43-2	Benzene	ND	3.9	0.77	ug/kg	
75-27-4	Bromodichloromethane	ND	3.9	0.77	ug/kg	
75-25-2	Bromoform	ND	3.9	0.84	ug/kg	
108-90-7	Chlorobenzene	ND	3.9	0.77	ug/kg	
75-00-3	Chloroethane	ND	3.9	1.7	ug/kg	
67-66-3	Chloroform	ND	3.9	0.87	ug/kg	
75-15-0	Carbon disulfide	ND	3.9	0.77	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.9	1.1	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.9	0.77	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.9	0.77	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.9	0.77	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.9	0.77	ug/kg	
124-48-1	Dibromochloromethane	ND	3.9	0.77	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.9	0.77	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.9	0.77	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.9	1.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.9	0.77	ug/kg	
100-41-4	Ethylbenzene	ND	3.9	0.77	ug/kg	
591-78-6	2-Hexanone	ND	19	3.8	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	19	3.9	ug/kg	
74-83-9	Methyl bromide	ND	3.9	1.4	ug/kg	
74-87-3	Methyl chloride	ND	3.9	1.5	ug/kg	
75-09-2	Methylene chloride	ND	7.7	3.1	ug/kg	
78-93-3	Methyl ethyl ketone	ND	19	5.8	ug/kg	
100-42-5	Styrene	ND	3.9	0.77	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.9	0.77	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.9	1.1	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.9	1.2	ug/kg	
127-18-4	Tetrachloroethylene	7.7	3.9	0.97	ug/kg	
108-88-3	Toluene	ND	3.9	0.77	ug/kg	
79-01-6	Trichloroethylene	ND	3.9	0.79	ug/kg	

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:	DPT-46 (1.5-3.5)-A		
Lab Sample ID:	FA12909-2	**Date Sampled:**	02/28/14
Matrix:	SO - Soil	**Date Received:**	03/01/14
Method:	SW846 8260B	**Percent Solids:**	79.5
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.9	0.79	ug/kg	
1330-20-7	Xylene (total)	ND	12	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		75-124%
2037-26-5	Toluene-D8	93%		75-126%
460-00-4	4-Bromofluorobenzene	101%		71-133%
17060-07-0	1,2-Dichloroethane-D4	100%		72-135%

(a) Pre-weighed vials were altered in the field; sample weights are estimated.

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: DPT-46 (1.5-3.5)-A
Lab Sample ID: FA12909-2 **Date Sampled:** 02/28/14
Matrix: SO - Soil **Date Received:** 03/01/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 79.5
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T011852.D	1	03/06/14	FS	03/04/14	OP50690	ST562
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	1000	210	ug/kg	
95-57-8	2-Chlorophenol	ND	210	21	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	210	21	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	210	21	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	ND	210	23	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1000	210	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	410	82	ug/kg	
95-48-7	2-Methylphenol	ND	210	21	ug/kg	
	3&4-Methylphenol	ND	210	41	ug/kg	
88-75-5	2-Nitrophenol	ND	210	21	ug/kg	
100-02-7	4-Nitrophenol	ND	1000	160	ug/kg	
87-86-5	Pentachlorophenol	ND	1000	160	ug/kg	
108-95-2	Phenol	ND	210	21	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	210	27	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	210	21	ug/kg	
83-32-9	Acenaphthene	ND	210	26	ug/kg	
208-96-8	Acenaphthylene	ND	210	21	ug/kg	
120-12-7	Anthracene	ND	210	21	ug/kg	
56-55-3	Benzo(a)anthracene [a]	ND	210	21	ug/kg	
50-32-8	Benzo(a)pyrene [a]	ND	210	21	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	210	21	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	210	21	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	210	22	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	210	21	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	210	41	ug/kg	
100-51-6	Benzyl Alcohol	ND	210	21	ug/kg	
91-58-7	2-Chloronaphthalene	ND	210	25	ug/kg	
106-47-8	4-Chloroaniline	ND	210	21	ug/kg	
86-74-8	Carbazole	ND	210	21	ug/kg	
218-01-9	Chrysene [a]	ND	210	21	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	210	21	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	210	21	ug/kg	

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: DPT-46 (1.5-3.5)-A
Lab Sample ID: FA12909-2 **Date Sampled:** 02/28/14
Matrix: SO - Soil **Date Received:** 03/01/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 79.5
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	210	21	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	210	31	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	210	21	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	210	21	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	210	21	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	210	23	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	210	23	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	210	21	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	210	21	ug/kg	
132-64-9	Dibenzofuran	ND	210	21	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	410	41	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	210	41	ug/kg	
84-66-2	Diethyl phthalate	ND	410	41	ug/kg	
131-11-3	Dimethyl phthalate	ND	210	41	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	410	41	ug/kg	
206-44-0	Fluoranthene	ND	210	21	ug/kg	
86-73-7	Fluorene	ND	210	21	ug/kg	
118-74-1	Hexachlorobenzene	ND	210	21	ug/kg	
87-68-3	Hexachlorobutadiene	ND	210	21	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	210	21	ug/kg	
67-72-1	Hexachloroethane	ND	210	21	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	210	21	ug/kg	
78-59-1	Isophorone [a]	ND	210	21	ug/kg	
91-57-6	2-Methylnaphthalene	ND	210	21	ug/kg	
88-74-4	2-Nitroaniline	ND	210	41	ug/kg	
99-09-2	3-Nitroaniline	ND	210	41	ug/kg	
100-01-6	4-Nitroaniline	ND	210	41	ug/kg	
91-20-3	Naphthalene	ND	210	21	ug/kg	
98-95-3	Nitrobenzene	ND	210	21	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	210	21	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	210	21	ug/kg	
85-01-8	Phenanthrene	ND	210	21	ug/kg	
129-00-0	Pyrene	ND	210	21	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	210	21	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	87%		40-102%
4165-62-2	Phenol-d5	89%		41-100%
118-79-6	2,4,6-Tribromophenol	90%		42-108%

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:	DPT-46 (1.5-3.5)-A		
Lab Sample ID:	FA12909-2	**Date Sampled:**	02/28/14
Matrix:	SO - Soil	**Date Received:**	03/01/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	79.5
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	91%		40-105%
321-60-8	2-Fluorobiphenyl	85%		43-107%
1718-51-0	Terphenyl-d14	116%		45-119%

(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: DPT-46 (1.5-3.5)-A
Lab Sample ID: FA12909-2
Matrix: SO - Soil
Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 79.5
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.091 U	0.91	0.091	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Arsenic	0.69	0.46	0.091	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.087 J	0.23	0.023	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Cadmium	0.023 U	0.18	0.023	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Chromium	12.0	0.46	0.046	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Copper	1.7	1.1	0.046	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Lead	8.4	0.91	0.073	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Mercury	0.053	0.049	0.0049	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [1]	SW846 7471B [4]
Nickel	1.6 J	1.8	0.023	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Selenium	0.42 J	0.91	0.14	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Silver	0.030 U	0.46	0.030	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Thallium	0.068 U	0.46	0.068	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]
Zinc	2.2	0.91	0.14	mg/kg	1	03/06/14	03/07/14	LM	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA11440
(2) Instrument QC Batch: MA11442
(3) Prep QC Batch: MP26915
(4) Prep QC Batch: MP26919

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: DPT-46 (1.5-3.5)-A
Lab Sample ID: FA12909-2
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 79.5

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	1.8 J	2.5	1.1	mg/kg	1	03/14/14 10:45	FN	SW846 3060A/7196A
Solids, Percent	79.5			%	1	03/04/14 13:45	LE	SM19 2540G

RL = Reporting Limit
MDL = Method Detection Limit

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

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA12909

AECOM

Chain of Custody and Analytical Request

Page: 1 of 1
Project Number: 60369713.603.145
Chain of Custody Number [1]: 022814-02
LIMS Number:

Project Name / Location: UTC Delaware Spray Technologies SRL Bamberg SC
Client Name: UTC
Collected By: C. Alexander - SR Morgan
Project Manager: Walker Gerald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.)	Sample Analysis Requested: TCL VOCs (8260B)	TCL SVOCs (8270D)	Priority Pollutant Metals (6020A / 7470A)	Hex Chrom (7196A)	COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
1 DPT-46 (1.5-3.5)	28-FEB-2014	1240	X	X		1.5-3.5ft	X	X	X	X	S	1
2 DPT-46 (1.5-3.5) Lab	↓	1240	X	X		1.5, 3.5ft	X	X	X	X	S	1
Temp Blank												

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	[signature]	3/2/14	16:15	[signature]	03/01/14	10:00
2.	RK	03/1/14	16:00			
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:
Method of Shipment: FedEx
Analytical Lab: Accutest
Lab Recipient:

Shipped: X
Airbill #: 6004 8047 3475 6279
Location: Orlando FL
Date: Time:

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

VOCs are grab, all else is composite

2.6

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

5.1 5

FA12909: Chain of Custody
Page 1 of 3

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA12909 CLIENT: UTC PROJECT: Walker Gerald

DATE/TIME RECEIVED: 03/01/14 10:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

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

AIRBILL NUMBERS: 8047 3475 6279

COOLER INFORMATION

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

TRIP BLANK INFORMATION

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

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 31 CORR. FACTOR -04
- [ ] OBSERVED TEMPS: 3.0
- [ ] CORRECTED TEMPS: 2.4

SAMPLE INFORMATION

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

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS: Soil Vial Have Extra labels on them

TECHNICIAN SIGNATURE/DATE 03/01/14 REVIEWER SIGNATURE/DATE 03-01-14

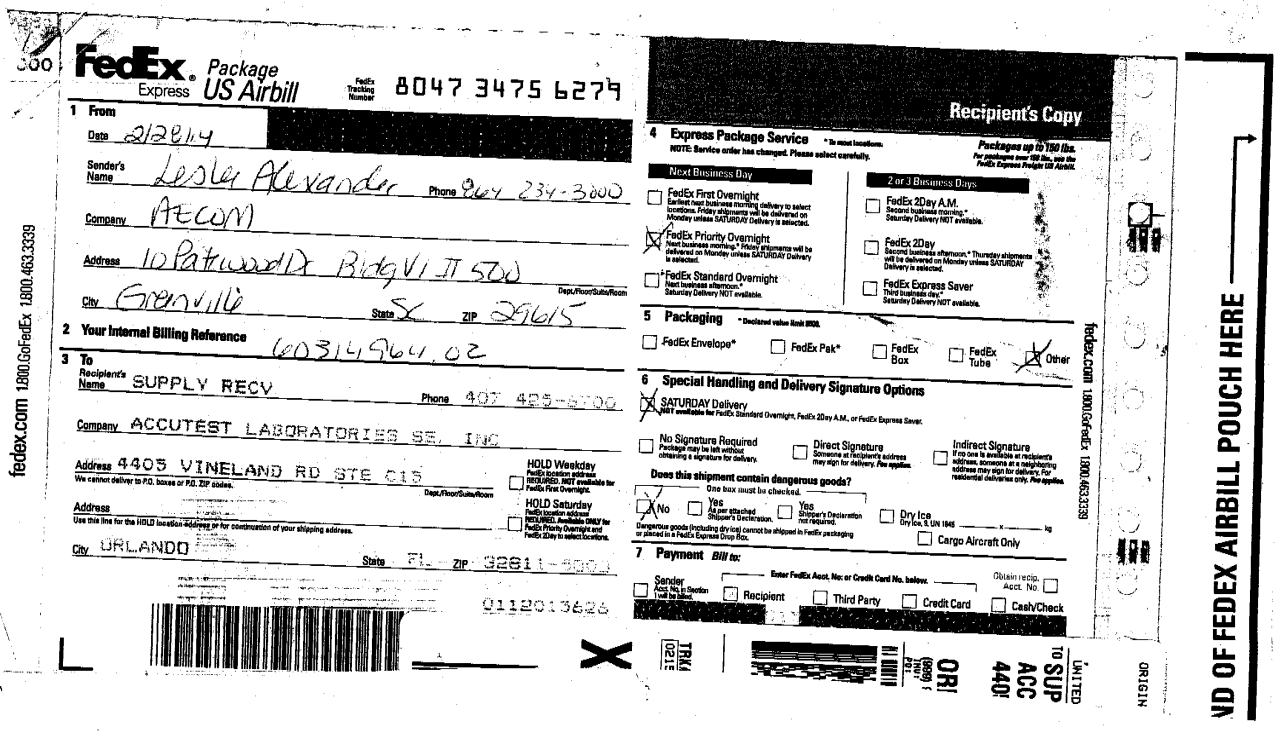
NF 12/10

receipt confirmation 122910.xls

5.1 5

FA12909: Chain of Custody

Page 2 of 3



FedEx Express Package US Airbill
FedEx Tracking Number 8047 3475 6279

1 From
Date 2/28/14
Sender's Name Leslie Alexander Phone 864 234-3000
Company AECOM
Address 10 Patewood Dr Bldg VI Ste 500
City Greenville State SC ZIP 29615

2 Your Internal Billing Reference 603149641.02

3 To
Recipient's Name SUPPLY RECV Phone 407 425-6700
Company ACCUTEST LABORATORIES SE, INC
Address 4405 VINELAND RD STE C15
We cannot deliver to P.O. boxes or P.O. ZIP codes.
Dept./Floor/Suite/Room
HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.
HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.
Address
Use this line for the HOLD location address or for continuation of your shipping address.
City ORLANDO State FL ZIP 32811-5001

0112013626

Recipient's Copy

4 Express Package Service * To most locations.
NOTE: Service order has changed. Please select carefully.
Packages up to 150 lbs.
For packages over 150 lbs., use the FedEx Express Freight Service.

Next Business Day
- FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days
- FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.
FedEx Envelope* | FedEx Pak* | FedEx Box | FedEx Tube | [X] Other

6 Special Handling and Delivery Signature Options
[X] SATURDAY Delivery NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.
No Signature Required — Package may be left without obtaining a signature for delivery.
Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?
One box must be checked.
[X] No | Yes As per attached Shipper's Declaration | Yes Shipper's Declaration not required | Dry Ice Dry Ice, 9, UN 1845 ____ x ____ kg
Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.
Cargo Aircraft Only

7 Payment Bill to:
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FA12909: Chain of Custody
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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: FA12909
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY586-MB	Y13113.D	1	03/03/14	EP	n/a	n/a	VY586

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

FA12909-1, FA12909-2

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	15	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.1	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.3	ug/kg	
67-66-3	Chloroform	ND	5.0	1.1	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	1.0	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.4	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.3	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	
591-78-6	2-Hexanone	ND	25	4.9	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	5.0	ug/kg	
74-83-9	Methyl bromide	ND	5.0	1.9	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.0	ug/kg	
75-09-2	Methylene chloride	ND	10	4.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.4	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.6	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/kg	
108-88-3	Toluene	ND	5.0	1.0	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.7	ug/kg	

Method Blank Summary

Job Number: FA12909
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY586-MB	Y13113.D	1	03/03/14	EP	n/a	n/a	VY586

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

FA12909-1, FA12909-2

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	91%	75-124%
2037-26-5	Toluene-D8	92%	75-126%
460-00-4	4-Bromofluorobenzene	100%	71-133%
17060-07-0	1,2-Dichloroethane-D4	91%	72-135%

Blank Spike Summary

Job Number: FA12909
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY586-BS	Y13114.D	1	03/03/14	EP	n/a	n/a	VY586

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

FA12909-1, FA12909-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	270	108	61-152
71-43-2	Benzene	50	48.9	98	76-126
75-27-4	Bromodichloromethane	50	49.7	99	74-130
75-25-2	Bromoform	50	54.1	108	76-127
108-90-7	Chlorobenzene	50	49.4	99	81-129
75-00-3	Chloroethane	50	46.6	93	68-133
67-66-3	Chloroform	50	49.6	99	72-123
75-15-0	Carbon disulfide	50	45.6	91	72-122
56-23-5	Carbon tetrachloride	50	51.6	103	78-133
75-34-3	1,1-Dichloroethane	50	48.9	98	73-125
75-35-4	1,1-Dichloroethylene	50	44.7	89	81-136
107-06-2	1,2-Dichloroethane	50	49.7	99	74-128
78-87-5	1,2-Dichloropropane	50	50.1	100	74-125
124-48-1	Dibromochloromethane	50	52.0	104	76-127
156-59-2	cis-1,2-Dichloroethylene	50	51.2	102	74-126
10061-01-5	cis-1,3-Dichloropropene	50	51.6	103	80-123
156-60-5	trans-1,2-Dichloroethylene	50	47.8	96	70-127
10061-02-6	trans-1,3-Dichloropropene	50	51.4	103	75-131
100-41-4	Ethylbenzene	50	49.0	98	77-123
591-78-6	2-Hexanone	250	268	107	72-133
108-10-1	4-Methyl-2-pentanone	250	260	104	76-132
74-83-9	Methyl bromide	50	51.0	102	65-139
74-87-3	Methyl chloride	50	54.7	109	71-144
75-09-2	Methylene chloride	50	45.3	91	74-137
78-93-3	Methyl ethyl ketone	250	275	110	75-137
100-42-5	Styrene	50	51.2	102	78-125
71-55-6	1,1,1-Trichloroethane	50	47.2	94	70-129
79-34-5	1,1,2,2-Tetrachloroethane	50	50.4	101	71-126
79-00-5	1,1,2-Trichloroethane	50	51.7	103	74-124
127-18-4	Tetrachloroethylene	50	47.8	96	79-130
108-88-3	Toluene	50	48.9	98	76-124
79-01-6	Trichloroethylene	50	47.9	96	75-128
75-01-4	Vinyl chloride	50	51.0	102	76-141
1330-20-7	Xylene (total)	150	149	99	80-129

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12909
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY586-BS	Y13114.D	1	03/03/14	EP	n/a	n/a	VY586

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

FA12909-1, FA12909-2

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	93%	75-124%
2037-26-5	Toluene-D8	94%	75-126%
460-00-4	4-Bromofluorobenzene	96%	71-133%
17060-07-0	1,2-Dichloroethane-D4	91%	72-135%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12909
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12909-2MS	Y13121.D	1	03/03/14	EP	n/a	n/a	VY586
FA12909-2MSD	Y13122.D	1	03/03/14	EP	n/a	n/a	VY586
FA12909-2 [a]	Y13118.D	1	03/03/14	EP	n/a	n/a	VY586

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

FA12909-1, FA12909-2

CAS No.	Compound	FA12909-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	26.6	J	373	326	80	337	83	3	61-152/27
71-43-2	Benzene	ND		74.5	73.6	99	69.9	94	5	76-126/26
75-27-4	Bromodichloromethane	ND		74.5	76.0	102	73.3	98	4	74-130/25
75-25-2	Bromoform	ND		74.5	76.2	102	72.7	98	5	76-127/26
108-90-7	Chlorobenzene	ND		74.5	79.9	107	75.0	101	6	81-129/29
75-00-3	Chloroethane	ND		74.5	65.8	88	55.6	75	17	68-133/29
67-66-3	Chloroform	ND		74.5	75.0	101	71.4	96	5	72-123/26
75-15-0	Carbon disulfide	ND		74.5	60.7	81	56.6	76	7	72-122/29
56-23-5	Carbon tetrachloride	ND		74.5	77.0	103	72.1	97	7	78-133/29
75-34-3	1,1-Dichloroethane	ND		74.5	72.5	97	70.0	94	4	73-125/27
75-35-4	1,1-Dichloroethylene	ND		74.5	68.4	92	62.3	84	9	81-136/28
107-06-2	1,2-Dichloroethane	ND		74.5	75.0	101	73.1	98	3	74-128/23
78-87-5	1,2-Dichloropropane	ND		74.5	76.6	103	73.5	99	4	74-125/25
124-48-1	Dibromochloromethane	ND		74.5	78.9	106	75.2	101	5	76-127/27
156-59-2	cis-1,2-Dichloroethylene	ND		74.5	75.5	101	71.3	96	6	74-126/26
10061-01-5	cis-1,3-Dichloropropene	ND		74.5	75.6	101	72.5	97	4	80-123/26
156-60-5	trans-1,2-Dichloroethylene	ND		74.5	71.0	95	67.3	90	5	70-127/27
10061-02-6	trans-1,3-Dichloropropene	ND		74.5	82.1	110	78.8	106	4	75-131/28
100-41-4	Ethylbenzene	ND		74.5	74.0	99	69.3	93	7	77-123/31
591-78-6	2-Hexanone	ND		373	331	89	336	90	1	72-133/26
108-10-1	4-Methyl-2-pentanone	ND		373	344	92	350	94	2	76-132/26
74-83-9	Methyl bromide	ND		74.5	77.7	104	69.2	93	12	65-139/31
74-87-3	Methyl chloride	ND		74.5	79.7	107	74.5	100	7	71-144/27
75-09-2	Methylene chloride	ND		74.5	69.1	93	71.8	96	4	74-137/28
78-93-3	Methyl ethyl ketone	ND		373	343	92	358	96	4	75-137/25
100-42-5	Styrene	ND		74.5	75.8	102	71.7	96	6	78-125/30
71-55-6	1,1,1-Trichloroethane	ND		74.5	71.2	96	68.6	92	4	70-129/27
79-34-5	1,1,2,2-Tetrachloroethane	ND		74.5	71.9	96	71.7	96	0	71-126/30
79-00-5	1,1,2-Trichloroethane	ND		74.5	75.2	101	72.4	97	4	74-124/28
127-18-4	Tetrachloroethylene	7.7		74.5	71.8	86	66.6	79	8	79-130/31
108-88-3	Toluene	ND		74.5	74.6	100	70.0	94	6	76-124/30
79-01-6	Trichloroethylene	ND		74.5	72.0	97	67.7	91	6	75-128/27
75-01-4	Vinyl chloride	ND		74.5	76.0	102	70.4	94	8	76-141/27
1330-20-7	Xylene (total)	ND		224	235	105	218	98	8	80-129/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12909
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12909-2MS	Y13121.D	1	03/03/14	EP	n/a	n/a	VY586
FA12909-2MSD	Y13122.D	1	03/03/14	EP	n/a	n/a	VY586
FA12909-2 [a]	Y13118.D	1	03/03/14	EP	n/a	n/a	VY586

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

FA12909-1, FA12909-2

CAS No.	Surrogate Recoveries	MS	MSD	FA12909-2	Limits
1868-53-7	Dibromofluoromethane	93%	94%	93%	75-124%
2037-26-5	Toluene-D8	94%	94%	93%	75-126%
460-00-4	4-Bromofluorobenzene	95%	98%	101%	71-133%
17060-07-0	1,2-Dichloroethane-D4	88%	91%	100%	72-135%

(a) Pre-weighed vials were altered in the field; sample weights are estimated.

* = 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: FA12909
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-MB	T011838.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12909-1, FA12909-2

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	830	170	ug/kg	
95-57-8	2-Chlorophenol	ND	170	17	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	17	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	17	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	18	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	830	170	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	67	ug/kg	
95-48-7	2-Methylphenol	ND	170	17	ug/kg	
	3&4-Methylphenol	ND	170	33	ug/kg	
88-75-5	2-Nitrophenol	ND	170	17	ug/kg	
100-02-7	4-Nitrophenol	ND	830	130	ug/kg	
87-86-5	Pentachlorophenol	ND	830	130	ug/kg	
108-95-2	Phenol	ND	170	17	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	21	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	17	ug/kg	
83-32-9	Acenaphthene	ND	170	21	ug/kg	
208-96-8	Acenaphthylene	ND	170	17	ug/kg	
120-12-7	Anthracene	ND	170	17	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	18	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	17	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	17	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	20	ug/kg	
106-47-8	4-Chloroaniline	ND	170	17	ug/kg	
86-74-8	Carbazole	ND	170	17	ug/kg	
218-01-9	Chrysene	ND	170	17	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	17	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	17	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	17	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	25	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	170	17	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	17	ug/kg	

Method Blank Summary

Job Number: FA12909
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-MB	T011838.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12909-1, FA12909-2

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	170	17	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	19	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	18	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	170	17	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	17	ug/kg	
132-64-9	Dibenzofuran	ND	170	17	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	330	33	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	170	33	ug/kg	
84-66-2	Diethyl phthalate	ND	330	33	ug/kg	
131-11-3	Dimethyl phthalate	ND	170	33	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	33	ug/kg	
206-44-0	Fluoranthene	ND	170	17	ug/kg	
86-73-7	Fluorene	ND	170	17	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	17	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	17	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	17	ug/kg	
67-72-1	Hexachloroethane	ND	170	17	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	17	ug/kg	
78-59-1	Isophorone	ND	170	17	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	17	ug/kg	
88-74-4	2-Nitroaniline	ND	170	33	ug/kg	
99-09-2	3-Nitroaniline	ND	170	33	ug/kg	
100-01-6	4-Nitroaniline	ND	170	33	ug/kg	
91-20-3	Naphthalene	ND	170	17	ug/kg	
98-95-3	Nitrobenzene	ND	170	17	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	17	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	17	ug/kg	
85-01-8	Phenanthrene	ND	170	17	ug/kg	
129-00-0	Pyrene	ND	170	17	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	170	17	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	98%	40-102%
4165-62-2	Phenol-d5	98%	41-100%

Method Blank Summary

Job Number: FA12909
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-MB	T011838.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12909-1, FA12909-2

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	94%	42-108%
4165-60-0	Nitrobenzene-d5	102%	40-105%
321-60-8	2-Fluorobiphenyl	98%	43-107%
1718-51-0	Terphenyl-d14	124%* [a]	45-119%

(a) Outside control limits.

Blank Spike Summary

Job Number: FA12909
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-BS	T011837.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12909-1, FA12909-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
65-85-0	Benzoic Acid	3330	3560	107	36-118
95-57-8	2-Chlorophenol	1670	1590	95	48-104
59-50-7	4-Chloro-3-methyl phenol	1670	1710	103	52-108
120-83-2	2,4-Dichlorophenol	1670	1680	101	51-105
105-67-9	2,4-Dimethylphenol	1670	1780	107*	43-96
51-28-5	2,4-Dinitrophenol	3330	3860	116	40-119
534-52-1	4,6-Dinitro-o-cresol	3330	3300	99	64-121
95-48-7	2-Methylphenol	1670	1590	95	46-107
	3&4-Methylphenol	3330	3260	98	44-111
88-75-5	2-Nitrophenol	1670	1660	100	49-104
100-02-7	4-Nitrophenol	3330	3450	104	56-116
87-86-5	Pentachlorophenol	3330	3700	111	61-114
108-95-2	Phenol	1670	1610	97	45-110
95-95-4	2,4,5-Trichlorophenol	1670	1670	100	58-112
88-06-2	2,4,6-Trichlorophenol	1670	1730	104	56-109
83-32-9	Acenaphthene	1670	1700	102	56-109
208-96-8	Acenaphthylene	1670	1700	102	56-106
120-12-7	Anthracene	1670	1720	103	61-110
56-55-3	Benzo(a)anthracene	1670	1880	113*	66-111
50-32-8	Benzo(a)pyrene	1670	1850	111*	59-104
205-99-2	Benzo(b)fluoranthene	1670	1810	109	67-113
191-24-2	Benzo(g,h,i)perylene	1670	1760	106	67-113
207-08-9	Benzo(k)fluoranthene	1670	1770	106	67-114
101-55-3	4-Bromophenyl phenyl ether	1670	1390	83	62-110
85-68-7	Butyl benzyl phthalate	1670	1720	103	65-113
100-51-6	Benzyl Alcohol	1670	1700	102	53-108
91-58-7	2-Chloronaphthalene	1670	1620	97	53-106
106-47-8	4-Chloroaniline	1670	1530	92	30-115
86-74-8	Carbazole	1670	1780	107	60-111
218-01-9	Chrysene	1670	1900	114*	65-112
111-91-1	bis(2-Chloroethoxy)methane	1670	1630	98	48-105
111-44-4	bis(2-Chloroethyl)ether	1670	1450	87	46-103
108-60-1	bis(2-Chloroisopropyl)ether	1670	1490	89	40-110
7005-72-3	4-Chlorophenyl phenyl ether	1670	1640	98	58-106
95-50-1	1,2-Dichlorobenzene	1670	1310	79	44-102
541-73-1	1,3-Dichlorobenzene	1670	1300	78	42-100

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12909
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-BS	T011837.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12909-1, FA12909-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
106-46-7	1,4-Dichlorobenzene	1670	1440	86	40-106
121-14-2	2,4-Dinitrotoluene	1670	1710	103	59-109
606-20-2	2,6-Dinitrotoluene	1670	1670	100	61-107
91-94-1	3,3'-Dichlorobenzidine	1670	1620	97	36-114
53-70-3	Dibenzo(a,h)anthracene	1670	1690	101	68-115
132-64-9	Dibenzofuran	1670	1650	99	57-108
84-74-2	Di-n-butyl phthalate	1670	1570	94	63-108
117-84-0	Di-n-octyl phthalate	1670	1620	97	64-119
84-66-2	Diethyl phthalate	1670	1590	95	61-109
131-11-3	Dimethyl phthalate	1670	1480	89	59-108
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1720	103	64-115
206-44-0	Fluoranthene	1670	1700	102	60-108
86-73-7	Fluorene	1670	1740	104	58-109
118-74-1	Hexachlorobenzene	1670	1650	99	59-111
87-68-3	Hexachlorobutadiene	1670	1530	92	41-108
77-47-4	Hexachlorocyclopentadiene	1670	1420	85	49-110
67-72-1	Hexachloroethane	1670	1350	81	40-105
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1770	106	66-116
78-59-1	Isophorone	1670	1560	94*	42-89
91-57-6	2-Methylnaphthalene	1670	1570	94	47-106
88-74-4	2-Nitroaniline	1670	1770	106	56-123
99-09-2	3-Nitroaniline	1670	1610	97	41-111
100-01-6	4-Nitroaniline	1670	1730	104	54-113
91-20-3	Naphthalene	1670	1580	95	44-104
98-95-3	Nitrobenzene	1670	1530	92	43-108
621-64-7	N-Nitroso-di-n-propylamine	1670	1660	100	48-108
86-30-6	N-Nitrosodiphenylamine	1670	1730	104	62-110
85-01-8	Phenanthrene	1670	1750	105	63-111
129-00-0	Pyrene	1670	1870	112	65-115
120-82-1	1,2,4-Trichlorobenzene	1670	1460	88	45-100

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	95%	40-102%
4165-62-2	Phenol-d5	103%* [a]	41-100%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12909
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-BS	T011837.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12909-1, FA12909-2

CAS No.	Surrogate Recoveries	BSP	Limits
118-79-6	2,4,6-Tribromophenol	101%	42-108%
4165-60-0	Nitrobenzene-d5	93%	40-105%
321-60-8	2-Fluorobiphenyl	97%	43-107%
1718-51-0	Terphenyl-d14	131%* [a]	45-119%

(a) Outside control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12909
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-MS	T011843.D	1	03/06/14	FS	03/04/14	OP50690	ST562
OP50690-MSD	T011844.D	1	03/06/14	FS	03/04/14	OP50690	ST562
FA12790-12R	T011842.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12909-1, FA12909-2

CAS No.	Compound	FA12790-12R ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		3680	3770	102	3820	104	1	36-118/41
95-57-8	2-Chlorophenol	ND		1840	1810	98	1780	97	2	48-104/26
59-50-7	4-Chloro-3-methyl phenol	ND		1840	1920	104	1920	105	0	52-108/21
120-83-2	2,4-Dichlorophenol	ND		1840	1890	103	1960	107*	4	51-105/27
105-67-9	2,4-Dimethylphenol	ND		1840	1990	108*	2050	112*	3	43-96/23
51-28-5	2,4-Dinitrophenol	ND		3680	3710	101	4120	112	10	40-119/32
534-52-1	4,6-Dinitro-o-cresol	ND		3680	3410	93	3510	96	3	64-121/29
95-48-7	2-Methylphenol	ND		1840	1740	95	1800	98	3	46-107/24
	3&4-Methylphenol	ND		3680	3720	101	3850	105	3	44-111/24
88-75-5	2-Nitrophenol	ND		1840	1920	104	1940	106*	1	49-104/27
100-02-7	4-Nitrophenol	ND		3680	4300	117*	4090	112	5	56-116/23
87-86-5	Pentachlorophenol	ND		3680	4090	111	4310	118*	5	61-114/23
108-95-2	Phenol	ND		1840	1810	98	1850	101	2	45-110/24
95-95-4	2,4,5-Trichlorophenol	ND		1840	1820	99	2030	111	11	58-112/22
88-06-2	2,4,6-Trichlorophenol	ND		1840	1950	106	2130	116*	9	56-109/25
83-32-9	Acenaphthene	ND		1840	1900	103	1950	106	3	56-109/23
208-96-8	Acenaphthylene	ND		1840	1970	107*	2080	113*	5	56-106/23
120-12-7	Anthracene	ND		1840	1820	99	1920	105	5	61-110/21
56-55-3	Benzo(a)anthracene	ND		1840	2030	110	2070	113*	2	66-111/23
50-32-8	Benzo(a)pyrene	ND		1840	1910	104	2000	109*	5	59-104/23
205-99-2	Benzo(b)fluoranthene	ND		1840	1950	106	1890	103	3	67-113/24
191-24-2	Benzo(g,h,i)perylene	ND		1840	1790	97	1950	106	9	67-113/21
207-08-9	Benzo(k)fluoranthene	ND		1840	1740	95	1890	103	8	67-114/22
101-55-3	4-Bromophenyl phenyl ether	ND		1840	1700	92	1660	91	2	62-110/21
85-68-7	Butyl benzyl phthalate	ND		1840	1870	102	1950	106	4	65-113/20
100-51-6	Benzyl Alcohol	ND		1840	1940	105	2020	110*	4	53-108/24
91-58-7	2-Chloronaphthalene	ND		1840	1760	96	1920	105	9	53-106/23
106-47-8	4-Chloroaniline	ND		1840	1660	90	1710	93	3	30-115/30
86-74-8	Carbazole	ND		1840	2020	110	2030	111	0	60-111/19
218-01-9	Chrysene	ND		1840	1980	108	2020	110	2	65-112/25
111-91-1	bis(2-Chloroethoxy)methane	ND		1840	1810	98	1810	99	0	48-105/24
111-44-4	bis(2-Chloroethyl)ether	ND		1840	1620	88	1670	91	3	46-103/27
108-60-1	bis(2-Chloroisopropyl)ether	ND		1840	1660	90	1800	98	8	40-110/25
7005-72-3	4-Chlorophenyl phenyl ether	ND		1840	1810	98	1840	100	2	58-106/21
95-50-1	1,2-Dichlorobenzene	ND		1840	1380	75	1490	81	8	44-102/28
541-73-1	1,3-Dichlorobenzene	ND		1840	1440	78	1460	80	1	42-100/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12909
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-MS	T011843.D	1	03/06/14	FS	03/04/14	OP50690	ST562
OP50690-MSD	T011844.D	1	03/06/14	FS	03/04/14	OP50690	ST562
FA12790-12R	T011842.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12909-1, FA12909-2

CAS No.	Compound	FA12790-12R ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
106-46-7	1,4-Dichlorobenzene	ND		1840	1590	86	1540	84	3	40-106/29
121-14-2	2,4-Dinitrotoluene	ND		1840	1800	98	1920	105	6	59-109/20
606-20-2	2,6-Dinitrotoluene	ND		1840	1880	102	2000	109*	6	61-107/22
91-94-1	3,3'-Dichlorobenzidine	ND		1840	1680	91	1630	89	3	36-114/28
53-70-3	Dibenzo(a,h)anthracene	ND		1840	1810	98	1920	105	6	68-115/23
132-64-9	Dibenzofuran	ND		1840	1840	100	1970	107	7	57-108/22
84-74-2	Di-n-butyl phthalate	ND		1840	1770	96	1790	98	1	63-108/19
117-84-0	Di-n-octyl phthalate	ND		1840	1770	96	1830	100	3	64-119/21
84-66-2	Diethyl phthalate	ND		1840	1710	93	1790	98	5	61-109/20
131-11-3	Dimethyl phthalate	ND		1840	1610	88	1770	97	9	59-108/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		1840	1890	103	1920	105	2	64-115/23
206-44-0	Fluoranthene	ND		1840	1910	104	1980	108	4	60-108/25
86-73-7	Fluorene	ND		1840	1960	107	1990	109	2	58-109/21
118-74-1	Hexachlorobenzene	ND		1840	1830	99	1790	98	2	59-111/21
87-68-3	Hexachlorobutadiene	ND		1840	1780	97	1790	98	1	41-108/27
77-47-4	Hexachlorocyclopentadiene	ND		1840	1290	70	1460	80	12	49-110/31
67-72-1	Hexachloroethane	ND		1840	1440	78	1520	83	5	40-105/32
193-39-5	Indeno(1,2,3-cd)pyrene	ND		1840	1800	98	2010	110	11	66-116/22
78-59-1	Isophorone	ND		1840	1800	98*	1870	102*	4	42-89/22
91-57-6	2-Methylnaphthalene	ND		1840	1730	94	1820	99	5	47-106/27
88-74-4	2-Nitroaniline	ND		1840	1940	105	2190	119	12	56-123/24
99-09-2	3-Nitroaniline	ND		1840	1860	101	1950	106	5	41-111/25
100-01-6	4-Nitroaniline	ND		1840	1930	105	1860	101	4	54-113/22
91-20-3	Naphthalene	ND		1840	1800	98	1800	98	0	44-104/27
98-95-3	Nitrobenzene	ND		1840	1710	93	1830	100	7	43-108/25
621-64-7	N-Nitroso-di-n-propylamine	ND		1840	1880	102	1990	109*	6	48-108/27
86-30-6	N-Nitrosodiphenylamine	ND		1840	1990	108	2030	111*	2	62-110/21
85-01-8	Phenanthrene	ND		1840	1910	104	1920	105	1	63-111/22
129-00-0	Pyrene	ND		1840	1830	99	1910	104	4	65-115/25
120-82-1	1,2,4-Trichlorobenzene	ND		1840	1590	86	1690	92	6	45-100/26

CAS No.	Surrogate Recoveries	MS	MSD	FA12790-12R	Limits
367-12-4	2-Fluorophenol	99%	104%*	83%	40-102%
4165-62-2	Phenol-d5	103%*	104%*	89%	41-100%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12909
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-MS	T011843.D	1	03/06/14	FS	03/04/14	OP50690	ST562
OP50690-MSD	T011844.D	1	03/06/14	FS	03/04/14	OP50690	ST562
FA12790-12R	T011842.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12909-1, FA12909-2

CAS No.	Surrogate Recoveries	MS	MSD	FA12790-12R	Limits
118-79-6	2,4,6-Tribromophenol	105%	114%*	93%	42-108%
4165-60-0	Nitrobenzene-d5	92%	102%	94%	40-105%
321-60-8	2-Fluorobiphenyl	94%	106%	81%	43-107%
1718-51-0	Terphenyl-d14	107%	119%	95%	45-119%

* = 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: FA12909
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26915
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/06/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.75	1.6		
Antimony	1.0	.1	.1	-0.030	<1.0
Arsenic	0.50	.1	.1	-0.12	<0.50
Barium	10	.05	.05		
Beryllium	0.25	.025	.025	-0.0050	<0.25
Cadmium	0.20	.025	.025	0.0	<0.20
Calcium	250	2.5	2.5		
Chromium	0.50	.05	.05	0.030	<0.50
Cobalt	2.5	.025	.025		
Copper	1.3	.05	.05	0.015	<1.3
Iron	15	.85	1.3		
Lead	1.0	.055	.08	-0.085	<1.0
Magnesium	250	2.5	2.5		
Manganese	0.75	.025	.025		
Molybdenum	2.5	.025	.03		
Nickel	2.0	.025	.025	-0.010	<2.0
Potassium	500	10	10		
Selenium	1.0	.12	.15	0.17	<1.0
Silver	0.50	.033	.033	-0.015	<0.50
Sodium	500	25	25		
Strontium	0.50	.02	.025		
Thallium	0.50	.075	.075	-0.25	<0.50
Tin	2.5	.035	.035		
Titanium	0.50	.045	.045		
Vanadium	2.5	.025	.025		
Zinc	1.0	.15	.15	0.25	<1.0

Associated samples MP26915: FA12909-1, FA12909-2

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: FA12909
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26915
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/06/14 03/06/14

Metal	FA12978-1 Original	DUP	RPD	QC Limits	FA12978-1 Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr								
Antimony	0.0	0.0	NC	0-20	0.0	20.3	22.2	91.3	80-120
Arsenic	0.0	0.0	NC	0-20	0.0	84.0	88.9	94.5	80-120
Barium	anr								
Beryllium	0.0	0.0	NC	0-20	0.0	2.3	2.22	103.5	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	2.1	2.22	94.5	80-120
Calcium									
Chromium	0.21	0.23	9.1	0-20	0.21	9.4	8.89	103.4	80-120
Cobalt									
Copper	0.13	0.17	26.7 (a)	0-20	0.13	11.3	11.1	100.5	80-120
Iron									
Lead	0.63	0.66	4.7	0-20	0.63	21.7	22.2	94.8	80-120
Magnesium									
Manganese									
Molybdenum									
Nickel	0.024	0.058	82.9 (a)	0-20	0.024	22.3	22.2	100.2	80-120
Potassium									
Selenium	0.13	0.17	26.7 (a)	0-20	0.13	85.2	88.9	95.7	80-120
Silver	0.0	0.0	NC	0-20	0.0	2.1	2.22	94.5	80-120
Sodium									
Strontium									
Thallium	0.0	0.0	NC	0-20	0.0	83.1	88.9	93.5	80-120
Tin									
Titanium									
Vanadium									
Zinc	0.23	0.30	26.4 (a)	0-20	0.23	22.2	22.2	98.8	80-120

Associated samples MP26915: FA12909-1, FA12909-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA12909
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26915
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/06/14

Metal	FA12978-1 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	0.0	20.2	21.8	92.5	0.5	20
Arsenic	0.0	83.9	87.4	96.0	0.1	20
Barium	anr					
Beryllium	0.0	2.3	2.18	105.3	0.0	20
Cadmium	0.0	2.1	2.18	96.1	0.0	20
Calcium						
Chromium	0.21	9.4	8.74	105.2	0.0	20
Cobalt						
Copper	0.13	11.3	10.9	102.3	0.0	20
Iron						
Lead	0.63	21.9	21.8	97.4	0.9	20
Magnesium						
Manganese						
Molybdenum						
Nickel	0.024	22.4	21.8	102.4	0.4	20
Potassium						
Selenium	0.13	84.3	87.4	96.3	1.1	20
Silver	0.0	2.1	2.18	96.1	0.0	20
Sodium						
Strontium						
Thallium	0.0	83.3	87.4	95.3	0.2	20
Tin						
Titanium						
Vanadium						
Zinc	0.23	22.3	21.8	101.0	0.4	20

Associated samples MP26915: FA12909-1, FA12909-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12909
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26915
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/06/14

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr			
Antimony	23.8	25	95.2	80-120
Arsenic	94.6	100	94.6	80-120
Barium	anr			
Beryllium	2.6	2.5	104.0	80-120
Cadmium	2.4	2.5	96.0	80-120
Calcium				
Chromium	10.3	10	103.0	80-120
Cobalt				
Copper	12.5	12.5	100.0	80-120
Iron				
Lead	23.7	25	94.8	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel	25.1	25	100.4	80-120
Potassium				
Selenium	94.0	100	94.0	80-120
Silver	2.4	2.5	96.0	80-120
Sodium				
Strontium				
Thallium	94.4	100	94.4	80-120
Tin				
Titanium				
Vanadium				
Zinc	25.1	25	100.4	80-120

Associated samples MP26915: FA12909-1, FA12909-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12909
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26915
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/06/14

Metal	FA12978-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	0.00	0.00	NC	0-10
Arsenic	0.00	0.00	NC	0-10
Barium	anr			
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	4.40	0.00	100.0(a)	0-10
Cobalt				
Copper	2.70	0.00	100.0(a)	0-10
Iron				
Lead	13.0	14.8	13.8 (a)	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	0.500	0.00	100.0(a)	0-10
Potassium				
Selenium	2.60	16.7	542.3(a)	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium				
Zinc	4.80	0.00	100.0(a)	0-10

Associated samples MP26915: FA12909-1, FA12909-2

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: FA12909
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26915
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/06/14

Metal	Sample ml	Final ml	FA12978-1 Raw	FA12978-1 Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10			96.7	0.2	5	100	96.7	80-120
Arsenic	9.8	10			93.9	0.2	5	100	93.9	80-120
Barium										
Beryllium	9.8	10			52.7	0.2	2.5	50	105.4	80-120
Cadmium	9.8	10			49.9	0.2	2.5	50	99.8	80-120
Calcium										
Chromium	9.8	10	4.4	4.312	57.5	0.2	2.5	50	106.4	80-120
Cobalt										
Copper	9.8	10	2.7	2.646	101.9	0.2	5	100	99.3	80-120
Iron										
Lead	9.8	10	13	12.74	61	0.2	2.5	50	96.5	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel	9.8	10	.5	.49	102.5	0.2	5	100	102.0	80-120
Potassium										
Selenium	9.8	10	2.6	2.548	95.9	0.2	5	100	93.4	80-120
Silver	9.8	10			49.1	0.2	2.5	50	98.2	80-120
Sodium										
Strontium										
Thallium	9.8	10			91.8	0.2	5	100	91.8	80-120
Tin										
Titanium										
Vanadium										
Zinc	9.8	10	4.8	4.704	258.8	0.2	12.5	250	101.6	80-120

Associated samples MP26915: FA12909-1, FA12909-2

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA12909
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/14

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.042	.0025	.0042	0.00021	<0.042

Associated samples MP26919: FA12909-1, FA12909-2

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: FA12909
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/14 03/07/14

Metal	FA12977-7 Original	DUP	RPD	QC Limits	FA12977-7 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.025	0.027	7.7	0-20	0.025	0.55	0.462	113.7	80-120

Associated samples MP26919: FA12909-1, FA12909-2

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: FA12909
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/14

Metal	FA12977-7 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.025	0.57	0.455	119.8	3.6	20

Associated samples MP26919: FA12909-1, FA12909-2

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

8.2.2
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12909
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 03/07/14

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.26	0.25	104.0	80-120

Associated samples MP26919: FA12909-1, FA12909-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12909
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919 Methods: SW846 7471B
Matrix Type: SOLID Units: ug/l

Prep Date: 03/07/14

Metal	FA12977-7 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.156	0.00	100.0(a)	0-10

Associated samples MP26919: FA12909-1, FA12909-2

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).

8.2.4

8

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: FA12909
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
Chromium, Hexavalent	GN60625	2.0	0.0	mg/kg	20.0	19.7	98.3	75-125%

Associated Samples:
Batch GN60625: FA12909-1, FA12909-2
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA12909
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
Chromium, Hexavalent	GN60625	FA12814-11	mg/kg	1.4	1.2	12.1	0-20%
Solids, Percent	GN60416	FA12909-2	%	79.5	79.8	0.4	0-5%

Associated Samples:
Batch GN60416: FA12909-1, FA12909-2
Batch GN60625: FA12909-1, FA12909-2
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA12909
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
Chromium, Hexavalent	GN60625	FA12814-11	mg/kg	1.4	657.6	740	112.4	75-125%
Chromium, Hexavalent	GN60625	FA12814-11	mg/kg	1.4	23.3	27.7	113.2	75-125%

Associated Samples:
Batch GN60625: FA12909-1, FA12909-2
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Southeast
ACCUTEST LABORATORIES

03/27/14

Technical Report for

United Technologies Corporation

AECOMSCG: Delavan Spray Technologies; Bamberg, SC

60314964

Accutest Job Number: FA12917

Sampling Date: 02/28/14

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: **94**

NELAP ACCREDITED TNI LABORATORY

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

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Heather Wandrey 407-425-6700

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Sample Summary

United Technologies Corporation

Job No: FA12917

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA12917-1	02/28/14	08:48	LARM	03/01/14	SO	Soil	BG-3 (0.5-1.5)
FA12917-2	02/28/14	08:50	LARM	03/01/14	SO	Soil	BG-3 (2-3)
FA12917-3	02/28/14	08:55	LARM	03/01/14	SO	Soil	BG-3 (9-11)
FA12917-4	02/28/14	09:00	LARM	03/01/14	SO	Soil	BG-3 (14-16)
FA12917-5	02/28/14	09:05	LARM	03/01/14	SO	Soil	BG-3 (18-20)
FA12917-6	02/28/14	09:25	LARM	03/01/14	SO	Soil	BG-2 (1.5-2.5)
FA12917-7	02/28/14	09:28	LARM	03/01/14	SO	Soil	BG-2 (4-5)
FA12917-8	02/28/14	09:30	LARM	03/01/14	SO	Soil	BG-2 (7-8)
FA12917-9	02/28/14	09:40	LARM	03/01/14	SO	Soil	BG-2 (12-14)
FA12917-10	02/28/14	09:40	LARM	03/01/14	SO	Soil	BG-2 (12-14)-A
FA12917-11	02/28/14	09:50	LARM	03/01/14	SO	Soil	BG-2 (16-17)
FA12917-12	02/28/14	11:15	LARM	03/01/14	SO	Soil	BG-1 (16-17)
FA12917-13	02/28/14	10:50	LARM	03/01/14	SO	Soil	BG-1 (1-2)

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

Sample Summary
(continued)

United Technologies Corporation

Job No: FA12917

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA12917-14	02/28/14	12:05	LARM	03/01/14	SO	Soil	DPT-47 (5-7)
FA12917-15	02/28/14	12:20	LARM	03/01/14	SO	Soil	DPT-48 (7.5-9.5)

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

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: United Technologies Corporation **Job No:** FA12917

Site: AECOMSCG: Delavan Spray Technologies; Bamberg, SC **Report Date** 3/27/2014 4:08:00 PM

15 Samples were collected on 02/28/2014 and were received at Accutest SE on 03/01/2014 properly preserved, at 2.6 Deg. C and intact. These Samples received an Accutest job number of FA12917. 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: SO **Batch ID:** VY586

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12909-2MS, FA12909-2MSD were used as the QC samples indicated.

FA12917-14: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12917-15: Pre-weighed vials were altered in the field; sample weights are estimated.

Extractables by GCMS By Method SW846 8270D

Matrix: SO **Batch ID:** OP50690

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) FA12790-12RMS, FA12790-12RMSD were used as the QC samples indicated.

Blank Spike Recovery(s) for 2,4-Dimethylphenol, Benzo(a)anthracene, Benzo(a)pyrene, Chrysene, Isophorone are outside control limits. Blank Spike recoveries are biased high. Analytes are non-detect in associated samples; therefore data integrity is not compromised.

Matrix Spike Recovery(s) for 2,4-Dimethylphenol, 4-Nitrophenol, Acenaphthylene, Isophorone are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 2,4,6-Trichlorophenol, 2,4-Dichlorophenol, 2,4-Dimethylphenol, 2,6-Dinitrotoluene, 2-Nitrophenol, Acenaphthylene, Benzo(a)anthracene, Benzo(a)pyrene, Benzyl Alcohol, Isophorone, N-Nitroso-di-n-propylamine, N-Nitrosodiphenylamine, Pentachlorophenol are outside control limits. Probable cause is due to matrix interference.

Sample(s) OP50690-MB, OP50690-BS have surrogates outside control limits. Probable cause is due to matrix interference.

Sample(s) OP50690-MS, OP50690-MSD have surrogates outside control limits. Probable cause is due to matrix interference.

OP50690-MB for Terphenyl-d14: Outside control limits.

OP50690-BS for Phenol-d5: Outside control limits.

OP50690-BS for Terphenyl-d14: Outside control limits.

FA12917-14 for 2,4-Dimethylphenol: Associated BS recovery outside control limits.

FA12917-14 for Benzo(a)anthracene: Associated BS recovery outside control limits.

FA12917-14 for Benzo(a)pyrene: Associated BS recovery outside control limits.

FA12917-14 for Chrysene: Associated BS recovery outside control limits.

FA12917-14 for Isophorone: Associated BS recovery outside control limits.

FA12917-15 for 2,4-Dimethylphenol: Associated BS recovery outside control limits.

FA12917-15 for Benzo(a)anthracene: Associated BS recovery outside control limits.

FA12917-15 for Benzo(a)pyrene: Associated BS recovery outside control limits.

FA12917-15 for Chrysene: Associated BS recovery outside control limits.

FA12917-15 for Isophorone: Associated BS recovery outside control limits.

Metals By Method SW846 6010C

Matrix: SO **Batch ID:** MP26934

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) FA12917-1DUP, FA12917-1MS, FA12917-1MSD, FA12917-1PS, FA12917-1SDL were used as the QC samples for metals.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for Antimony are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

RPD(s) for Duplicate for Arsenic, Beryllium, Copper, Lead are outside control limits for sample MP26934-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Arsenic, Copper, Lead, Zinc are outside control limits for sample MP26934-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

FA12917-9 for Thallium: Elevated reporting limit(s) due to matrix interference. Manually elevated.

FA12917-10 for Thallium: Elevated reporting limit(s) due to matrix interference. Manually elevated.

FA12917-11 for Antimony: Elevated reporting limit(s) due to matrix interference.

FA12917-11 for Arsenic: Elevated reporting limit(s) due to matrix interference.

FA12917-11 for Beryllium: Elevated reporting limit(s) due to matrix interference.

FA12917-11 for Cadmium: Elevated reporting limit(s) due to matrix interference.

FA12917-11 for Chromium: Elevated reporting limit(s) due to matrix interference.

FA12917-11 for Copper: Elevated reporting limit(s) due to matrix interference.

FA12917-11 for Nickel: Elevated reporting limit(s) due to matrix interference.

FA12917-11 for Selenium: Elevated reporting limit(s) due to matrix interference.

FA12917-11 for Silver: Elevated reporting limit(s) due to matrix interference.

FA12917-11 for Zinc: Elevated reporting limit(s) due to matrix interference.

Metals By Method SW846 7471B

Matrix: SO **Batch ID:** MP26919

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) FA12977-7DUP, FA12977-7MS, FA12977-7MSD, FA12977-7SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Mercury are outside control limits for sample MP26919-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Matrix: SO **Batch ID:** MP26920

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) FA12917-3DUP, FA12917-3MS, FA12917-3MSD, FA12917-3SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Mercury are outside control limits for sample MP26920-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Wet Chemistry By Method SM19 2540G

Matrix: SO **Batch ID:** GN60416

Sample(s) FA12917-6DUP was used as the QC samples for Solids, Percent.

Matrix: SO **Batch ID:** GN60417

Sample(s) FA12917-13DUP was used as the QC samples for Solids, Percent.

Matrix: SO **Batch ID:** GN60442

Sample(s) FA12917-12DUP was used as the QC samples for Solids, Percent.

Wet Chemistry By Method SW846 3060A/7196A

Matrix: SO **Batch ID:** GN60752

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12917-15DUP, FA12917-15MS were used as the QC samples for Chromium, Hexavalent.

Matrix Spike Recovery(s) for Chromium, Hexavalent are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

FA12917-1 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12917-2 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12917-3 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12917-4 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12917-5 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12917-6 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12917-7 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12917-8 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12917-9 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12917-10 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12917-11 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12917-12 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12917-13 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12917-14 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

FA12917-15 for Chromium, Hexavalent: Associated insoluble XCR spike recovery outside control limits.

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: March 27, 2014

Lovelie Metzgar, QA Officer (signature on file)

Summary of Hits

Job Number: FA12917
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 02/28/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA12917-1	**BG-3 (0.5-1.5)**					
Arsenic		0.28 J	0.52	0.10	mg/kg	SW846 6010C
Chromium		1.3	0.52	0.052	mg/kg	SW846 6010C
Copper		0.33 J	1.3	0.052	mg/kg	SW846 6010C
Lead		1.2	1.0	0.083	mg/kg	SW846 6010C
Mercury		0.0096 J	0.043	0.0043	mg/kg	SW846 7471B
Nickel		0.38 J	2.1	0.026	mg/kg	SW846 6010C
Zinc		1.1	1.0	0.15	mg/kg	SW846 6010C
FA12917-2	**BG-3 (2-3)**					
Arsenic		1.3	0.50	0.10	mg/kg	SW846 6010C
Beryllium		0.13 J	0.25	0.025	mg/kg	SW846 6010C
Chromium		6.4	0.50	0.050	mg/kg	SW846 6010C
Copper		2.2	1.3	0.050	mg/kg	SW846 6010C
Lead		4.5	1.0	0.080	mg/kg	SW846 6010C
Mercury		0.031 J	0.043	0.0043	mg/kg	SW846 7471B
Nickel		2.5	2.0	0.025	mg/kg	SW846 6010C
Zinc		3.4	1.0	0.15	mg/kg	SW846 6010C
Chromium, Hexavalent [a]		3.8	2.2	0.94	mg/kg	SW846 3060A/7196A
FA12917-3	**BG-3 (9-11)**					
Arsenic		0.77	0.52	0.10	mg/kg	SW846 6010C
Beryllium		0.041 J	0.26	0.026	mg/kg	SW846 6010C
Chromium		8.7	0.52	0.052	mg/kg	SW846 6010C
Copper		0.98 J	1.3	0.052	mg/kg	SW846 6010C
Lead		4.5	1.0	0.083	mg/kg	SW846 6010C
Mercury		0.021 J	0.043	0.0043	mg/kg	SW846 7471B
Nickel		0.62 J	2.1	0.026	mg/kg	SW846 6010C
Selenium		0.16 J	1.0	0.15	mg/kg	SW846 6010C
Zinc		0.66 J	1.0	0.15	mg/kg	SW846 6010C
FA12917-4	**BG-3 (14-16)**					
Arsenic		1.0	0.51	0.10	mg/kg	SW846 6010C
Beryllium		0.13 J	0.25	0.025	mg/kg	SW846 6010C
Chromium		15.6	0.51	0.051	mg/kg	SW846 6010C
Copper		1.4	1.3	0.051	mg/kg	SW846 6010C
Lead		11.9	1.0	0.081	mg/kg	SW846 6010C
Mercury		0.021 J	0.050	0.0050	mg/kg	SW846 7471B
Nickel		0.65 J	2.0	0.025	mg/kg	SW846 6010C
Zinc		1.7	1.0	0.15	mg/kg	SW846 6010C

Summary of Hits

Job Number: FA12917
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 02/28/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA12917-5	**BG-3 (18-20)**					
Arsenic		0.58 J	0.59	0.12	mg/kg	SW846 6010C
Beryllium		0.16 J	0.30	0.030	mg/kg	SW846 6010C
Chromium		9.0	0.59	0.059	mg/kg	SW846 6010C
Copper		1.3 J	1.5	0.059	mg/kg	SW846 6010C
Lead		5.2	1.2	0.095	mg/kg	SW846 6010C
Nickel		0.61 J	2.4	0.030	mg/kg	SW846 6010C
Zinc		2.9	1.2	0.18	mg/kg	SW846 6010C
FA12917-6	**BG-2 (1.5-2.5)**					
Arsenic		0.47 J	0.48	0.096	mg/kg	SW846 6010C
Beryllium		0.024 J	0.24	0.024	mg/kg	SW846 6010C
Chromium		2.1	0.48	0.048	mg/kg	SW846 6010C
Copper		0.37 J	1.2	0.048	mg/kg	SW846 6010C
Lead		1.4	0.96	0.077	mg/kg	SW846 6010C
Mercury		0.016 J	0.042	0.0042	mg/kg	SW846 7471B
Nickel		0.56 J	1.9	0.024	mg/kg	SW846 6010C
Zinc		2.2	0.96	0.14	mg/kg	SW846 6010C
FA12917-7	**BG-2 (4-5)**					
Arsenic		1.2	0.56	0.11	mg/kg	SW846 6010C
Beryllium		0.044 J	0.28	0.028	mg/kg	SW846 6010C
Chromium		22.3	0.56	0.056	mg/kg	SW846 6010C
Copper		2.2	1.4	0.056	mg/kg	SW846 6010C
Lead		5.7	1.1	0.089	mg/kg	SW846 6010C
Mercury		0.13	0.046	0.0046	mg/kg	SW846 7471B
Nickel		0.89 J	2.2	0.028	mg/kg	SW846 6010C
Selenium		0.19 J	1.1	0.17	mg/kg	SW846 6010C
Silver		0.056 J	0.56	0.036	mg/kg	SW846 6010C
Zinc		0.94 J	1.1	0.17	mg/kg	SW846 6010C
Chromium, Hexavalent [a]		1.5 J	2.3	1.0	mg/kg	SW846 3060A/7196A
FA12917-8	**BG-2 (7-8)**					
Arsenic		0.92	0.51	0.10	mg/kg	SW846 6010C
Beryllium		0.036 J	0.26	0.026	mg/kg	SW846 6010C
Chromium		12.9	0.51	0.051	mg/kg	SW846 6010C
Copper		0.95 J	1.3	0.051	mg/kg	SW846 6010C
Lead		6.8	1.0	0.082	mg/kg	SW846 6010C
Mercury		0.022 J	0.044	0.0044	mg/kg	SW846 7471B
Nickel		0.62 J	2.0	0.026	mg/kg	SW846 6010C
Zinc		1.1	1.0	0.15	mg/kg	SW846 6010C

Summary of Hits

Job Number: FA12917
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 02/28/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA12917-9	**BG-2 (12-14)**					
Arsenic		1.5	0.54	0.11	mg/kg	SW846 6010C
Beryllium		0.15 J	0.27	0.027	mg/kg	SW846 6010C
Chromium		23.2	0.54	0.054	mg/kg	SW846 6010C
Copper		2.5	1.3	0.054	mg/kg	SW846 6010C
Lead		11.5	1.1	0.086	mg/kg	SW846 6010C
Mercury		0.026 J	0.048	0.0048	mg/kg	SW846 7471B
Nickel		0.86 J	2.1	0.027	mg/kg	SW846 6010C
Zinc		3.2	1.1	0.16	mg/kg	SW846 6010C
FA12917-10	**BG-2 (12-14)-A**					
Arsenic		6.2	0.60	0.12	mg/kg	SW846 6010C
Beryllium		0.20 J	0.30	0.030	mg/kg	SW846 6010C
Chromium		29.7	0.60	0.060	mg/kg	SW846 6010C
Copper		3.7	1.5	0.060	mg/kg	SW846 6010C
Lead		12.9	1.2	0.096	mg/kg	SW846 6010C
Mercury		0.040 J	0.053	0.0053	mg/kg	SW846 7471B
Nickel		1.3 J	2.4	0.030	mg/kg	SW846 6010C
Zinc		4.7	1.2	0.18	mg/kg	SW846 6010C
FA12917-11	**BG-2 (16-17)**					
Arsenic [b]		2.2 J	3.0	0.60	mg/kg	SW846 6010C
Beryllium [b]		0.35 J	1.5	0.15	mg/kg	SW846 6010C
Chromium [b]		16.8	3.0	0.30	mg/kg	SW846 6010C
Copper [b]		4.8 J	7.5	0.30	mg/kg	SW846 6010C
Lead		9.4	1.2	0.095	mg/kg	SW846 6010C
Nickel [b]		2.0 J	12	0.15	mg/kg	SW846 6010C
Zinc [b]		10.6	6.0	0.89	mg/kg	SW846 6010C
FA12917-12	**BG-1 (16-17)**					
Arsenic		0.57	0.53	0.11	mg/kg	SW846 6010C
Beryllium		0.058 J	0.26	0.026	mg/kg	SW846 6010C
Chromium		12.1	0.53	0.053	mg/kg	SW846 6010C
Copper		0.77 J	1.3	0.053	mg/kg	SW846 6010C
Lead		2.4	1.1	0.085	mg/kg	SW846 6010C
Mercury		0.0084 J	0.047	0.0047	mg/kg	SW846 7471B
Nickel		0.49 J	2.1	0.026	mg/kg	SW846 6010C
Zinc		0.65 J	1.1	0.16	mg/kg	SW846 6010C

Summary of Hits

Job Number: FA12917
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 02/28/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA12917-13	**BG-1 (1-2)**					
Arsenic		0.33 J	0.48	0.096	mg/kg	SW846 6010C
Chromium		1.6	0.48	0.048	mg/kg	SW846 6010C
Copper		0.47 J	1.2	0.048	mg/kg	SW846 6010C
Lead		1.1	0.96	0.077	mg/kg	SW846 6010C
Mercury		0.015 J	0.041	0.0041	mg/kg	SW846 7471B
Nickel		0.63 J	1.9	0.024	mg/kg	SW846 6010C
Zinc		1.7	0.96	0.14	mg/kg	SW846 6010C
FA12917-14	**DPT-47 (5-7)**					
Tetrachloroethylene [c]		2.6 J	3.5	0.89	ug/kg	SW846 8260B
Arsenic		0.63	0.47	0.094	mg/kg	SW846 6010C
Beryllium		0.038 J	0.24	0.024	mg/kg	SW846 6010C
Chromium		7.5	0.47	0.047	mg/kg	SW846 6010C
Copper		1.4	1.2	0.047	mg/kg	SW846 6010C
Lead		6.1	0.94	0.075	mg/kg	SW846 6010C
Mercury		0.0067 J	0.045	0.0045	mg/kg	SW846 7471B
Nickel		0.70 J	1.9	0.024	mg/kg	SW846 6010C
Selenium		0.15 J	0.94	0.14	mg/kg	SW846 6010C
Zinc		0.78 J	0.94	0.14	mg/kg	SW846 6010C
FA12917-15	**DPT-48 (7.5-9.5)**					
cis-1,2-Dichloroethylene [c]		14.8	3.1	0.63	ug/kg	SW846 8260B
Tetrachloroethylene [c]		6.1	3.1	0.79	ug/kg	SW846 8260B
Arsenic		0.48 J	0.49	0.098	mg/kg	SW846 6010C
Beryllium		0.029 J	0.24	0.024	mg/kg	SW846 6010C
Chromium		7.1	0.49	0.049	mg/kg	SW846 6010C
Copper		1.4	1.2	0.049	mg/kg	SW846 6010C
Lead		7.4	0.98	0.078	mg/kg	SW846 6010C
Mercury		0.014 J	0.042	0.0042	mg/kg	SW846 7471B
Nickel		0.89 J	2.0	0.024	mg/kg	SW846 6010C
Zinc		0.93 J	0.98	0.15	mg/kg	SW846 6010C
Chromium, Hexavalent [a]		3.1	2.3	0.97	mg/kg	SW846 3060A/7196A

(a) Associated insoluble XCR spike recovery outside control limits.
(b) Elevated reporting limit(s) due to matrix interference.
(c) Pre-weighed vials were altered in the field; sample weights are estimated.

Southeast ACCUTEST LABORATORIES

4

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: BG-3 (0.5-1.5)
Lab Sample ID: FA12917-1
Matrix: SO - Soil
Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 92.3
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.10 U	1.0	0.10	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Arsenic	0.28 J	0.52	0.10	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.026 U	0.26	0.026	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Cadmium	0.026 U	0.21	0.026	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Chromium	1.3	0.52	0.052	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Copper	0.33 J	1.3	0.052	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Lead	1.2	1.0	0.083	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Mercury	0.0096 J	0.043	0.0043	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [1]	SW846 7471B [3]
Nickel	0.38 J	2.1	0.026	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Selenium	0.15 U	1.0	0.15	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Silver	0.034 U	0.52	0.034	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Thallium	0.077 U	0.52	0.077	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Zinc	1.1	1.0	0.15	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA11440
(2) Instrument QC Batch: MA11452
(3) Prep QC Batch: MP26919
(4) Prep QC Batch: MP26934

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:	BG-3 (0.5-1.5)		
Lab Sample ID:	FA12917-1	**Date Sampled:**	02/28/14
Matrix:	SO - Soil	**Date Received:**	03/01/14
		Percent Solids:	92.3
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	0.93 U	2.2	0.93	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	92.3			%	1	03/04/14 13:45	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-3 (2-3)
Lab Sample ID: FA12917-2
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 90.0

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.10 U	1.0	0.10	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Arsenic	1.3	0.50	0.10	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.13 J	0.25	0.025	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Cadmium	0.025 U	0.20	0.025	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Chromium	6.4	0.50	0.050	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Copper	2.2	1.3	0.050	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Lead	4.5	1.0	0.080	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Mercury	0.031 J	0.043	0.0043	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [1]	SW846 7471B [3]
Nickel	2.5	2.0	0.025	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Selenium	0.15 U	1.0	0.15	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Silver	0.033 U	0.50	0.033	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Thallium	0.075 U	0.50	0.075	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Zinc	3.4	1.0	0.15	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA11440
(2) Instrument QC Batch: MA11452
(3) Prep QC Batch: MP26919
(4) Prep QC Batch: MP26934

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: BG-3 (2-3)
Lab Sample ID: FA12917-2
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 90.0

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	3.8	2.2	0.94	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	90			%	1	03/04/14 13:45	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-3 (9-11)
Lab Sample ID: FA12917-3
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 89.7

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.10 U	1.0	0.10	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Arsenic	0.77	0.52	0.10	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.041 J	0.26	0.026	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Cadmium	0.026 U	0.21	0.026	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Chromium	8.7	0.52	0.052	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Copper	0.98 J	1.3	0.052	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Lead	4.5	1.0	0.083	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Mercury	0.021 J	0.043	0.0043	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [1]	SW846 7471B [3]
Nickel	0.62 J	2.1	0.026	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Selenium	0.16 J	1.0	0.15	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Silver	0.034 U	0.52	0.034	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Thallium	0.077 U	0.52	0.077	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Zinc	0.66 J	1.0	0.15	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA11440
(2) Instrument QC Batch: MA11452
(3) Prep QC Batch: MP26920
(4) Prep QC Batch: MP26934

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: BG-3 (9-11)
Lab Sample ID: FA12917-3
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 89.7

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	0.95 U	2.2	0.95	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	89.7			%	1	03/04/14 13:45	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-3 (14-16)
Lab Sample ID: FA12917-4
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 78.0

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.10 U	1.0	0.10	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Arsenic	1.0	0.51	0.10	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.13 J	0.25	0.025	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Cadmium	0.025 U	0.20	0.025	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Chromium	15.6	0.51	0.051	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Copper	1.4	1.3	0.051	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Lead	11.9	1.0	0.081	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Mercury	0.021 J	0.050	0.0050	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [1]	SW846 7471B [3]
Nickel	0.65 J	2.0	0.025	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Selenium	0.15 U	1.0	0.15	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Silver	0.033 U	0.51	0.033	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Thallium	0.076 U	0.51	0.076	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Zinc	1.7	1.0	0.15	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA11440
(2) Instrument QC Batch: MA11452
(3) Prep QC Batch: MP26920
(4) Prep QC Batch: MP26934

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: BG-3 (14-16)
Lab Sample ID: FA12917-4
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 78.0

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	1.1 U	2.5	1.1	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	78			%	1	03/04/14 13:45	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-3 (18-20)
Lab Sample ID: FA12917-5
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 73.8

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.12 U	1.2	0.12	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Arsenic	0.58 J	0.59	0.12	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.16 J	0.30	0.030	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Cadmium	0.030 U	0.24	0.030	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Chromium	9.0	0.59	0.059	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Copper	1.3 J	1.5	0.059	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Lead	5.2	1.2	0.095	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Mercury	0.0051 U	0.051	0.0051	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [1]	SW846 7471B [3]
Nickel	0.61 J	2.4	0.030	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Selenium	0.18 U	1.2	0.18	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Silver	0.039 U	0.59	0.039	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Thallium	0.089 U	0.59	0.089	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Zinc	2.9	1.2	0.18	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA11440
(2) Instrument QC Batch: MA11452
(3) Prep QC Batch: MP26920
(4) Prep QC Batch: MP26934

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: BG-3 (18-20)
Lab Sample ID: FA12917-5
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 73.8

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	1.2 U	2.7	1.2	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	73.8			%	1	03/04/14 13:45	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-2 (1.5-2.5)
Lab Sample ID: FA12917-6
Matrix: SO - Soil
Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 92.6
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.096 U	0.96	0.096	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Arsenic	0.47 J	0.48	0.096	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.024 J	0.24	0.024	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Cadmium	0.024 U	0.19	0.024	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Chromium	2.1	0.48	0.048	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Copper	0.37 J	1.2	0.048	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Lead	1.4	0.96	0.077	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Mercury	0.016 J	0.042	0.0042	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [1]	SW846 7471B [3]
Nickel	0.56 J	1.9	0.024	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Selenium	0.14 U	0.96	0.14	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Silver	0.031 U	0.48	0.031	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Thallium	0.072 U	0.48	0.072	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Zinc	2.2	0.96	0.14	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA11440
(2) Instrument QC Batch: MA11452
(3) Prep QC Batch: MP26920
(4) Prep QC Batch: MP26934

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: BG-2 (1.5-2.5)
Lab Sample ID: FA12917-6
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 92.6

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	0.91 U	2.1	0.91	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	92.6			%	1	03/04/14 13:45	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-2 (4-5)
Lab Sample ID: FA12917-7
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 84.1

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.11 U	1.1	0.11	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Arsenic	1.2	0.56	0.11	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.044 J	0.28	0.028	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Cadmium	0.028 U	0.22	0.028	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Chromium	22.3	0.56	0.056	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Copper	2.2	1.4	0.056	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Lead	5.7	1.1	0.089	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Mercury	0.13	0.046	0.0046	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [1]	SW846 7471B [3]
Nickel	0.89 J	2.2	0.028	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Selenium	0.19 J	1.1	0.17	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Silver	0.056 J	0.56	0.036	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Thallium	0.083 U	0.56	0.083	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Zinc	0.94 J	1.1	0.17	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA11440
(2) Instrument QC Batch: MA11452
(3) Prep QC Batch: MP26920
(4) Prep QC Batch: MP26934

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: BG-2 (4-5)
Lab Sample ID: FA12917-7
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 84.1

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	1.5 J	2.3	1.0	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	84.1			%	1	03/04/14 13:45	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-2 (7-8)
Lab Sample ID: FA12917-8
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 86.6

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.10 U	1.0	0.10	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Arsenic	0.92	0.51	0.10	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.036 J	0.26	0.026	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Cadmium	0.026 U	0.20	0.026	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Chromium	12.9	0.51	0.051	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Copper	0.95 J	1.3	0.051	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Lead	6.8	1.0	0.082	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Mercury	0.022 J	0.044	0.0044	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [1]	SW846 7471B [3]
Nickel	0.62 J	2.0	0.026	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Selenium	0.15 U	1.0	0.15	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Silver	0.033 U	0.51	0.033	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Thallium	0.077 U	0.51	0.077	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Zinc	1.1	1.0	0.15	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA11440
(2) Instrument QC Batch: MA11452
(3) Prep QC Batch: MP26920
(4) Prep QC Batch: MP26934

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: BG-2 (7-8)
Lab Sample ID: FA12917-8
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 86.6

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	0.98 U	2.3	0.98	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	86.6			%	1	03/04/14 14:10	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-2 (12-14)
Lab Sample ID: FA12917-9
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 78.5

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.11 U	1.1	0.11	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Arsenic	1.5	0.54	0.11	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.15 J	0.27	0.027	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Cadmium	0.027 U	0.21	0.027	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Chromium	23.2	0.54	0.054	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Copper	2.5	1.3	0.054	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Lead	11.5	1.1	0.086	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Mercury	0.026 J	0.048	0.0048	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [1]	SW846 7471B [3]
Nickel	0.86 J	2.1	0.027	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Selenium	0.16 U	1.1	0.16	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Silver	0.035 U	0.54	0.035	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Thallium [a]	0.80 U	1.1	0.80	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Zinc	3.2	1.1	0.16	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA11440
(2) Instrument QC Batch: MA11452
(3) Prep QC Batch: MP26920
(4) Prep QC Batch: MP26934

(a) Elevated reporting limit(s) due to matrix interference. Manually elevated.

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: BG-2 (12-14)
Lab Sample ID: FA12917-9
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 78.5

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	1.1 U	25	1.1	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	78.5			%	1	03/04/14 14:10	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-2 (12-14)-A
Lab Sample ID: FA12917-10
Matrix: SO - Soil
Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 75.5
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.12 U	1.2	0.12	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Arsenic	6.2	0.60	0.12	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.20 J	0.30	0.030	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Cadmium	0.030 U	0.24	0.030	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Chromium	29.7	0.60	0.060	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Copper	3.7	1.5	0.060	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Lead	12.9	1.2	0.096	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Mercury	0.040 J	0.053	0.0053	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [1]	SW846 7471B [3]
Nickel	1.3 J	2.4	0.030	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Selenium	0.18 U	1.2	0.18	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Silver	0.039 U	0.60	0.039	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Thallium [a]	0.90 U	1.2	0.90	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Zinc	4.7	1.2	0.18	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA11440
(2) Instrument QC Batch: MA11452
(3) Prep QC Batch: MP26920
(4) Prep QC Batch: MP26934

(a) Elevated reporting limit(s) due to matrix interference. Manually elevated.

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:	BG-2 (12-14)-A		
Lab Sample ID:	FA12917-10	**Date Sampled:**	02/28/14
Matrix:	SO - Soil	**Date Received:**	03/01/14
		Percent Solids:	75.5
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	1.1 U	2.6	1.1	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	75.5			%	1	03/04/14 14:10	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-2 (16-17)
Lab Sample ID: FA12917-11
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 67.1

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	0.60 U	6.0	0.60	mg/kg	5	03/11/14	03/13/14	LM	SW846 6010C [3]	SW846 3050B [5]
Arsenic [a]	2.2 J	3.0	0.60	mg/kg	5	03/11/14	03/13/14	LM	SW846 6010C [3]	SW846 3050B [5]
Beryllium [a]	0.35 J	1.5	0.15	mg/kg	5	03/11/14	03/13/14	LM	SW846 6010C [3]	SW846 3050B [5]
Cadmium [a]	0.15 U	1.2	0.15	mg/kg	5	03/11/14	03/13/14	LM	SW846 6010C [3]	SW846 3050B [5]
Chromium [a]	16.8	3.0	0.30	mg/kg	5	03/11/14	03/13/14	LM	SW846 6010C [3]	SW846 3050B [5]
Copper [a]	4.8 J	7.5	0.30	mg/kg	5	03/11/14	03/13/14	LM	SW846 6010C [3]	SW846 3050B [5]
Lead	9.4	1.2	0.095	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [5]
Mercury	0.0060 U	0.060	0.0060	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [1]	SW846 7471B [4]
Nickel [a]	2.0 J	12	0.15	mg/kg	5	03/11/14	03/13/14	LM	SW846 6010C [3]	SW846 3050B [5]
Selenium [a]	0.89 U	6.0	0.89	mg/kg	5	03/11/14	03/13/14	LM	SW846 6010C [3]	SW846 3050B [5]
Silver [a]	0.19 U	3.0	0.19	mg/kg	5	03/11/14	03/13/14	LM	SW846 6010C [3]	SW846 3050B [5]
Thallium	0.089 U	0.60	0.089	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [5]
Zinc [a]	10.6	6.0	0.89	mg/kg	5	03/11/14	03/13/14	LM	SW846 6010C [3]	SW846 3050B [5]

(1) Instrument QC Batch: MA11440
(2) Instrument QC Batch: MA11452
(3) Instrument QC Batch: MA11454
(4) Prep QC Batch: MP26920
(5) Prep QC Batch: MP26934

(a) Elevated reporting limit(s) 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: BG-2 (16-17)
Lab Sample ID: FA12917-11
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 67.1

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	1.3 U	2.9	1.3	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	67.1			%	1	03/04/14 14:10	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-1 (16-17)
Lab Sample ID: FA12917-12
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 84.4

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.11 U	1.1	0.11	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Arsenic	0.57	0.53	0.11	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.058 J	0.26	0.026	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Cadmium	0.026 U	0.21	0.026	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Chromium	12.1	0.53	0.053	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Copper	0.77 J	1.3	0.053	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Lead	2.4	1.1	0.085	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Mercury	0.0084 J	0.047	0.0047	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [1]	SW846 7471B [3]
Nickel	0.49 J	2.1	0.026	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Selenium	0.16 U	1.1	0.16	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Silver	0.034 U	0.53	0.034	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Thallium	0.079 U	0.53	0.079	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Zinc	0.65 J	1.1	0.16	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA11440
(2) Instrument QC Batch: MA11452
(3) Prep QC Batch: MP26920
(4) Prep QC Batch: MP26934

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: BG-1 (16-17)
Lab Sample ID: FA12917-12
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 84.4

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	1.0 U	2.3	1.0	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	84.4			%	1	03/06/14 12:02	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: BG-1 (1-2)
Lab Sample ID: FA12917-13
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 93.3

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.096 U	0.96	0.096	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Arsenic	0.33 J	0.48	0.096	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.024 U	0.24	0.024	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Cadmium	0.024 U	0.19	0.024	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Chromium	1.6	0.48	0.048	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Copper	0.47 J	1.2	0.048	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Lead	1.1	0.96	0.077	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Mercury	0.015 J	0.041	0.0041	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [1]	SW846 7471B [3]
Nickel	0.63 J	1.9	0.024	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Selenium	0.14 U	0.96	0.14	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Silver	0.031 U	0.48	0.031	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Thallium	0.072 U	0.48	0.072	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Zinc	1.7	0.96	0.14	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA11440
(2) Instrument QC Batch: MA11452
(3) Prep QC Batch: MP26920
(4) Prep QC Batch: MP26934

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:	BG-1 (1-2)		
Lab Sample ID:	FA12917-13	**Date Sampled:**	02/28/14
Matrix:	SO - Soil	**Date Received:**	03/01/14
		Percent Solids:	93.3
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	0.92 U	2.1	0.92	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	93.3			%	1	03/04/14 14:10	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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:	DPT-47 (5-7)		
Lab Sample ID:	FA12917-14	**Date Sampled:**	02/28/14
Matrix:	SO - Soil	**Date Received:**	03/01/14
Method:	SW846 8260B	**Percent Solids:**	89.9
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Y13119.D	1	03/03/14	EP	n/a	n/a	VY586
Run #2							

	Initial Weight
Run #1	7.85 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	35	11	ug/kg	
71-43-2	Benzene	ND	3.5	0.71	ug/kg	
75-27-4	Bromodichloromethane	ND	3.5	0.71	ug/kg	
75-25-2	Bromoform	ND	3.5	0.77	ug/kg	
108-90-7	Chlorobenzene	ND	3.5	0.71	ug/kg	
75-00-3	Chloroethane	ND	3.5	1.6	ug/kg	
67-66-3	Chloroform	ND	3.5	0.80	ug/kg	
75-15-0	Carbon disulfide	ND	3.5	0.71	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.5	0.98	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.5	0.71	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.5	0.71	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.5	0.71	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.5	0.71	ug/kg	
124-48-1	Dibromochloromethane	ND	3.5	0.71	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.5	0.71	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.5	0.71	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.5	0.95	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.5	0.71	ug/kg	
100-41-4	Ethylbenzene	ND	3.5	0.71	ug/kg	
591-78-6	2-Hexanone	ND	18	3.5	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	18	3.5	ug/kg	
74-83-9	Methyl bromide	ND	3.5	1.3	ug/kg	
74-87-3	Methyl chloride	ND	3.5	1.4	ug/kg	
75-09-2	Methylene chloride	ND	7.1	2.8	ug/kg	
78-93-3	Methyl ethyl ketone	ND	18	5.3	ug/kg	
100-42-5	Styrene	ND	3.5	0.71	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.5	0.71	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.5	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.5	1.1	ug/kg	
127-18-4	Tetrachloroethylene	2.6	3.5	0.89	ug/kg	J
108-88-3	Toluene	ND	3.5	0.71	ug/kg	
79-01-6	Trichloroethylene	ND	3.5	0.72	ug/kg	

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:	DPT-47 (5-7)		
Lab Sample ID:	FA12917-14	**Date Sampled:**	02/28/14
Matrix:	SO - Soil	**Date Received:**	03/01/14
Method:	SW846 8260B	**Percent Solids:**	89.9
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.5	0.72	ug/kg	
1330-20-7	Xylene (total)	ND	11	1.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		75-124%
2037-26-5	Toluene-D8	92%		75-126%
460-00-4	4-Bromofluorobenzene	98%		71-133%
17060-07-0	1,2-Dichloroethane-D4	98%		72-135%

(a) Pre-weighed vials were altered in the field; sample weights are estimated.

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: DPT-47 (5-7)
Lab Sample ID: FA12917-14 **Date Sampled:** 02/28/14
Matrix: SO - Soil **Date Received:** 03/01/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 89.9
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T011853.D	1	03/06/14	FS	03/04/14	OP50690	ST562
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	930	190	ug/kg	
95-57-8	2-Chlorophenol	ND	190	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	19	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	ND	190	20	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	930	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	370	74	ug/kg	
95-48-7	2-Methylphenol	ND	190	19	ug/kg	
	3&4-Methylphenol	ND	190	37	ug/kg	
88-75-5	2-Nitrophenol	ND	190	19	ug/kg	
100-02-7	4-Nitrophenol	ND	930	150	ug/kg	
87-86-5	Pentachlorophenol	ND	930	150	ug/kg	
108-95-2	Phenol	ND	190	19	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	24	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	19	ug/kg	
83-32-9	Acenaphthene	ND	190	23	ug/kg	
208-96-8	Acenaphthylene	ND	190	19	ug/kg	
120-12-7	Anthracene	ND	190	19	ug/kg	
56-55-3	Benzo(a)anthracene [a]	ND	190	19	ug/kg	
50-32-8	Benzo(a)pyrene [a]	ND	190	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	190	37	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	19	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	22	ug/kg	
106-47-8	4-Chloroaniline	ND	190	19	ug/kg	
86-74-8	Carbazole	ND	190	19	ug/kg	
218-01-9	Chrysene [a]	ND	190	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	19	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	19	ug/kg	

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: DPT-47 (5-7)
Lab Sample ID: FA12917-14 **Date Sampled:** 02/28/14
Matrix: SO - Soil **Date Received:** 03/01/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 89.9
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	190	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	28	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	21	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	19	ug/kg	
132-64-9	Dibenzofuran	ND	190	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	370	37	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	190	37	ug/kg	
84-66-2	Diethyl phthalate	ND	370	37	ug/kg	
131-11-3	Dimethyl phthalate	ND	190	37	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	370	37	ug/kg	
206-44-0	Fluoranthene	ND	190	19	ug/kg	
86-73-7	Fluorene	ND	190	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	19	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	19	ug/kg	
78-59-1	Isophorone [a]	ND	190	19	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	19	ug/kg	
88-74-4	2-Nitroaniline	ND	190	37	ug/kg	
99-09-2	3-Nitroaniline	ND	190	37	ug/kg	
100-01-6	4-Nitroaniline	ND	190	37	ug/kg	
91-20-3	Naphthalene	ND	190	19	ug/kg	
98-95-3	Nitrobenzene	ND	190	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	19	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	19	ug/kg	
85-01-8	Phenanthrene	ND	190	19	ug/kg	
129-00-0	Pyrene	ND	190	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	86%		40-102%
4165-62-2	Phenol-d5	91%		41-100%
118-79-6	2,4,6-Tribromophenol	92%		42-108%

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:	DPT-47 (5-7)		
Lab Sample ID:	FA12917-14	**Date Sampled:**	02/28/14
Matrix:	SO - Soil	**Date Received:**	03/01/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	89.9
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	99%		40-105%
321-60-8	2-Fluorobiphenyl	81%		43-107%
1718-51-0	Terphenyl-d14	118%		45-119%

(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: DPT-47 (5-7)
Lab Sample ID: FA12917-14
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 89.9

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.094 U	0.94	0.094	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Arsenic	0.63	0.47	0.094	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.038 J	0.24	0.024	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Cadmium	0.024 U	0.19	0.024	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Chromium	7.5	0.47	0.047	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Copper	1.4	1.2	0.047	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Lead	6.1	0.94	0.075	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Mercury	0.0067 J	0.045	0.0045	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [1]	SW846 7471B [3]
Nickel	0.70 J	1.9	0.024	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Selenium	0.15 J	0.94	0.14	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Silver	0.031 U	0.47	0.031	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Thallium	0.071 U	0.47	0.071	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Zinc	0.78 J	0.94	0.14	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA11440
(2) Instrument QC Batch: MA11452
(3) Prep QC Batch: MP26920
(4) Prep QC Batch: MP26934

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:	DPT-47 (5-7)		
Lab Sample ID:	FA12917-14	**Date Sampled:**	02/28/14
Matrix:	SO - Soil	**Date Received:**	03/01/14
		Percent Solids:	89.9
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	0.95 U	2.2	0.95	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	89.9			%	1	03/06/14 12:02	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

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: DPT-48 (7.5-9.5)
Lab Sample ID: FA12917-15 **Date Sampled:** 02/28/14
Matrix: SO - Soil **Date Received:** 03/01/14
Method: SW846 8260B **Percent Solids:** 86.6
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Y13120.D	1	03/03/14	EP	n/a	n/a	VY586
Run #2							

	Initial Weight
Run #1	9.22 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	31	9.4	ug/kg	
71-43-2	Benzene	ND	3.1	0.63	ug/kg	
75-27-4	Bromodichloromethane	ND	3.1	0.63	ug/kg	
75-25-2	Bromoform	ND	3.1	0.68	ug/kg	
108-90-7	Chlorobenzene	ND	3.1	0.63	ug/kg	
75-00-3	Chloroethane	ND	3.1	1.4	ug/kg	
67-66-3	Chloroform	ND	3.1	0.71	ug/kg	
75-15-0	Carbon disulfide	ND	3.1	0.63	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.1	0.87	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.1	0.63	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.1	0.63	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.1	0.63	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.1	0.63	ug/kg	
124-48-1	Dibromochloromethane	ND	3.1	0.63	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	14.8	3.1	0.63	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.1	0.63	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.1	0.84	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.1	0.63	ug/kg	
100-41-4	Ethylbenzene	ND	3.1	0.63	ug/kg	
591-78-6	2-Hexanone	ND	16	3.1	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	16	3.1	ug/kg	
74-83-9	Methyl bromide	ND	3.1	1.2	ug/kg	
74-87-3	Methyl chloride	ND	3.1	1.3	ug/kg	
75-09-2	Methylene chloride	ND	6.3	2.5	ug/kg	
78-93-3	Methyl ethyl ketone	ND	16	4.7	ug/kg	
100-42-5	Styrene	ND	3.1	0.63	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.1	0.63	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.1	0.88	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.1	1.0	ug/kg	
127-18-4	Tetrachloroethylene	6.1	3.1	0.79	ug/kg	
108-88-3	Toluene	ND	3.1	0.63	ug/kg	
79-01-6	Trichloroethylene	ND	3.1	0.64	ug/kg	

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:	DPT-48 (7.5-9.5)		
Lab Sample ID:	FA12917-15	**Date Sampled:**	02/28/14
Matrix:	SO - Soil	**Date Received:**	03/01/14
Method:	SW846 8260B	**Percent Solids:**	86.6
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.1	0.64	ug/kg	
1330-20-7	Xylene (total)	ND	9.4	1.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		75-124%
2037-26-5	Toluene-D8	92%		75-126%
460-00-4	4-Bromofluorobenzene	97%		71-133%
17060-07-0	1,2-Dichloroethane-D4	98%		72-135%

(a) Pre-weighed vials were altered in the field; sample weights are estimated.

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: DPT-48 (7.5-9.5)
Lab Sample ID: FA12917-15 **Date Sampled:** 02/28/14
Matrix: SO - Soil **Date Received:** 03/01/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 86.6
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T011854.D	1	03/06/14	FS	03/04/14	OP50690	ST562
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	960	190	ug/kg	
95-57-8	2-Chlorophenol	ND	190	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	20	ug/kg	
105-67-9	2,4-Dimethylphenol [a]	ND	190	21	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	960	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	380	77	ug/kg	
95-48-7	2-Methylphenol	ND	190	19	ug/kg	
	3&4-Methylphenol	ND	190	38	ug/kg	
88-75-5	2-Nitrophenol	ND	190	19	ug/kg	
100-02-7	4-Nitrophenol	ND	960	150	ug/kg	
87-86-5	Pentachlorophenol	ND	960	150	ug/kg	
108-95-2	Phenol	ND	190	19	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	19	ug/kg	
83-32-9	Acenaphthene	ND	190	24	ug/kg	
208-96-8	Acenaphthylene	ND	190	19	ug/kg	
120-12-7	Anthracene	ND	190	19	ug/kg	
56-55-3	Benzo(a)anthracene [a]	ND	190	19	ug/kg	
50-32-8	Benzo(a)pyrene [a]	ND	190	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	21	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	190	38	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	19	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	23	ug/kg	
106-47-8	4-Chloroaniline	ND	190	19	ug/kg	
86-74-8	Carbazole	ND	190	19	ug/kg	
218-01-9	Chrysene [a]	ND	190	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	19	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	19	ug/kg	

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: DPT-48 (7.5-9.5)
Lab Sample ID: FA12917-15 **Date Sampled:** 02/28/14
Matrix: SO - Soil **Date Received:** 03/01/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 86.6
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	190	20	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	29	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	22	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	21	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	19	ug/kg	
132-64-9	Dibenzofuran	ND	190	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	380	38	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	190	38	ug/kg	
84-66-2	Diethyl phthalate	ND	380	38	ug/kg	
131-11-3	Dimethyl phthalate	ND	190	38	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	380	38	ug/kg	
206-44-0	Fluoranthene	ND	190	19	ug/kg	
86-73-7	Fluorene	ND	190	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	19	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	19	ug/kg	
78-59-1	Isophorone [a]	ND	190	19	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	19	ug/kg	
88-74-4	2-Nitroaniline	ND	190	38	ug/kg	
99-09-2	3-Nitroaniline	ND	190	38	ug/kg	
100-01-6	4-Nitroaniline	ND	190	38	ug/kg	
91-20-3	Naphthalene	ND	190	19	ug/kg	
98-95-3	Nitrobenzene	ND	190	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	19	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	19	ug/kg	
85-01-8	Phenanthrene	ND	190	19	ug/kg	
129-00-0	Pyrene	ND	190	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	78%		40-102%
4165-62-2	Phenol-d5	83%		41-100%
118-79-6	2,4,6-Tribromophenol	76%		42-108%

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:	DPT-48 (7.5-9.5)		
Lab Sample ID:	FA12917-15	**Date Sampled:**	02/28/14
Matrix:	SO - Soil	**Date Received:**	03/01/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	86.6
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	85%		40-105%
321-60-8	2-Fluorobiphenyl	72%		43-107%
1718-51-0	Terphenyl-d14	97%		45-119%

(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: DPT-48 (7.5-9.5)
Lab Sample ID: FA12917-15
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 86.6

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.098 U	0.98	0.098	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Arsenic	0.48 J	0.49	0.098	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.029 J	0.24	0.024	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Cadmium	0.024 U	0.20	0.024	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Chromium	7.1	0.49	0.049	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Copper	1.4	1.2	0.049	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Lead	7.4	0.98	0.078	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Mercury	0.014 J	0.042	0.0042	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [1]	SW846 7471B [3]
Nickel	0.89 J	2.0	0.024	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Selenium	0.15 U	0.98	0.15	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Silver	0.032 U	0.49	0.032	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Thallium	0.073 U	0.49	0.073	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Zinc	0.93 J	0.98	0.15	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA11440
(2) Instrument QC Batch: MA11452
(3) Prep QC Batch: MP26920
(4) Prep QC Batch: MP26934

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: DPT-48 (7.5-9.5)
Lab Sample ID: FA12917-15
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 02/28/14
Date Received: 03/01/14
Percent Solids: 86.6

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent [a]	3.1	2.3	0.97	mg/kg	1	03/21/14 11:50	FN	SW846 3060A/7196A
Solids, Percent	86.6			%	1	03/06/14 12:02	LE	SM19 2540G

(a) Associated insoluble XCR spike recovery outside control limits.

RL = Reporting Limit
MDL = Method Detection Limit

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

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA12917

AECOM

Chain of Custody and Analytical Request

Page: 1 of 1
Project Number: ~~60269713~~ 603/41
Chain of Custody Number [1]: 022814-01
LIMS Number:

Project Name / Location: Delavan Spray Technologies Site/Bamberg SC
Client Name: UTC
Collected by: LAlexander RMorgan
Project Manager: Walter Gerald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm) Depth	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.) Time	TCL VOCs (SW8260)	TCL SVOCs (SW8270)	Pharm Panel (Metals/TAL/TCL)	Hex Chrom (7196A)	COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
BG-3(0.5-1.5)	28-FEB-2014	0.5-1.5Ft	X	X		0848			X	X	3	1
BG-3(2-3)		2-3 Ft	X	X		0850			X	X		2
BG-3(9-11)		9-11 Ft	X	X		0855			X	X		3
BG-3 (14-16)		14-16 Ft	X	X		0900			X	X		4
BG-3(18-20)		18-20 Ft	X	X		0905			X	X		5
BG-2 (1.5-2.5)		1.5-2.5Ft	X	X		0925			X	X		6
BG-2(4-5)		4-5 Ft	X	X		0928			X	X		7
BG-2(7-8)		7-8 Ft	X			0930			X	X		8
BG-2(12-14)		12-14Ft	X			0940			X	X		9
BG-2(12-14)-a		12-14Ft	X			0940			X	X		10
BG-2(16-17)		16-17Ft	X			0950			X	X		11
BG-1(16-17)		16-17Ft	X			1115			X	X		12
BG-1 (1-2)		1-2Ft	X			1050			X	X		13
DPT-47 (5-7)		5-7Ft	X	X		1205	X	X	X	X		14
DPT-48 (7.5-9.5)		7.5-9.5Ft	X	X		1220	X	X	X	X		15

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	Alexander/Atzom	2/28/14	1615	1.		
2.	RM	03-01-14	1000	2.		03.01.14 1000
3.				3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:
Method of Shipment: FedEx
Analytical Lab: Accutest
Lab Recipient:

Shipped: X
Airbill #: 8047 3475 6279
Location: Orlando FL
Date: Time:

2.6

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

VOCs are grab, rest is composite

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

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA12917 CLIENT: AECOM PROJECT: Delaware Spray

DATE/TIME RECEIVED: 03-01-14 1000 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

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

AIRBILL NUMBERS: 8047 3475 6279

COOLER INFORMATION

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

TRIP BLANK INFORMATION

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

MISC. INFORMATION

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

NUMBER OF 5035 FIELD KITS ? 2

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.4
- [ ] OBSERVED TEMPS: 3.0
- [ ] CORRECTED TEMPS: 2.6

SAMPLE INFORMATION

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

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS: Samples 14,15 Soil Vials Have Extra Lables

TECHNICIAN SIGNATURE/DATE [signature] 03-01-14 REVIEWER SIGNATURE/DATE [signature] 03/01/14

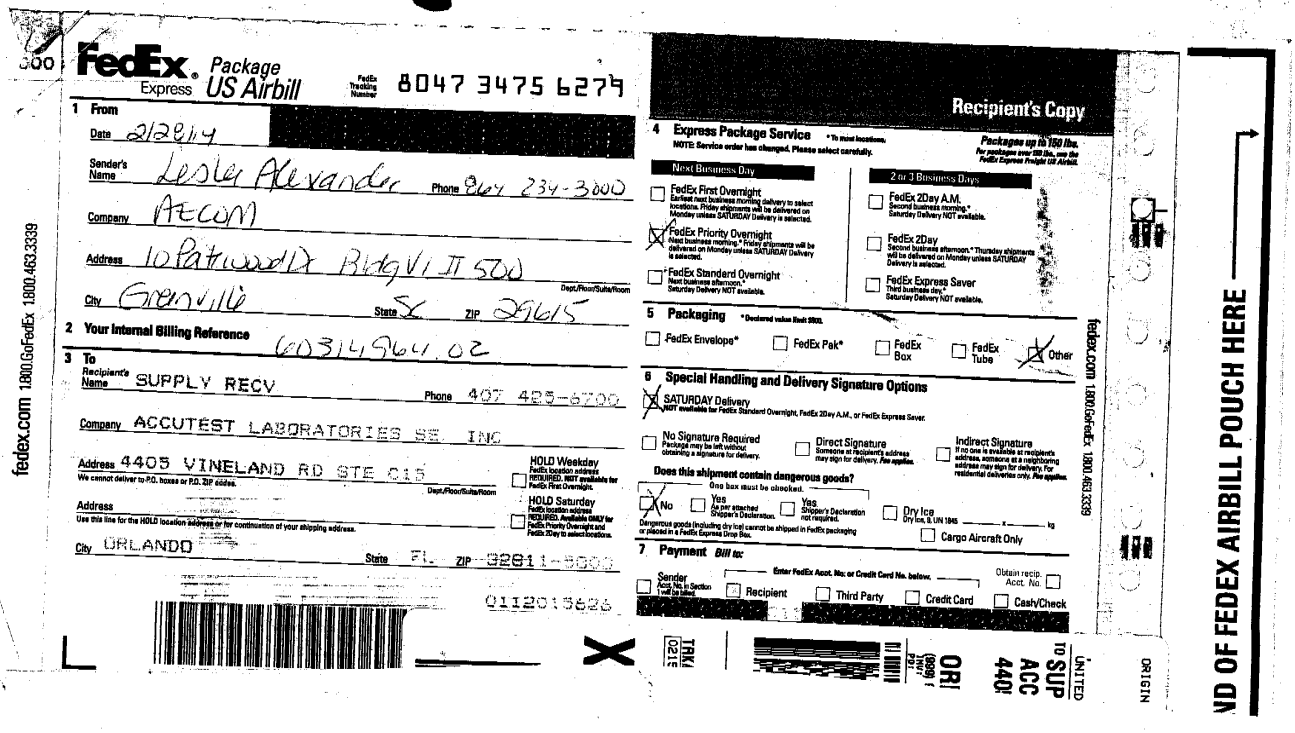
NF 12/10

receipt confirmation 122910.xls

5.1 5

FA12917: Chain of Custody
Page 2 of 3

2.2



FedEx Express US Airbill — FedEx Tracking Number 8047 3475 6279

1 From
Date 2/28/14
Sender's Name Lesley Alexander Phone 864 234-3000
Company AECOM
Address 10 Patewood Dr Bldg VI II 500
City Greenville State SC ZIP 29615

2 Your Internal Billing Reference 60314964.02

3 To
Recipient's Name SUPPLY RECV Phone 407 425-6700
Company ACCUTEST LABORATORIES SE INC
Address 4405 VINELAND RD STE C15
We cannot deliver to P.O. boxes or P.O. ZIP codes.
Dept./Floor/Suite/Room
Address
Use this line for the HOLD location address or for continuation of your shipping address.
City ORLANDO State FL ZIP 32811-5093

HOLD Weekday — FedEx location address REQUIRED. NOT available for FedEx First Overnight.
HOLD Saturday — FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

0112015626

Recipient's Copy

4 Express Package Service * To most locations.
NOTE: Service order has changed. Please select carefully.
Packages up to 150 lbs. For packages over 150 lbs., use the FedEx Express Freight US Airbill.

Next Business Day
- FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days
- FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.
FedEx Envelope* | FedEx Pak* | FedEx Box | FedEx Tube | [X] Other

6 Special Handling and Delivery Signature Options
[X] SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.
No Signature Required — Package may be left without obtaining a signature for delivery.
Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods? One box must be checked.
[X] No
Yes — As per attached Shipper's Declaration
Yes — Shipper's Declaration not required.
Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg
Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.
Cargo Aircraft Only

7 Payment Bill to:
Sender Acct. No. in Section 1 will be billed | [X] Recipient | Third Party | Credit Card | Cash/Check
Enter FedEx Acct. No. or Credit Card No. below.
Obtain recip. Acct. No.

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FA12917: Chain of Custody
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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: FA12917
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY586-MB	Y13113.D	1	03/03/14	EP	n/a	n/a	VY586

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

FA12917-14, FA12917-15

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	15	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.1	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.3	ug/kg	
67-66-3	Chloroform	ND	5.0	1.1	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	1.0	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.4	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.3	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	
591-78-6	2-Hexanone	ND	25	4.9	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	5.0	ug/kg	
74-83-9	Methyl bromide	ND	5.0	1.9	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.0	ug/kg	
75-09-2	Methylene chloride	ND	10	4.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.4	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.6	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/kg	
108-88-3	Toluene	ND	5.0	1.0	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.7	ug/kg	

Method Blank Summary

Job Number: FA12917
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY586-MB	Y13113.D	1	03/03/14	EP	n/a	n/a	VY586

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

FA12917-14, FA12917-15

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	91%	75-124%
2037-26-5	Toluene-D8	92%	75-126%
460-00-4	4-Bromofluorobenzene	100%	71-133%
17060-07-0	1,2-Dichloroethane-D4	91%	72-135%

Blank Spike Summary

Job Number: FA12917
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY586-BS	Y13114.D	1	03/03/14	EP	n/a	n/a	VY586

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

FA12917-14, FA12917-15

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	270	108	61-152
71-43-2	Benzene	50	48.9	98	76-126
75-27-4	Bromodichloromethane	50	49.7	99	74-130
75-25-2	Bromoform	50	54.1	108	76-127
108-90-7	Chlorobenzene	50	49.4	99	81-129
75-00-3	Chloroethane	50	46.6	93	68-133
67-66-3	Chloroform	50	49.6	99	72-123
75-15-0	Carbon disulfide	50	45.6	91	72-122
56-23-5	Carbon tetrachloride	50	51.6	103	78-133
75-34-3	1,1-Dichloroethane	50	48.9	98	73-125
75-35-4	1,1-Dichloroethylene	50	44.7	89	81-136
107-06-2	1,2-Dichloroethane	50	49.7	99	74-128
78-87-5	1,2-Dichloropropane	50	50.1	100	74-125
124-48-1	Dibromochloromethane	50	52.0	104	76-127
156-59-2	cis-1,2-Dichloroethylene	50	51.2	102	74-126
10061-01-5	cis-1,3-Dichloropropene	50	51.6	103	80-123
156-60-5	trans-1,2-Dichloroethylene	50	47.8	96	70-127
10061-02-6	trans-1,3-Dichloropropene	50	51.4	103	75-131
100-41-4	Ethylbenzene	50	49.0	98	77-123
591-78-6	2-Hexanone	250	268	107	72-133
108-10-1	4-Methyl-2-pentanone	250	260	104	76-132
74-83-9	Methyl bromide	50	51.0	102	65-139
74-87-3	Methyl chloride	50	54.7	109	71-144
75-09-2	Methylene chloride	50	45.3	91	74-137
78-93-3	Methyl ethyl ketone	250	275	110	75-137
100-42-5	Styrene	50	51.2	102	78-125
71-55-6	1,1,1-Trichloroethane	50	47.2	94	70-129
79-34-5	1,1,2,2-Tetrachloroethane	50	50.4	101	71-126
79-00-5	1,1,2-Trichloroethane	50	51.7	103	74-124
127-18-4	Tetrachloroethylene	50	47.8	96	79-130
108-88-3	Toluene	50	48.9	98	76-124
79-01-6	Trichloroethylene	50	47.9	96	75-128
75-01-4	Vinyl chloride	50	51.0	102	76-141
1330-20-7	Xylene (total)	150	149	99	80-129

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12917
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY586-BS	Y13114.D	1	03/03/14	EP	n/a	n/a	VY586

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

FA12917-14, FA12917-15

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	93%	75-124%
2037-26-5	Toluene-D8	94%	75-126%
460-00-4	4-Bromofluorobenzene	96%	71-133%
17060-07-0	1,2-Dichloroethane-D4	91%	72-135%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12917
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12909-2MS	Y13121.D	1	03/03/14	EP	n/a	n/a	VY586
FA12909-2MSD	Y13122.D	1	03/03/14	EP	n/a	n/a	VY586
FA12909-2 [a]	Y13118.D	1	03/03/14	EP	n/a	n/a	VY586

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

FA12917-14, FA12917-15

CAS No.	Compound	FA12909-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	26.6	J	373	326	80	337	83	3	61-152/27
71-43-2	Benzene	ND		74.5	73.6	99	69.9	94	5	76-126/26
75-27-4	Bromodichloromethane	ND		74.5	76.0	102	73.3	98	4	74-130/25
75-25-2	Bromoform	ND		74.5	76.2	102	72.7	98	5	76-127/26
108-90-7	Chlorobenzene	ND		74.5	79.9	107	75.0	101	6	81-129/29
75-00-3	Chloroethane	ND		74.5	65.8	88	55.6	75	17	68-133/29
67-66-3	Chloroform	ND		74.5	75.0	101	71.4	96	5	72-123/26
75-15-0	Carbon disulfide	ND		74.5	60.7	81	56.6	76	7	72-122/29
56-23-5	Carbon tetrachloride	ND		74.5	77.0	103	72.1	97	7	78-133/29
75-34-3	1,1-Dichloroethane	ND		74.5	72.5	97	70.0	94	4	73-125/27
75-35-4	1,1-Dichloroethylene	ND		74.5	68.4	92	62.3	84	9	81-136/28
107-06-2	1,2-Dichloroethane	ND		74.5	75.0	101	73.1	98	3	74-128/23
78-87-5	1,2-Dichloropropane	ND		74.5	76.6	103	73.5	99	4	74-125/25
124-48-1	Dibromochloromethane	ND		74.5	78.9	106	75.2	101	5	76-127/27
156-59-2	cis-1,2-Dichloroethylene	ND		74.5	75.5	101	71.3	96	6	74-126/26
10061-01-5	cis-1,3-Dichloropropene	ND		74.5	75.6	101	72.5	97	4	80-123/26
156-60-5	trans-1,2-Dichloroethylene	ND		74.5	71.0	95	67.3	90	5	70-127/27
10061-02-6	trans-1,3-Dichloropropene	ND		74.5	82.1	110	78.8	106	4	75-131/28
100-41-4	Ethylbenzene	ND		74.5	74.0	99	69.3	93	7	77-123/31
591-78-6	2-Hexanone	ND		373	331	89	336	90	1	72-133/26
108-10-1	4-Methyl-2-pentanone	ND		373	344	92	350	94	2	76-132/26
74-83-9	Methyl bromide	ND		74.5	77.7	104	69.2	93	12	65-139/31
74-87-3	Methyl chloride	ND		74.5	79.7	107	74.5	100	7	71-144/27
75-09-2	Methylene chloride	ND		74.5	69.1	93	71.8	96	4	74-137/28
78-93-3	Methyl ethyl ketone	ND		373	343	92	358	96	4	75-137/25
100-42-5	Styrene	ND		74.5	75.8	102	71.7	96	6	78-125/30
71-55-6	1,1,1-Trichloroethane	ND		74.5	71.2	96	68.6	92	4	70-129/27
79-34-5	1,1,2,2-Tetrachloroethane	ND		74.5	71.9	96	71.7	96	0	71-126/30
79-00-5	1,1,2-Trichloroethane	ND		74.5	75.2	101	72.4	97	4	74-124/28
127-18-4	Tetrachloroethylene	7.7		74.5	71.8	86	66.6	79	8	79-130/31
108-88-3	Toluene	ND		74.5	74.6	100	70.0	94	6	76-124/30
79-01-6	Trichloroethylene	ND		74.5	72.0	97	67.7	91	6	75-128/27
75-01-4	Vinyl chloride	ND		74.5	76.0	102	70.4	94	8	76-141/27
1330-20-7	Xylene (total)	ND		224	235	105	218	98	8	80-129/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12917
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12909-2MS	Y13121.D	1	03/03/14	EP	n/a	n/a	VY586
FA12909-2MSD	Y13122.D	1	03/03/14	EP	n/a	n/a	VY586
FA12909-2 [a]	Y13118.D	1	03/03/14	EP	n/a	n/a	VY586

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

FA12917-14, FA12917-15

CAS No.	Surrogate Recoveries	MS	MSD	FA12909-2	Limits
1868-53-7	Dibromofluoromethane	93%	94%	93%	75-124%
2037-26-5	Toluene-D8	94%	94%	93%	75-126%
460-00-4	4-Bromofluorobenzene	95%	98%	101%	71-133%
17060-07-0	1,2-Dichloroethane-D4	88%	91%	100%	72-135%

(a) Pre-weighed vials were altered in the field; sample weights are estimated.

* = 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: FA12917
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-MB	T011838.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12917-14, FA12917-15

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	830	170	ug/kg	
95-57-8	2-Chlorophenol	ND	170	17	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	17	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	17	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	18	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	830	170	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	67	ug/kg	
95-48-7	2-Methylphenol	ND	170	17	ug/kg	
	3&4-Methylphenol	ND	170	33	ug/kg	
88-75-5	2-Nitrophenol	ND	170	17	ug/kg	
100-02-7	4-Nitrophenol	ND	830	130	ug/kg	
87-86-5	Pentachlorophenol	ND	830	130	ug/kg	
108-95-2	Phenol	ND	170	17	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	21	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	17	ug/kg	
83-32-9	Acenaphthene	ND	170	21	ug/kg	
208-96-8	Acenaphthylene	ND	170	17	ug/kg	
120-12-7	Anthracene	ND	170	17	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	18	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	17	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	17	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	20	ug/kg	
106-47-8	4-Chloroaniline	ND	170	17	ug/kg	
86-74-8	Carbazole	ND	170	17	ug/kg	
218-01-9	Chrysene	ND	170	17	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	17	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	17	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	17	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	25	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	170	17	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	17	ug/kg	

Method Blank Summary

Job Number: FA12917
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-MB	T011838.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12917-14, FA12917-15

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	170	17	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	19	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	18	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	170	17	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	17	ug/kg	
132-64-9	Dibenzofuran	ND	170	17	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	330	33	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	170	33	ug/kg	
84-66-2	Diethyl phthalate	ND	330	33	ug/kg	
131-11-3	Dimethyl phthalate	ND	170	33	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	33	ug/kg	
206-44-0	Fluoranthene	ND	170	17	ug/kg	
86-73-7	Fluorene	ND	170	17	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	17	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	17	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	17	ug/kg	
67-72-1	Hexachloroethane	ND	170	17	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	17	ug/kg	
78-59-1	Isophorone	ND	170	17	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	17	ug/kg	
88-74-4	2-Nitroaniline	ND	170	33	ug/kg	
99-09-2	3-Nitroaniline	ND	170	33	ug/kg	
100-01-6	4-Nitroaniline	ND	170	33	ug/kg	
91-20-3	Naphthalene	ND	170	17	ug/kg	
98-95-3	Nitrobenzene	ND	170	17	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	17	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	17	ug/kg	
85-01-8	Phenanthrene	ND	170	17	ug/kg	
129-00-0	Pyrene	ND	170	17	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	170	17	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	98%	40-102%
4165-62-2	Phenol-d5	98%	41-100%

Method Blank Summary

Job Number: FA12917
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-MB	T011838.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12917-14, FA12917-15

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	94%	42-108%
4165-60-0	Nitrobenzene-d5	102%	40-105%
321-60-8	2-Fluorobiphenyl	98%	43-107%
1718-51-0	Terphenyl-d14	124%* [a]	45-119%

(a) Outside control limits.

Blank Spike Summary

Job Number: FA12917
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-BS	T011837.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12917-14, FA12917-15

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
65-85-0	Benzoic Acid	3330	3560	107	36-118
95-57-8	2-Chlorophenol	1670	1590	95	48-104
59-50-7	4-Chloro-3-methyl phenol	1670	1710	103	52-108
120-83-2	2,4-Dichlorophenol	1670	1680	101	51-105
105-67-9	2,4-Dimethylphenol	1670	1780	107*	43-96
51-28-5	2,4-Dinitrophenol	3330	3860	116	40-119
534-52-1	4,6-Dinitro-o-cresol	3330	3300	99	64-121
95-48-7	2-Methylphenol	1670	1590	95	46-107
	3&4-Methylphenol	3330	3260	98	44-111
88-75-5	2-Nitrophenol	1670	1660	100	49-104
100-02-7	4-Nitrophenol	3330	3450	104	56-116
87-86-5	Pentachlorophenol	3330	3700	111	61-114
108-95-2	Phenol	1670	1610	97	45-110
95-95-4	2,4,5-Trichlorophenol	1670	1670	100	58-112
88-06-2	2,4,6-Trichlorophenol	1670	1730	104	56-109
83-32-9	Acenaphthene	1670	1700	102	56-109
208-96-8	Acenaphthylene	1670	1700	102	56-106
120-12-7	Anthracene	1670	1720	103	61-110
56-55-3	Benzo(a)anthracene	1670	1880	113*	66-111
50-32-8	Benzo(a)pyrene	1670	1850	111*	59-104
205-99-2	Benzo(b)fluoranthene	1670	1810	109	67-113
191-24-2	Benzo(g,h,i)perylene	1670	1760	106	67-113
207-08-9	Benzo(k)fluoranthene	1670	1770	106	67-114
101-55-3	4-Bromophenyl phenyl ether	1670	1390	83	62-110
85-68-7	Butyl benzyl phthalate	1670	1720	103	65-113
100-51-6	Benzyl Alcohol	1670	1700	102	53-108
91-58-7	2-Chloronaphthalene	1670	1620	97	53-106
106-47-8	4-Chloroaniline	1670	1530	92	30-115
86-74-8	Carbazole	1670	1780	107	60-111
218-01-9	Chrysene	1670	1900	114*	65-112
111-91-1	bis(2-Chloroethoxy)methane	1670	1630	98	48-105
111-44-4	bis(2-Chloroethyl)ether	1670	1450	87	46-103
108-60-1	bis(2-Chloroisopropyl)ether	1670	1490	89	40-110
7005-72-3	4-Chlorophenyl phenyl ether	1670	1640	98	58-106
95-50-1	1,2-Dichlorobenzene	1670	1310	79	44-102
541-73-1	1,3-Dichlorobenzene	1670	1300	78	42-100

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12917
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-BS	T011837.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12917-14, FA12917-15

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
106-46-7	1,4-Dichlorobenzene	1670	1440	86	40-106
121-14-2	2,4-Dinitrotoluene	1670	1710	103	59-109
606-20-2	2,6-Dinitrotoluene	1670	1670	100	61-107
91-94-1	3,3'-Dichlorobenzidine	1670	1620	97	36-114
53-70-3	Dibenzo(a,h)anthracene	1670	1690	101	68-115
132-64-9	Dibenzofuran	1670	1650	99	57-108
84-74-2	Di-n-butyl phthalate	1670	1570	94	63-108
117-84-0	Di-n-octyl phthalate	1670	1620	97	64-119
84-66-2	Diethyl phthalate	1670	1590	95	61-109
131-11-3	Dimethyl phthalate	1670	1480	89	59-108
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1720	103	64-115
206-44-0	Fluoranthene	1670	1700	102	60-108
86-73-7	Fluorene	1670	1740	104	58-109
118-74-1	Hexachlorobenzene	1670	1650	99	59-111
87-68-3	Hexachlorobutadiene	1670	1530	92	41-108
77-47-4	Hexachlorocyclopentadiene	1670	1420	85	49-110
67-72-1	Hexachloroethane	1670	1350	81	40-105
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1770	106	66-116
78-59-1	Isophorone	1670	1560	94*	42-89
91-57-6	2-Methylnaphthalene	1670	1570	94	47-106
88-74-4	2-Nitroaniline	1670	1770	106	56-123
99-09-2	3-Nitroaniline	1670	1610	97	41-111
100-01-6	4-Nitroaniline	1670	1730	104	54-113
91-20-3	Naphthalene	1670	1580	95	44-104
98-95-3	Nitrobenzene	1670	1530	92	43-108
621-64-7	N-Nitroso-di-n-propylamine	1670	1660	100	48-108
86-30-6	N-Nitrosodiphenylamine	1670	1730	104	62-110
85-01-8	Phenanthrene	1670	1750	105	63-111
129-00-0	Pyrene	1670	1870	112	65-115
120-82-1	1,2,4-Trichlorobenzene	1670	1460	88	45-100

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	95%	40-102%
4165-62-2	Phenol-d5	103%* [a]	41-100%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12917
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-BS	T011837.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12917-14, FA12917-15

CAS No.	Surrogate Recoveries	BSP	Limits
118-79-6	2,4,6-Tribromophenol	101%	42-108%
4165-60-0	Nitrobenzene-d5	93%	40-105%
321-60-8	2-Fluorobiphenyl	97%	43-107%
1718-51-0	Terphenyl-d14	131%* [a]	45-119%

(a) Outside control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12917
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-MS	T011843.D	1	03/06/14	FS	03/04/14	OP50690	ST562
OP50690-MSD	T011844.D	1	03/06/14	FS	03/04/14	OP50690	ST562
FA12790-12R	T011842.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12917-14, FA12917-15

CAS No.	Compound	FA12790-12R ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		3680	3770	102	3820	104	1	36-118/41
95-57-8	2-Chlorophenol	ND		1840	1810	98	1780	97	2	48-104/26
59-50-7	4-Chloro-3-methyl phenol	ND		1840	1920	104	1920	105	0	52-108/21
120-83-2	2,4-Dichlorophenol	ND		1840	1890	103	1960	107*	4	51-105/27
105-67-9	2,4-Dimethylphenol	ND		1840	1990	108*	2050	112*	3	43-96/23
51-28-5	2,4-Dinitrophenol	ND		3680	3710	101	4120	112	10	40-119/32
534-52-1	4,6-Dinitro-o-cresol	ND		3680	3410	93	3510	96	3	64-121/29
95-48-7	2-Methylphenol	ND		1840	1740	95	1800	98	3	46-107/24
	3&4-Methylphenol	ND		3680	3720	101	3850	105	3	44-111/24
88-75-5	2-Nitrophenol	ND		1840	1920	104	1940	106*	1	49-104/27
100-02-7	4-Nitrophenol	ND		3680	4300	117*	4090	112	5	56-116/23
87-86-5	Pentachlorophenol	ND		3680	4090	111	4310	118*	5	61-114/23
108-95-2	Phenol	ND		1840	1810	98	1850	101	2	45-110/24
95-95-4	2,4,5-Trichlorophenol	ND		1840	1820	99	2030	111	11	58-112/22
88-06-2	2,4,6-Trichlorophenol	ND		1840	1950	106	2130	116*	9	56-109/25
83-32-9	Acenaphthene	ND		1840	1900	103	1950	106	3	56-109/23
208-96-8	Acenaphthylene	ND		1840	1970	107*	2080	113*	5	56-106/23
120-12-7	Anthracene	ND		1840	1820	99	1920	105	5	61-110/21
56-55-3	Benzo(a)anthracene	ND		1840	2030	110	2070	113*	2	66-111/23
50-32-8	Benzo(a)pyrene	ND		1840	1910	104	2000	109*	5	59-104/23
205-99-2	Benzo(b)fluoranthene	ND		1840	1950	106	1890	103	3	67-113/24
191-24-2	Benzo(g,h,i)perylene	ND		1840	1790	97	1950	106	9	67-113/21
207-08-9	Benzo(k)fluoranthene	ND		1840	1740	95	1890	103	8	67-114/22
101-55-3	4-Bromophenyl phenyl ether	ND		1840	1700	92	1660	91	2	62-110/21
85-68-7	Butyl benzyl phthalate	ND		1840	1870	102	1950	106	4	65-113/20
100-51-6	Benzyl Alcohol	ND		1840	1940	105	2020	110*	4	53-108/24
91-58-7	2-Chloronaphthalene	ND		1840	1760	96	1920	105	9	53-106/23
106-47-8	4-Chloroaniline	ND		1840	1660	90	1710	93	3	30-115/30
86-74-8	Carbazole	ND		1840	2020	110	2030	111	0	60-111/19
218-01-9	Chrysene	ND		1840	1980	108	2020	110	2	65-112/25
111-91-1	bis(2-Chloroethoxy)methane	ND		1840	1810	98	1810	99	0	48-105/24
111-44-4	bis(2-Chloroethyl)ether	ND		1840	1620	88	1670	91	3	46-103/27
108-60-1	bis(2-Chloroisopropyl)ether	ND		1840	1660	90	1800	98	8	40-110/25
7005-72-3	4-Chlorophenyl phenyl ether	ND		1840	1810	98	1840	100	2	58-106/21
95-50-1	1,2-Dichlorobenzene	ND		1840	1380	75	1490	81	8	44-102/28
541-73-1	1,3-Dichlorobenzene	ND		1840	1440	78	1460	80	1	42-100/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12917
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-MS	T011843.D	1	03/06/14	FS	03/04/14	OP50690	ST562
OP50690-MSD	T011844.D	1	03/06/14	FS	03/04/14	OP50690	ST562
FA12790-12R	T011842.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12917-14, FA12917-15

CAS No.	Compound	FA12790-12R ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
106-46-7	1,4-Dichlorobenzene	ND		1840	1590	86	1540	84	3	40-106/29
121-14-2	2,4-Dinitrotoluene	ND		1840	1800	98	1920	105	6	59-109/20
606-20-2	2,6-Dinitrotoluene	ND		1840	1880	102	2000	109*	6	61-107/22
91-94-1	3,3'-Dichlorobenzidine	ND		1840	1680	91	1630	89	3	36-114/28
53-70-3	Dibenzo(a,h)anthracene	ND		1840	1810	98	1920	105	6	68-115/23
132-64-9	Dibenzofuran	ND		1840	1840	100	1970	107	7	57-108/22
84-74-2	Di-n-butyl phthalate	ND		1840	1770	96	1790	98	1	63-108/19
117-84-0	Di-n-octyl phthalate	ND		1840	1770	96	1830	100	3	64-119/21
84-66-2	Diethyl phthalate	ND		1840	1710	93	1790	98	5	61-109/20
131-11-3	Dimethyl phthalate	ND		1840	1610	88	1770	97	9	59-108/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		1840	1890	103	1920	105	2	64-115/23
206-44-0	Fluoranthene	ND		1840	1910	104	1980	108	4	60-108/25
86-73-7	Fluorene	ND		1840	1960	107	1990	109	2	58-109/21
118-74-1	Hexachlorobenzene	ND		1840	1830	99	1790	98	2	59-111/21
87-68-3	Hexachlorobutadiene	ND		1840	1780	97	1790	98	1	41-108/27
77-47-4	Hexachlorocyclopentadiene	ND		1840	1290	70	1460	80	12	49-110/31
67-72-1	Hexachloroethane	ND		1840	1440	78	1520	83	5	40-105/32
193-39-5	Indeno(1,2,3-cd)pyrene	ND		1840	1800	98	2010	110	11	66-116/22
78-59-1	Isophorone	ND		1840	1800	98*	1870	102*	4	42-89/22
91-57-6	2-Methylnaphthalene	ND		1840	1730	94	1820	99	5	47-106/27
88-74-4	2-Nitroaniline	ND		1840	1940	105	2190	119	12	56-123/24
99-09-2	3-Nitroaniline	ND		1840	1860	101	1950	106	5	41-111/25
100-01-6	4-Nitroaniline	ND		1840	1930	105	1860	101	4	54-113/22
91-20-3	Naphthalene	ND		1840	1800	98	1800	98	0	44-104/27
98-95-3	Nitrobenzene	ND		1840	1710	93	1830	100	7	43-108/25
621-64-7	N-Nitroso-di-n-propylamine	ND		1840	1880	102	1990	109*	6	48-108/27
86-30-6	N-Nitrosodiphenylamine	ND		1840	1990	108	2030	111*	2	62-110/21
85-01-8	Phenanthrene	ND		1840	1910	104	1920	105	1	63-111/22
129-00-0	Pyrene	ND		1840	1830	99	1910	104	4	65-115/25
120-82-1	1,2,4-Trichlorobenzene	ND		1840	1590	86	1690	92	6	45-100/26

CAS No.	Surrogate Recoveries	MS	MSD	FA12790-12R	Limits
367-12-4	2-Fluorophenol	99%	104%*	83%	40-102%
4165-62-2	Phenol-d5	103%*	104%*	89%	41-100%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12917
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50690-MS	T011843.D	1	03/06/14	FS	03/04/14	OP50690	ST562
OP50690-MSD	T011844.D	1	03/06/14	FS	03/04/14	OP50690	ST562
FA12790-12R	T011842.D	1	03/06/14	FS	03/04/14	OP50690	ST562

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12917-14, FA12917-15

CAS No.	Surrogate Recoveries	MS	MSD	FA12790-12R	Limits
118-79-6	2,4,6-Tribromophenol	105%	114%*	93%	42-108%
4165-60-0	Nitrobenzene-d5	92%	102%	94%	40-105%
321-60-8	2-Fluorobiphenyl	94%	106%	81%	43-107%
1718-51-0	Terphenyl-d14	107%	119%	95%	45-119%

* = 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: FA12917
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/14

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.042	.0025	.0042	0.00021	<0.042

Associated samples MP26919: FA12917-1, FA12917-2

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: FA12917
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/14 03/07/14

Metal	FA12977-7 Original	DUP	RPD	QC Limits	FA12977-7 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.025	0.027	7.7	0-20	0.025	0.55	0.462	113.7	80-120

Associated samples MP26919: FA12917-1, FA12917-2

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: FA12917
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/14

Metal	FA12977-7 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.025	0.57	0.455	119.8	3.6	20

Associated samples MP26919: FA12917-1, FA12917-2

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
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SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12917
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 03/07/14

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.26	0.25	104.0	80-120

Associated samples MP26919: FA12917-1, FA12917-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12917
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26919 Methods: SW846 7471B
Matrix Type: SOLID Units: ug/l

Prep Date: 03/07/14

Metal	FA12977-7 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.156	0.00	100.0(a)	0-10

Associated samples MP26919: FA12917-1, FA12917-2

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).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA12917
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26920 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/14

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.042	.0025	.0042	-0.00060	<0.042

Associated samples MP26920: FA12917-3, FA12917-4, FA12917-5, FA12917-6, FA12917-7, FA12917-8, FA12917-9, FA12917-10, FA12917-11, FA12917-12, FA12917-13, FA12917-14, FA12917-15

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: FA12917
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26920
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 03/07/14 03/07/14

Metal	FA12917-3 Original	DUP	RPD	QC Limits	FA12917-3 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.021	0.022	4.7	0-20	0.021	0.32	0.261	114.4	80-120

Associated samples MP26920: FA12917-3, FA12917-4, FA12917-5, FA12917-6, FA12917-7, FA12917-8, FA12917-9, FA12917-10, FA12917-11, FA12917-12, FA12917-13, FA12917-14, FA12917-15

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: FA12917
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26920 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/14

Metal	FA12917-3 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.021	0.34	0.27	118.3	6.1	20

Associated samples MP26920: FA12917-3, FA12917-4, FA12917-5, FA12917-6, FA12917-7, FA12917-8, FA12917-9, FA12917-10, FA12917-11, FA12917-12, FA12917-13, FA12917-14, FA12917-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12917
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26920
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 03/07/14

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.25	0.25	100.0	80-120

Associated samples MP26920: FA12917-3, FA12917-4, FA12917-5, FA12917-6, FA12917-7, FA12917-8, FA12917-9, FA12917-10, FA12917-11, FA12917-12, FA12917-13, FA12917-14, FA12917-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12917
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26920 Methods: SW846 7471B
Matrix Type: SOLID Units: ug/l

Prep Date: 03/07/14

Metal	FA12917-3 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.251	0.00	100.0(a)	0-10

Associated samples MP26920: FA12917-3, FA12917-4, FA12917-5, FA12917-6, FA12917-7, FA12917-8, FA12917-9, FA12917-10, FA12917-11, FA12917-12, FA12917-13, FA12917-14, FA12917-15

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).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA12917
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26934
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/11/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.75	1.6		
Antimony	1.0	.1	.1	0.070	<1.0
Arsenic	0.50	.1	.1	-0.030	<0.50
Barium	10	.05	.05		
Beryllium	0.25	.025	.025	0.0	<0.25
Cadmium	0.20	.025	.025	0.0	<0.20
Calcium	250	2.5	2.5		
Chromium	0.50	.05	.05	0.020	<0.50
Cobalt	2.5	.025	.025		
Copper	1.3	.05	.05	0.050	<1.3
Iron	15	.85	1.3		
Lead	1.0	.055	.08	0.010	<1.0
Magnesium	250	2.5	2.5		
Manganese	0.75	.025	.025		
Molybdenum	2.5	.025	.03		
Nickel	2.0	.025	.025	0.015	<2.0
Potassium	500	10	10		
Selenium	1.0	.12	.15	0.0050	<1.0
Silver	0.50	.033	.033	0.0	<0.50
Sodium	500	25	25		
Strontium	0.50	.02	.025		
Thallium	0.50	.075	.075	-0.060	<0.50
Tin	2.5	.035	.035		
Titanium	0.50	.045	.045		
Vanadium	2.5	.025	.025		
Zinc	1.0	.15	.15	0.18	<1.0

Associated samples MP26934: FA12917-1, FA12917-2, FA12917-3, FA12917-4, FA12917-5, FA12917-6, FA12917-7, FA12917-8, FA12917-9, FA12917-10, FA12917-11, FA12917-12, FA12917-13, FA12917-14, FA12917-15

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: FA12917
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26934
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date:			03/11/14					03/11/14	
Metal	FA12917-1 Original	DUP	RPD	QC Limits	FA12917-1 Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr								
Antimony	0.0	0.0	NC	0-20	0.0	18.3	24.4	75.0N(b)	80-120
Arsenic	0.28	0.45	46.6 (a)	0-20	0.28	86.0	97.6	87.8	80-120
Barium	anr								
Beryllium	0.0	0.029	200.0(a)	0-20	0.0	2.5	2.44	102.5	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	2.3	2.44	94.3	80-120
Calcium									
Chromium	1.3	1.4	7.4	0-20	1.3	11.1	9.76	100.4	80-120
Cobalt									
Copper	0.33	0.44	28.6 (a)	0-20	0.33	13.2	12.2	105.5	80-120
Iron									
Lead	1.2	1.6	28.6 (a)	0-20	1.2	24.9	24.4	97.1	80-120
Magnesium									
Manganese									
Molybdenum									
Nickel	0.38	0.38	0.0	0-20	0.38	23.8	24.4	96.0	80-120
Potassium									
Selenium	0.0	0.0	NC	0-20	0.0	86.1	97.6	88.2	80-120
Silver	0.0	0.0	NC	0-20	0.0	2.3	2.44	94.3	80-120
Sodium									
Strontium									
Thallium	0.0	0.0	NC	0-20	0.0	92.0	97.6	94.3	80-120
Tin									
Titanium									
Vanadium									
Zinc	1.1	1.2	8.7	0-20	1.1	24.7	24.4	96.7	80-120

Associated samples MP26934: FA12917-1, FA12917-2, FA12917-3, FA12917-4, FA12917-5, FA12917-6, FA12917-7, FA12917-8, FA12917-9, FA12917-10, FA12917-11, FA12917-12, FA12917-13, FA12917-14, FA12917-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.
(b) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA12917
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26934
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/11/14

Metal	FA12917-1 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	0.0	21.0	26.8	78.3N(a)	13.7	20
Arsenic	0.28	96.2	107	89.4	11.2	20
Barium	anr					
Beryllium	0.0	2.8	2.68	104.4	11.3	20
Cadmium	0.0	2.6	2.68	97.0	12.2	20
Calcium						
Chromium	1.3	12.1	10.7	100.7	8.6	20
Cobalt						
Copper	0.33	14.6	13.4	106.4	10.1	20
Iron						
Lead	1.2	27.3	26.8	97.3	9.2	20
Magnesium						
Manganese						
Molybdenum						
Nickel	0.38	26.5	26.8	97.4	10.7	20
Potassium						
Selenium	0.0	96.1	107	89.6	11.0	20
Silver	0.0	2.5	2.68	93.2	8.3	20
Sodium						
Strontium						
Thallium	0.0	101	107	94.2	9.3	20
Tin						
Titanium						
Vanadium						
Zinc	1.1	27.3	26.8	97.7	10.0	20

Associated samples MP26934: FA12917-1, FA12917-2, FA12917-3, FA12917-4, FA12917-5, FA12917-6, FA12917-7, FA12917-8, FA12917-9, FA12917-10, FA12917-11, FA12917-12, FA12917-13, FA12917-14, FA12917-15

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) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12917
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26934
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/11/14

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr			
Antimony	25.9	25	103.6	80-120
Arsenic	96.4	100	96.4	80-120
Barium	anr			
Beryllium	2.6	2.5	104.0	80-120
Cadmium	2.5	2.5	100.0	80-120
Calcium				
Chromium	10.6	10	106.0	80-120
Cobalt				
Copper	13.7	12.5	109.6	80-120
Iron				
Lead	24.5	25	98.0	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel	25.4	25	101.6	80-120
Potassium				
Selenium	95.2	100	95.2	80-120
Silver	2.5	2.5	100.0	80-120
Sodium				
Strontium				
Thallium	96.4	100	96.4	80-120
Tin				
Titanium				
Vanadium				
Zinc	25.7	25	102.8	80-120

Associated samples MP26934: FA12917-1, FA12917-2, FA12917-3, FA12917-4, FA12917-5, FA12917-6, FA12917-7, FA12917-8, FA12917-9, FA12917-10, FA12917-11, FA12917-12, FA12917-13, FA12917-14, FA12917-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12917
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26934 Methods: SW846 6010C
Matrix Type: SOLID Units: ug/l

Prep Date: 03/11/14

Metal	FA12917-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	0.00	0.00	NC	0-10
Arsenic	5.40	0.00	100.0(a)	0-10
Barium	anr			
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	26.0	25.5	1.9	0-10
Cobalt				
Copper	6.40	9.10	42.2 (a)	0-10
Iron				
Lead	22.9	27.0	17.9 (a)	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	7.40	8.10	9.5	0-10
Potassium				
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium				
Zinc	20.6	27.0	31.1 (a)	0-10

Associated samples MP26934: FA12917-1, FA12917-2, FA12917-3, FA12917-4, FA12917-5, FA12917-6, FA12917-7, FA12917-8, FA12917-9, FA12917-10, FA12917-11, FA12917-12, FA12917-13, FA12917-14, FA12917-15

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: FA12917
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26934
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/11/14

Metal	Sample ml	Final ml	FA12917-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10			99.8	0.2	5	100	99.8	80-120
Arsenic	9.8	10	5.4	5.292	99.7	0.2	5	100	94.4	80-120
Barium										
Beryllium	9.8	10			52	0.2	2.5	50	104.0	80-120
Cadmium	9.8	10			50	0.2	2.5	50	100.0	80-120
Calcium										
Chromium	9.8	10	26	25.48	77.1	0.2	2.5	50	103.2	80-120
Cobalt										
Copper	9.8	10	6.4	6.272	112.4	0.2	5	100	106.1	80-120
Iron										
Lead	9.8	10	22.9	22.442	72.3	0.2	2.5	50	99.7	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel	9.8	10	7.4	7.252	107.2	0.2	5	100	99.9	80-120
Potassium										
Selenium	9.8	10			88.3	0.2	5	100	88.3	80-120
Silver	9.8	10			48.6	0.2	2.5	50	97.2	80-120
Sodium										
Strontium										
Thallium	9.8	10			95.5	0.2	5	100	95.5	80-120
Tin										
Titanium										
Vanadium										
Zinc	9.8	10	20.6	20.188	270.8	0.2	12.5	250	100.2	80-120

Associated samples MP26934: FA12917-1, FA12917-2, FA12917-3, FA12917-4, FA12917-5, FA12917-6, FA12917-7, FA12917-8, FA12917-9, FA12917-10, FA12917-11, FA12917-12, FA12917-13, FA12917-14, FA12917-15

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

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: FA12917
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
Chromium, Hexavalent	GN60752	2.0	0.0	mg/kg	20.0	19.6	98.1	75-125%

Associated Samples:
Batch GN60752: FA12917-1, FA12917-2, FA12917-3, FA12917-4, FA12917-5, FA12917-6, FA12917-7, FA12917-8, FA12917-9, FA12917-10, FA12917-11, FA12917-12, FA12917-13, FA12917-14, FA12917-15
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA12917
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
Chromium, Hexavalent	GN60752	FA12917-15	mg/kg	3.1	3.5	10.2	0-20%
Solids, Percent	GN60416	FA12917-6	%	92.6	92.3	0.3	0-5%
Solids, Percent	GN60417	FA12917-13	%	93.3	93.3	0.0	0-5%
Solids, Percent	GN60442	FA12917-12	%	84.4	84.6	0.2	0-5%

Associated Samples:
Batch GN60416: FA12917-1, FA12917-2, FA12917-3, FA12917-4, FA12917-5, FA12917-6, FA12917-7
Batch GN60417: FA12917-8, FA12917-9, FA12917-10, FA12917-11, FA12917-13
Batch GN60442: FA12917-12, FA12917-14, FA12917-15
Batch GN60752: FA12917-1, FA12917-2, FA12917-3, FA12917-4, FA12917-5, FA12917-6, FA12917-7, FA12917-8, FA12917-9, FA12917-10, FA12917-11, FA12917-12, FA12917-13, FA12917-14, FA12917-15
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA12917
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
Chromium, Hexavalent	GN60752	FA12917-15	mg/kg	3.1	772.3	1720	221.8*(a)	75-125%
Chromium, Hexavalent	GN60752	FA12917-15	mg/kg	3.1	23.0	24.6	93.2	75-125%

Associated Samples:
Batch GN60752: FA12917-1, FA12917-2, FA12917-3, FA12917-4, FA12917-5, FA12917-6, FA12917-7, FA12917-8, FA12917-9, FA12917-10, FA12917-11, FA12917-12, FA12917-13, FA12917-14, FA12917-15
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery outside of acceptable QC criteria.

Southeast
ACCUTEST LABORATORIES

03/21/14

Technical Report for

United Technologies Corporation

AECOMSCG: Delavan Spray Technologies; Bamberg, SC

60314964

Accutest Job Number: FA12959

Sampling Dates: 03/01/14 - 03/03/14

Report to:

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Greenville, SC 29615
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Total number of pages in report: **174**

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

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Heather Wandrey 407-425-6700

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Accutest Laboratories

Sample Summary

United Technologies Corporation

Job No: FA12959

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA12959-1	03/01/14	09:55	LARM	03/04/14	SO	Soil	DPT-34 (8-10)
FA12959-2	03/01/14	09:55	LARM	03/04/14	SO	Soil	DPT-34 (8-10)A
FA12959-3	03/01/14	12:00	LARM	03/04/14	SO	Soil	DPT-36 (5-7)
FA12959-4	03/01/14	12:00	LARM	03/04/14	SO	Soil	DPT-36 (5-7)-A
FA12959-5	03/01/14	12:15	LARM	03/04/14	SO	Soil	DPT-36 (12-14)
FA12959-6	03/01/14	15:20	LARM	03/04/14	SO	Soil	DPT-35 (3-5)
FA12959-6D	03/01/14	15:20	LARM	03/04/14	SO	Soil Dup/MSD	DPT-35 (3-5)
FA12959-6S	03/01/14	15:20	LARM	03/04/14	SO	Soil Matrix Spike	DPT-35 (3-5)
FA12959-7	03/01/14	16:20	LARM	03/04/14	SO	Soil	DPT-35 (10.5-12.5)
FA12959-8	03/02/14	09:50	LARM	03/04/14	SO	Soil	DPT-37 (6-8)
FA12959-9	03/02/14	10:10	LARM	03/04/14	SO	Soil	DPT-38 (8-10)
FA12959-10	03/02/14	12:40	LARM	03/04/14	AQ	Equipment Blank	DPT-39 (8-10)-D
FA12959-11	03/02/14	13:05	LARM	03/04/14	SO	Soil	DPT-39 (8-10)

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

Sample Summary
(continued)

United Technologies Corporation

Job No: FA12959

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA12959-12	03/02/14	13:35	LARM	03/04/14	SO	Soil	DPT-41 (6-8)
FA12959-13	03/02/14	12:40	LARM	03/04/14	AQ	Trip Blank Soil	DPT-39 (8-10)-C
FA12959-14	03/03/14	10:20	LARM	03/04/14	SO	Soil	DPT-42 (8-10)
FA12959-15	03/03/14	11:10	LARM	03/04/14	SO	Soil	DPT-40 (9-11)
FA12959-16	03/03/14	13:20	LARM	03/04/14	SO	Soil	DPT-44 (7-9)
FA12959-17	03/03/14	13:25	LARM	03/04/14	SO	Soil	DPT-43 (5-7)
FA12959-18	03/03/14	15:20	LARM	03/04/14	SO	Soil	DPT-43 (11-12)
FA12959-19	03/03/14	09:25	LARM	03/04/14	SO	Soil	DPT-40 (2-4)

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

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: United Technologies Corporation **Job No:** FA12959

Site: AECOMSCG: Delavan Spray Technologies; Bamberg, SC **Report Date** 3/21/2014 3:31:55 PM

18 Samples and 1 Trip Blank were collected between 03/01/2014 and 03/03/2014 and were received at Accutest SE on 03/04/2014 properly preserved, at 2.2 Deg. C and intact. These Samples received an Accutest job number of FA12959. 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:** VZ924

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12912-1MS, FA12912-1MSD were used as the QC samples indicated.

Sample(s) FA12959-6MS, FA12959-6MSD have surrogates outside control limits. Probable cause is due to matrix interference.

FA12959-10: Sample was not preserved to a pH < 2.

FA12959-13: Sample was not preserved to a pH < 2.

Matrix: SO **Batch ID:** VC3897

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12959-6MS, FA12959-6MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Chloroethane are outside control limits. Blank Spike recovery is biased high. Analyte is non-detect in associated sample; therefore data integrity is not compromised.

Matrix Spike Recovery(s) for 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1-Dichloroethylene, Bromoform, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Ethylbenzene, Methylene chloride, Styrene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropene, Trichloroethylene, Xylene (total) are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 1,1-Dichloroethylene, Carbon disulfide, Ethylbenzene, Styrene, trans-1,3-Dichloropropene, Xylene (total) are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, cis-1,2-Dichloroethylene, Trichloroethylene are outside control limits for sample FA12959-6MSD. Probable cause is due to sample non-homogeneity.

Sample(s) FA12959-6MS, FA12959-6MSD have surrogates outside control limits. Probable cause is due to matrix interference.

FA12959-6 for Chloroethane: Associated BS recovery outside control limits.

Matrix: SO **Batch ID:** VC3898

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12956-2MS, FA12956-2MSD were used as the QC samples indicated.

Sample(s) FA12959-6MS, FA12959-6MSD have surrogates outside control limits. Probable cause is due to matrix interference.

Matrix: SO **Batch ID:** VG3373

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12937-3MS, FA12937-3MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for 1,1-Dichloroethylene are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

Matrix Spike Duplicate Recovery(s) for 1,1-Dichloroethylene, Carbon disulfide, Vinyl chloride are outside control limits. Probable cause is due to matrix interference. or method performance in a clean matrix, refer to Blank Spike.

Sample(s) FA12959-6MS, FA12959-6MSD have surrogates outside control limits. Probable cause is due to matrix interference.

FA12959-3: Soil vials were not received within 48 hours of sampling; results are considered minimum values.

Volatiles by GCMS By Method SW846 8260B

Matrix: SO **Batch ID:** VG3373

FA12959-4: Soil vials were not received within 48 hours of sampling; results are considered minimum values.

FA12959-5: Soil vials were not received within 48 hours of sampling; results are considered minimum values.

FA12959-3 for Benzene: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12959-4 for Benzene: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12959-5 for Benzene: Pre-weighed vials were altered in the field; sample weights are estimated.

Matrix: SO **Batch ID:** VH3204

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12959-14MS, FA12959-14MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Tetrachloroethylene are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

Sample(s) FA12959-6MS, FA12959-6MSD have surrogates outside control limits. Probable cause is due to matrix interference.

FA12959-1: Soil vials were not received within 48 hours of sampling; results are considered minimum values.

FA12959-7: Soil vials were not received within 48 hours of sampling; results are considered minimum values.

FA12959-9: Soil vials were not received within 48 hours of sampling; results are considered minimum values.

FA12959-14: Soil vials were not received within 48 hours of sampling; results are considered minimum values.

FA12959-15: Soil vials were not received within 48 hours of sampling; results are considered minimum values.

FA12959-16: Soil vials were not received within 48 hours of sampling; results are considered minimum values.

FA12959-17: Soil vials were not received within 48 hours of sampling; results are considered minimum values.

FA12959-18: Soil vials were not received within 48 hours of sampling; results are considered minimum values.

FA12959-1 for Acetone: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12959-7 for Benzene: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12959-9 for Benzene: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12959-11 for Benzene: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12959-12 for Benzene: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12959-14 for Benzene: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12959-15 for Benzene: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12959-16 for Benzene: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12959-17 for Benzene: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12959-18 for Benzene: Pre-weighed vials were altered in the field; sample weights are estimated.

Matrix: SO **Batch ID:** VH3205

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12959-8MS, FA12959-8MSD were used as the QC samples indicated.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for Tetrachloroethylene are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

Sample(s) FA12959-6MS, FA12959-6MSD have surrogates outside control limits. Probable cause is due to matrix interference.

FA12959-1: Soil vials were not received within 48 hours of sampling; results are considered minimum values.

FA12959-2: Soil vials were not received within 48 hours of sampling; results are considered minimum values.

FA12959-7: Soil vials were not received within 48 hours of sampling; results are considered minimum values.

FA12959-8: Soil vials were not received within 48 hours of sampling; results are considered minimum values.

FA12959-18: Soil vials were not received within 48 hours of sampling.

FA12959-19: Soil vials were not received within 48 hours of sampling; results are considered minimum values.

FA12959-1 for Tetrachloroethylene: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12959-2 for Acetone: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12959-2 for Tetrachloroethylene: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12959-8 for Benzene: Pre-weighed vials were altered in the field; sample weights are estimated.

FA12959-19 for Benzene: Pre-weighed vials were altered in the field; sample weights are estimated.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ **Batch ID:** OP50725

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) FA12855-1MS, FA12855-1MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Benzoic Acid are outside control limits. Sporadic marginal failure.

FA12959-10 for Benzoic Acid: Associated BS recovery outside control limits.

Matrix: SO **Batch ID:** OP50714

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) FA12959-6MS, FA12959-6MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for 3,3'-Dichlorobenzidine are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

RPD(s) for MSD for 3,3'-Dichlorobenzidine are outside control limits for sample OP50714-MSD. Probable cause is due to sample non-homogeneity.

FA12959-15 for 2-Fluorophenol: Surrogate recoveries corrected for double spike.

FA12959-15 for Phenol-d5: Surrogate recoveries corrected for double spike.

FA12959-15 for 2,4,6-Tribromophenol: Surrogate recoveries corrected for double spike.

FA12959-15 for Nitrobenzene-d5: Surrogate recoveries corrected for double spike.

FA12959-15 for 2-Fluorobiphenyl: Surrogate recoveries corrected for double spike.

FA12959-15 for Terphenyl-d14: Surrogate recoveries corrected for double spike.

Metals By Method SW846 6010C

Matrix: SO **Batch ID:** MP26934

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) FA12917-1DUP, FA12917-1MS, FA12917-1MSD, FA12917-1PS, FA12917-1SDL were used as the QC samples for metals.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for Antimony are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

RPD(s) for Duplicate for Arsenic, Beryllium, Copper, Lead are outside control limits for sample MP26934-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Arsenic, Copper, Lead, Zinc are outside control limits for sample MP26934-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 7471B

Matrix: SO **Batch ID:** MP26920

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) FA12917-3DUP, FA12917-3MS, FA12917-3MSD, FA12917-3SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Mercury are outside control limits for sample MP26920-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Wet Chemistry By Method SM19 2540G

Matrix: SO **Batch ID:** GN60434

Sample(s) FA12959-4DUP was used as the QC samples for Solids, Percent.

Wet Chemistry By Method SM19 2540G

Matrix: SO **Batch ID:** GN60472

Sample(s) FA13060-1DUP was used as the QC samples for Solids, Percent.

Matrix: SO **Batch ID:** GN60474

Sample(s) FA12998-2DUP was used as the QC samples for Solids, Percent.

Matrix: SO **Batch ID:** GN60506

Sample(s) FA12959-3DUP was used as the QC samples for Solids, Percent.

Wet Chemistry By Method SW846 3060A/7196A

Matrix: SO **Batch ID:** GN60625

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12814-11DUP, FA12814-11MS were used as the QC samples for Chromium, Hexavalent.

Wet Chemistry By Method SW846 9045D

Matrix: SO **Batch ID:** GN60674

Sample(s) FA12959-1DUP was used as the QC samples for pH.

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: March 21, 2014

Lovelie Metzgar, QA Officer (signature on file)

Summary of Hits

Job Number: FA12959
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 03/01/14 thru 03/03/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA12959-1	**DPT-34 (8-10)**					
Tetrachloroethylene [a]		371	260	66	ug/kg	SW846 8260B
Arsenic		1.2	0.47	0.094	mg/kg	SW846 6010C
Beryllium		0.023 J	0.23	0.023	mg/kg	SW846 6010C
Chromium		14.7	0.47	0.047	mg/kg	SW846 6010C
Copper		43.3	1.2	0.047	mg/kg	SW846 6010C
Lead		3.0	0.94	0.075	mg/kg	SW846 6010C
Mercury		0.013 J	0.044	0.0044	mg/kg	SW846 7471B
Nickel		0.71 J	1.9	0.023	mg/kg	SW846 6010C
Silver		0.042 J	0.47	0.031	mg/kg	SW846 6010C
Zinc		29.3	0.94	0.14	mg/kg	SW846 6010C
pH		3.87			su	SW846 9045D
FA12959-2	**DPT-34 (8-10)A**					
1,1,1-Trichloroethane [b]		2.0 J	3.5	0.71	ug/kg	SW846 8260B
Tetrachloroethylene [a]		459	200	51	ug/kg	SW846 8260B
2-Methylphenol		22.3 J	190	19	ug/kg	SW846 8270D
Benzyl Alcohol		29.9 J	190	19	ug/kg	SW846 8270D
Arsenic		0.98	0.50	0.099	mg/kg	SW846 6010C
Beryllium		0.025 J	0.25	0.025	mg/kg	SW846 6010C
Chromium		14.7	0.50	0.050	mg/kg	SW846 6010C
Copper		52.7	1.2	0.050	mg/kg	SW846 6010C
Lead		3.2	0.99	0.079	mg/kg	SW846 6010C
Mercury		0.018 J	0.044	0.0044	mg/kg	SW846 7471B
Nickel		0.95 J	2.0	0.025	mg/kg	SW846 6010C
Zinc		35.1	0.99	0.15	mg/kg	SW846 6010C
Chromium, Hexavalent		0.97 J	2.2	0.96	mg/kg	SW846 3060A/7196A
pH		3.97			su	SW846 9045D
FA12959-3	**DPT-36 (5-7)**					
Tetrachloroethylene [b]		13.9	3.5	0.88	ug/kg	SW846 8260B
FA12959-4	**DPT-36 (5-7)-A**					
Tetrachloroethylene [b]		3.9	3.7	0.94	ug/kg	SW846 8260B
2-Methylphenol		95.1 J	180	18	ug/kg	SW846 8270D
Benzyl Alcohol		128 J	180	18	ug/kg	SW846 8270D
FA12959-5	**DPT-36 (12-14)**					
cis-1,2-Dichloroethylene [b]		2.1 J	3.8	0.75	ug/kg	SW846 8260B
Tetrachloroethylene [b]		101	3.8	0.95	ug/kg	SW846 8260B

Summary of Hits

Job Number: FA12959
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 03/01/14 thru 03/03/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Trichloroethylene [b]		1.4 J	3.8	0.77	ug/kg	SW846 8260B
FA12959-6	**DPT-35 (3-5)**					
Chloroform		1.8 J	3.4	0.76	ug/kg	SW846 8260B
1,1-Dichloroethylene		3.0 J	3.4	0.67	ug/kg	SW846 8260B
cis-1,2-Dichloroethylene		22.2	3.4	0.67	ug/kg	SW846 8260B
1,1,1-Trichloroethane		24.8	3.4	0.67	ug/kg	SW846 8260B
Tetrachloroethylene		85400	2700	680	ug/kg	SW846 8260B
Trichloroethylene		32.2	3.4	0.69	ug/kg	SW846 8260B
Xylene (total)		19.9	10	1.8	ug/kg	SW846 8260B
Dibenzofuran		34.5 J	200	20	ug/kg	SW846 8270D
Di-n-butyl phthalate		76.7 J	390	39	ug/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate		463	390	39	ug/kg	SW846 8270D
Isophorone		557	200	20	ug/kg	SW846 8270D
2-Methylnaphthalene		219	200	20	ug/kg	SW846 8270D
Naphthalene		82.0 J	200	20	ug/kg	SW846 8270D
Phenanthrene		134 J	200	20	ug/kg	SW846 8270D
FA12959-7	**DPT-35 (10.5-12.5)**					
cis-1,2-Dichloroethylene [b]		10.9	3.8	0.76	ug/kg	SW846 8260B
1,1,1-Trichloroethane [b]		4.6	3.8	0.76	ug/kg	SW846 8260B
Tetrachloroethylene [b]		449	210	52	ug/kg	SW846 8260B
Trichloroethylene [b]		2.3 J	3.8	0.77	ug/kg	SW846 8260B
FA12959-8	**DPT-37 (6-8)**					
Tetrachloroethylene [b]		47.0	3.9	0.99	ug/kg	SW846 8260B
FA12959-9	**DPT-38 (8-10)**					
Tetrachloroethylene [b]		13.6	3.3	0.83	ug/kg	SW846 8260B
FA12959-10	**DPT-39 (8-10)-D**					
No hits reported in this sample.						
FA12959-11	**DPT-39 (8-10)**					
bis(2-Ethylhexyl)phthalate		136 J	400	40	ug/kg	SW846 8270D
FA12959-12	**DPT-41 (6-8)**					
Tetrachloroethylene		2.5 J	3.9	0.99	ug/kg	SW846 8260B

Summary of Hits

Job Number: FA12959
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 03/01/14 thru 03/03/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Benzyl Alcohol		106 J	190	19	ug/kg	SW846 8270D
FA12959-13	**DPT-39 (8-10)-C**					
No hits reported in this sample.						
FA12959-14	**DPT-42 (8-10)**					
Tetrachloroethylene [b]		5.0	3.7	0.92	ug/kg	SW846 8260B
FA12959-15	**DPT-40 (9-11)**					
Tetrachloroethylene [b]		11.6	4.2	1.1	ug/kg	SW846 8260B
FA12959-16	**DPT-44 (7-9)**					
Tetrachloroethylene [b]		24.3	3.2	0.80	ug/kg	SW846 8260B
FA12959-17	**DPT-43 (5-7)**					
Acetone [b]		24.6 J	40	12	ug/kg	SW846 8260B
Tetrachloroethylene [b]		12.1	4.0	1.0	ug/kg	SW846 8260B
FA12959-18	**DPT-43 (11-12)**					
cis-1,2-Dichloroethylene [b]		2.9 J	4.0	0.79	ug/kg	SW846 8260B
Tetrachloroethylene [c]		535	230	58	ug/kg	SW846 8260B
Trichloroethylene [b]		3.1 J	4.0	0.81	ug/kg	SW846 8260B
FA12959-19	**DPT-40 (2-4)**					
Tetrachloroethylene [b]		7.7	3.0	0.75	ug/kg	SW846 8260B
Benzyl Alcohol		87.8 J	180	18	ug/kg	SW846 8270D

(a) Soil vials were not received within 48 hours of sampling; results are considered minimum values. Pre-weighed vials were altered in the field; sample weights are estimated.
(b) Soil vials were not received within 48 hours of sampling; results are considered minimum values.
(c) Soil vials were not received within 48 hours of sampling.

Southeast ACCUTEST LABORATORIES

4

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	DPT-34 (8-10)		
Lab Sample ID:	FA12959-1	**Date Sampled:**	03/01/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	89.5
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H0084541.D	1	03/04/14	EP	n/a	n/a	VH3204
Run #2 [a]	H0084547.D	1	03/05/14	EP	n/a	n/a	VH3205

	Initial Weight	Methanol Aliquot
Run #1	6.57 g	
Run #2	6.02 g	100 ul

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [b]	ND	43	13	ug/kg	
71-43-2	Benzene	ND	4.3	0.85	ug/kg	
75-27-4	Bromodichloromethane	ND	4.3	0.85	ug/kg	
75-25-2	Bromoform	ND	4.3	0.92	ug/kg	
108-90-7	Chlorobenzene	ND	4.3	0.85	ug/kg	
75-00-3	Chloroethane	ND	4.3	1.9	ug/kg	
67-66-3	Chloroform	ND	4.3	0.96	ug/kg	
75-15-0	Carbon disulfide	ND	4.3	0.85	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.3	1.2	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.3	0.85	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	4.3	0.85	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.3	0.85	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.3	0.85	ug/kg	
124-48-1	Dibromochloromethane	ND	4.3	0.85	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	4.3	0.85	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.3	0.85	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	4.3	1.1	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.3	0.85	ug/kg	
100-41-4	Ethylbenzene	ND	4.3	0.85	ug/kg	
591-78-6	2-Hexanone	ND	21	4.2	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	21	4.3	ug/kg	
74-83-9	Methyl bromide	ND	4.3	1.6	ug/kg	
74-87-3	Methyl chloride	ND	4.3	1.7	ug/kg	
75-09-2	Methylene chloride	ND	8.5	3.4	ug/kg	
78-93-3	Methyl ethyl ketone	ND	21	6.4	ug/kg	
100-42-5	Styrene	ND	4.3	0.85	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.3	0.85	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.3	1.2	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.3	1.4	ug/kg	
127-18-4	Tetrachloroethylene [b]	371 [c]	260	66	ug/kg	
108-88-3	Toluene	ND	4.3	0.85	ug/kg	
79-01-6	Trichloroethylene	ND	4.3	0.87	ug/kg	

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:	DPT-34 (8-10)		
Lab Sample ID:	FA12959-1	**Date Sampled:**	03/01/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	89.5
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	4.3	0.87	ug/kg	
1330-20-7	Xylene (total)	ND	13	2.3	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%	82%	75-124%
2037-26-5	Toluene-D8	93%	94%	75-126%
460-00-4	4-Bromofluorobenzene	96%	98%	71-133%
17060-07-0	1,2-Dichloroethane-D4	108%	101%	72-135%

(a) Soil vials were not received within 48 hours of sampling; results are considered minimum values.
(b) Pre-weighed vials were altered in the field; sample weights are estimated.
(c) Result is from Run# 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: DPT-34 (8-10)
Lab Sample ID: FA12959-1 **Date Sampled:** 03/01/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 89.5
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X033613.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	930	190	ug/kg	
95-57-8	2-Chlorophenol	ND	190	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	19	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	21	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	930	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	370	74	ug/kg	
95-48-7	2-Methylphenol	ND	190	19	ug/kg	
	3&4-Methylphenol	ND	190	37	ug/kg	
88-75-5	2-Nitrophenol	ND	190	19	ug/kg	
100-02-7	4-Nitrophenol	ND	930	150	ug/kg	
87-86-5	Pentachlorophenol	ND	930	150	ug/kg	
108-95-2	Phenol	ND	190	19	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	24	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	19	ug/kg	
83-32-9	Acenaphthene	ND	190	24	ug/kg	
208-96-8	Acenaphthylene	ND	190	19	ug/kg	
120-12-7	Anthracene	ND	190	19	ug/kg	
56-55-3	Benzo(a)anthracene	ND	190	19	ug/kg	
50-32-8	Benzo(a)pyrene	ND	190	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	190	37	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	19	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	22	ug/kg	
106-47-8	4-Chloroaniline	ND	190	19	ug/kg	
86-74-8	Carbazole	ND	190	19	ug/kg	
218-01-9	Chrysene	ND	190	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	19	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	19	ug/kg	

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: DPT-34 (8-10)
Lab Sample ID: FA12959-1 **Date Sampled:** 03/01/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 89.5
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	190	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	28	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	21	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	19	ug/kg	
132-64-9	Dibenzofuran	ND	190	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	370	37	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	190	37	ug/kg	
84-66-2	Diethyl phthalate	ND	370	37	ug/kg	
131-11-3	Dimethyl phthalate	ND	190	37	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	370	37	ug/kg	
206-44-0	Fluoranthene	ND	190	19	ug/kg	
86-73-7	Fluorene	ND	190	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	19	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	19	ug/kg	
78-59-1	Isophorone	ND	190	19	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	19	ug/kg	
88-74-4	2-Nitroaniline	ND	190	37	ug/kg	
99-09-2	3-Nitroaniline	ND	190	37	ug/kg	
100-01-6	4-Nitroaniline	ND	190	37	ug/kg	
91-20-3	Naphthalene	ND	190	19	ug/kg	
98-95-3	Nitrobenzene	ND	190	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	19	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	19	ug/kg	
85-01-8	Phenanthrene	ND	190	19	ug/kg	
129-00-0	Pyrene	ND	190	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	79%		40-102%
4165-62-2	Phenol-d5	86%		41-100%
118-79-6	2,4,6-Tribromophenol	90%		42-108%

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:	DPT-34 (8-10)		
Lab Sample ID:	FA12959-1	**Date Sampled:**	03/01/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	89.5
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	82%		40-105%
321-60-8	2-Fluorobiphenyl	82%		43-107%
1718-51-0	Terphenyl-d14	110%		45-119%

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: DPT-34 (8-10)
Lab Sample ID: FA12959-1
Matrix: SO - Soil
Date Sampled: 03/01/14
Date Received: 03/04/14
Percent Solids: 89.5
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.094 U	0.94	0.094	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Arsenic	1.2	0.47	0.094	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.023 J	0.23	0.023	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Cadmium	0.023 U	0.19	0.023	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Chromium	14.7	0.47	0.047	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Copper	43.3	1.2	0.047	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Lead	3.0	0.94	0.075	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Mercury	0.013 J	0.044	0.0044	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [1]	SW846 7471B [3]
Nickel	0.71 J	1.9	0.023	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Selenium	0.14 U	0.94	0.14	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Silver	0.042 J	0.47	0.031	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Thallium	0.070 U	0.47	0.070	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Zinc	29.3	0.94	0.14	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA11440
(2) Instrument QC Batch: MA11452
(3) Prep QC Batch: MP26920
(4) Prep QC Batch: MP26934

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: DPT-34 (8-10)
Lab Sample ID: FA12959-1
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/01/14
Date Received: 03/04/14
Percent Solids: 89.5

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.96 U	2.2	0.96	mg/kg	1	03/14/14 10:45	FN	SW846 3060A/7196A
Solids, Percent	89.5			%	1	03/08/14 12:32	LE	SM19 2540G
pH	3.87			su	1	03/21/14 14:00	JA	SW846 9045D

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:	DPT-34 (8-10)A		
Lab Sample ID:	FA12959-2	**Date Sampled:**	03/01/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	89.2
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H0084548.D	1	03/05/14	EP	n/a	n/a	VH3205
Run #2 [a]	H0084549.D	1	03/05/14	EP	n/a	n/a	VH3205

	Initial Weight	Methanol Aliquot
Run #1	7.93 g	
Run #2	8.15 g	100 ul

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [b]	ND	35	11	ug/kg	
71-43-2	Benzene	ND	3.5	0.71	ug/kg	
75-27-4	Bromodichloromethane	ND	3.5	0.71	ug/kg	
75-25-2	Bromoform	ND	3.5	0.76	ug/kg	
108-90-7	Chlorobenzene	ND	3.5	0.71	ug/kg	
75-00-3	Chloroethane	ND	3.5	1.6	ug/kg	
67-66-3	Chloroform	ND	3.5	0.80	ug/kg	
75-15-0	Carbon disulfide	ND	3.5	0.71	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.5	0.98	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.5	0.71	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.5	0.71	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.5	0.71	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.5	0.71	ug/kg	
124-48-1	Dibromochloromethane	ND	3.5	0.71	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.5	0.71	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.5	0.71	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.5	0.95	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.5	0.71	ug/kg	
100-41-4	Ethylbenzene	ND	3.5	0.71	ug/kg	
591-78-6	2-Hexanone	ND	18	3.5	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	18	3.5	ug/kg	
74-83-9	Methyl bromide	ND	3.5	1.3	ug/kg	
74-87-3	Methyl chloride	ND	3.5	1.4	ug/kg	
75-09-2	Methylene chloride	ND	7.1	2.8	ug/kg	
78-93-3	Methyl ethyl ketone	ND	18	5.3	ug/kg	
100-42-5	Styrene	ND	3.5	0.71	ug/kg	
71-55-6	1,1,1-Trichloroethane	2.0	3.5	0.71	ug/kg	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.5	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.5	1.1	ug/kg	
127-18-4	Tetrachloroethylene [b]	459 [c]	200	51	ug/kg	
108-88-3	Toluene	ND	3.5	0.71	ug/kg	
79-01-6	Trichloroethylene	ND	3.5	0.72	ug/kg	

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:	DPT-34 (8-10)A		
Lab Sample ID:	FA12959-2	**Date Sampled:**	03/01/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	89.2
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.5	0.72	ug/kg	
1330-20-7	Xylene (total)	ND	11	1.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%	90%	75-124%
2037-26-5	Toluene-D8	93%	93%	75-126%
460-00-4	4-Bromofluorobenzene	97%	96%	71-133%
17060-07-0	1,2-Dichloroethane-D4	112%	102%	72-135%

(a) Soil vials were not received within 48 hours of sampling; results are considered minimum values.
(b) Pre-weighed vials were altered in the field; sample weights are estimated.
(c) Result is from Run# 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: DPT-34 (8-10)A
Lab Sample ID: FA12959-2 **Date Sampled:** 03/01/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 89.2
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X033616.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	940	190	ug/kg	
95-57-8	2-Chlorophenol	ND	190	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	19	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	21	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	940	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	370	75	ug/kg	
95-48-7	2-Methylphenol	22.3	190	19	ug/kg	J
	3&4-Methylphenol	ND	190	37	ug/kg	
88-75-5	2-Nitrophenol	ND	190	19	ug/kg	
100-02-7	4-Nitrophenol	ND	940	150	ug/kg	
87-86-5	Pentachlorophenol	ND	940	150	ug/kg	
108-95-2	Phenol	ND	190	19	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	24	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	19	ug/kg	
83-32-9	Acenaphthene	ND	190	24	ug/kg	
208-96-8	Acenaphthylene	ND	190	19	ug/kg	
120-12-7	Anthracene	ND	190	19	ug/kg	
56-55-3	Benzo(a)anthracene	ND	190	19	ug/kg	
50-32-8	Benzo(a)pyrene	ND	190	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	190	37	ug/kg	
100-51-6	Benzyl Alcohol	29.9	190	19	ug/kg	J
91-58-7	2-Chloronaphthalene	ND	190	22	ug/kg	
106-47-8	4-Chloroaniline	ND	190	19	ug/kg	
86-74-8	Carbazole	ND	190	19	ug/kg	
218-01-9	Chrysene	ND	190	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	19	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	19	ug/kg	

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: DPT-34 (8-10)A
Lab Sample ID: FA12959-2 **Date Sampled:** 03/01/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 89.2
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	190	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	28	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	21	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	21	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	19	ug/kg	
132-64-9	Dibenzofuran	ND	190	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	370	37	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	190	37	ug/kg	
84-66-2	Diethyl phthalate	ND	370	37	ug/kg	
131-11-3	Dimethyl phthalate	ND	190	37	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	370	37	ug/kg	
206-44-0	Fluoranthene	ND	190	19	ug/kg	
86-73-7	Fluorene	ND	190	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	19	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	19	ug/kg	
78-59-1	Isophorone	ND	190	19	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	19	ug/kg	
88-74-4	2-Nitroaniline	ND	190	37	ug/kg	
99-09-2	3-Nitroaniline	ND	190	37	ug/kg	
100-01-6	4-Nitroaniline	ND	190	37	ug/kg	
91-20-3	Naphthalene	ND	190	19	ug/kg	
98-95-3	Nitrobenzene	ND	190	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	19	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	19	ug/kg	
85-01-8	Phenanthrene	ND	190	19	ug/kg	
129-00-0	Pyrene	ND	190	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	74%		40-102%
4165-62-2	Phenol-d5	81%		41-100%
118-79-6	2,4,6-Tribromophenol	84%		42-108%

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:	DPT-34 (8-10)A		
Lab Sample ID:	FA12959-2	**Date Sampled:**	03/01/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	89.2
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%		40-105%
321-60-8	2-Fluorobiphenyl	76%		43-107%
1718-51-0	Terphenyl-d14	107%		45-119%

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: DPT-34 (8-10)A
Lab Sample ID: FA12959-2
Matrix: SO - Soil
Date Sampled: 03/01/14
Date Received: 03/04/14
Percent Solids: 89.2
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.099 U	0.99	0.099	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Arsenic	0.98	0.50	0.099	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.025 J	0.25	0.025	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Cadmium	0.025 U	0.20	0.025	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Chromium	14.7	0.50	0.050	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Copper	52.7	1.2	0.050	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Lead	3.2	0.99	0.079	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Mercury	0.018 J	0.044	0.0044	mg/kg	1	03/07/14	03/07/14	JL	SW846 7471B [1]	SW846 7471B [3]
Nickel	0.95 J	2.0	0.025	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Selenium	0.15 U	0.99	0.15	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Silver	0.032 U	0.50	0.032	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Thallium	0.074 U	0.50	0.074	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]
Zinc	35.1	0.99	0.15	mg/kg	1	03/11/14	03/12/14	LM	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA11440
(2) Instrument QC Batch: MA11452
(3) Prep QC Batch: MP26920
(4) Prep QC Batch: MP26934

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: DPT-34 (8-10)A
Lab Sample ID: FA12959-2
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/01/14
Date Received: 03/04/14
Percent Solids: 89.2

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.97 J	2.2	0.96	mg/kg	1	03/14/14 10:45	FN	SW846 3060A/7196A
Solids, Percent	89.2			%	1	03/08/14 12:32	LE	SM19 2540G
pH	3.97			su	1	03/21/14 14:00	JA	SW846 9045D

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: DPT-36 (5-7)
Lab Sample ID: FA12959-3 **Date Sampled:** 03/01/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8260B **Percent Solids:** 89.7
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	G0092693.D	1	03/04/14	EP	n/a	n/a	VG3373
Run #2							

	Initial Weight
Run #1	7.96 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	35	11	ug/kg	
71-43-2	Benzene [b]	ND	3.5	0.70	ug/kg	
75-27-4	Bromodichloromethane	ND	3.5	0.70	ug/kg	
75-25-2	Bromoform	ND	3.5	0.76	ug/kg	
108-90-7	Chlorobenzene	ND	3.5	0.70	ug/kg	
75-00-3	Chloroethane	ND	3.5	1.6	ug/kg	
67-66-3	Chloroform	ND	3.5	0.79	ug/kg	
75-15-0	Carbon disulfide	ND	3.5	0.70	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.5	0.97	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.5	0.70	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.5	0.70	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.5	0.70	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.5	0.70	ug/kg	
124-48-1	Dibromochloromethane	ND	3.5	0.70	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.5	0.70	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.5	0.70	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.5	0.94	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.5	0.70	ug/kg	
100-41-4	Ethylbenzene	ND	3.5	0.70	ug/kg	
591-78-6	2-Hexanone	ND	18	3.4	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	18	3.5	ug/kg	
74-83-9	Methyl bromide	ND	3.5	1.3	ug/kg	
74-87-3	Methyl chloride	ND	3.5	1.4	ug/kg	
75-09-2	Methylene chloride	ND	7.0	2.8	ug/kg	
78-93-3	Methyl ethyl ketone	ND	18	5.2	ug/kg	
100-42-5	Styrene	ND	3.5	0.70	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.5	0.70	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.5	0.99	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.5	1.1	ug/kg	
127-18-4	Tetrachloroethylene	13.9	3.5	0.88	ug/kg	
108-88-3	Toluene	ND	3.5	0.70	ug/kg	
79-01-6	Trichloroethylene	ND	3.5	0.71	ug/kg	

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:	DPT-36 (5-7)		
Lab Sample ID:	FA12959-3	**Date Sampled:**	03/01/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	89.7
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.5	0.71	ug/kg	
1330-20-7	Xylene (total)	ND	11	1.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		75-124%
2037-26-5	Toluene-D8	106%		75-126%
460-00-4	4-Bromofluorobenzene	106%		71-133%
17060-07-0	1,2-Dichloroethane-D4	116%		72-135%

(a) Soil vials were not received within 48 hours of sampling; results are considered minimum values.
(b) Pre-weighed vials were altered in the field; sample weights are estimated.

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: DPT-36 (5-7)
Lab Sample ID: FA12959-3 **Date Sampled:** 03/01/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 89.7
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X033617.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	920	180	ug/kg	
95-57-8	2-Chlorophenol	ND	180	18	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	18	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	19	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	180	20	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	920	180	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	370	73	ug/kg	
95-48-7	2-Methylphenol	ND	180	18	ug/kg	
	3&4-Methylphenol	ND	180	37	ug/kg	
88-75-5	2-Nitrophenol	ND	180	18	ug/kg	
100-02-7	4-Nitrophenol	ND	920	150	ug/kg	
87-86-5	Pentachlorophenol	ND	920	150	ug/kg	
108-95-2	Phenol	ND	180	18	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	24	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	18	ug/kg	
83-32-9	Acenaphthene	ND	180	23	ug/kg	
208-96-8	Acenaphthylene	ND	180	18	ug/kg	
120-12-7	Anthracene	ND	180	18	ug/kg	
56-55-3	Benzo(a)anthracene	ND	180	18	ug/kg	
50-32-8	Benzo(a)pyrene	ND	180	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	180	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	180	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	180	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	180	18	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	180	37	ug/kg	
100-51-6	Benzyl Alcohol	ND	180	18	ug/kg	
91-58-7	2-Chloronaphthalene	ND	180	22	ug/kg	
106-47-8	4-Chloroaniline	ND	180	18	ug/kg	
86-74-8	Carbazole	ND	180	18	ug/kg	
218-01-9	Chrysene	ND	180	18	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	180	18	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	180	18	ug/kg	

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: DPT-36 (5-7)
Lab Sample ID: FA12959-3 **Date Sampled:** 03/01/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 89.7
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	180	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	180	27	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	180	18	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	180	18	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	180	18	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	180	21	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	180	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	180	18	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	180	18	ug/kg	
132-64-9	Dibenzofuran	ND	180	18	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	370	37	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	180	37	ug/kg	
84-66-2	Diethyl phthalate	ND	370	37	ug/kg	
131-11-3	Dimethyl phthalate	ND	180	37	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	370	37	ug/kg	
206-44-0	Fluoranthene	ND	180	18	ug/kg	
86-73-7	Fluorene	ND	180	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	180	18	ug/kg	
87-68-3	Hexachlorobutadiene	ND	180	18	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	180	18	ug/kg	
67-72-1	Hexachloroethane	ND	180	18	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	180	18	ug/kg	
78-59-1	Isophorone	ND	180	18	ug/kg	
91-57-6	2-Methylnaphthalene	ND	180	18	ug/kg	
88-74-4	2-Nitroaniline	ND	180	37	ug/kg	
99-09-2	3-Nitroaniline	ND	180	37	ug/kg	
100-01-6	4-Nitroaniline	ND	180	37	ug/kg	
91-20-3	Naphthalene	ND	180	18	ug/kg	
98-95-3	Nitrobenzene	ND	180	18	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	180	18	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	18	ug/kg	
85-01-8	Phenanthrene	ND	180	18	ug/kg	
129-00-0	Pyrene	ND	180	18	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	180	18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	80%		40-102%
4165-62-2	Phenol-d5	86%		41-100%
118-79-6	2,4,6-Tribromophenol	91%		42-108%

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:	DPT-36 (5-7)		
Lab Sample ID:	FA12959-3	**Date Sampled:**	03/01/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	89.7
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	83%		40-105%
321-60-8	2-Fluorobiphenyl	83%		43-107%
1718-51-0	Terphenyl-d14	111%		45-119%

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: DPT-36 (5-7)-A
Lab Sample ID: FA12959-4 **Date Sampled:** 03/01/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8260B **Percent Solids:** 90.0
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	G0092694.D	1	03/04/14	EP	n/a	n/a	VG3373
Run #2							

	Initial Weight
Run #1	7.42 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	37	11	ug/kg	
71-43-2	Benzene [b]	ND	3.7	0.75	ug/kg	
75-27-4	Bromodichloromethane	ND	3.7	0.75	ug/kg	
75-25-2	Bromoform	ND	3.7	0.81	ug/kg	
108-90-7	Chlorobenzene	ND	3.7	0.75	ug/kg	
75-00-3	Chloroethane	ND	3.7	1.7	ug/kg	
67-66-3	Chloroform	ND	3.7	0.85	ug/kg	
75-15-0	Carbon disulfide	ND	3.7	0.75	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.7	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.7	0.75	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.7	0.75	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.7	0.75	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.7	0.75	ug/kg	
124-48-1	Dibromochloromethane	ND	3.7	0.75	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.7	0.75	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.7	0.75	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.7	1.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.7	0.75	ug/kg	
100-41-4	Ethylbenzene	ND	3.7	0.75	ug/kg	
591-78-6	2-Hexanone	ND	19	3.7	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	19	3.7	ug/kg	
74-83-9	Methyl bromide	ND	3.7	1.4	ug/kg	
74-87-3	Methyl chloride	ND	3.7	1.5	ug/kg	
75-09-2	Methylene chloride	ND	7.5	3.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	19	5.6	ug/kg	
100-42-5	Styrene	ND	3.7	0.75	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.7	0.75	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.7	1.1	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.7	1.2	ug/kg	
127-18-4	Tetrachloroethylene	3.9	3.7	0.94	ug/kg	
108-88-3	Toluene	ND	3.7	0.75	ug/kg	
79-01-6	Trichloroethylene	ND	3.7	0.76	ug/kg	

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:	DPT-36 (5-7)-A		
Lab Sample ID:	FA12959-4	**Date Sampled:**	03/01/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	90.0
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.7	0.76	ug/kg	
1330-20-7	Xylene (total)	ND	11	2.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		75-124%
2037-26-5	Toluene-D8	104%		75-126%
460-00-4	4-Bromofluorobenzene	108%		71-133%
17060-07-0	1,2-Dichloroethane-D4	110%		72-135%

(a) Soil vials were not received within 48 hours of sampling; results are considered minimum values.
(b) Pre-weighed vials were altered in the field; sample weights are estimated.

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: DPT-36 (5-7)-A
Lab Sample ID: FA12959-4 **Date Sampled:** 03/01/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 90.0
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X033618.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	920	180	ug/kg	
95-57-8	2-Chlorophenol	ND	180	18	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	18	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	19	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	180	20	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	920	180	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	370	74	ug/kg	
95-48-7	2-Methylphenol	95.1	180	18	ug/kg	J
	3&4-Methylphenol	ND	180	37	ug/kg	
88-75-5	2-Nitrophenol	ND	180	18	ug/kg	
100-02-7	4-Nitrophenol	ND	920	150	ug/kg	
87-86-5	Pentachlorophenol	ND	920	150	ug/kg	
108-95-2	Phenol	ND	180	18	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	24	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	18	ug/kg	
83-32-9	Acenaphthene	ND	180	23	ug/kg	
208-96-8	Acenaphthylene	ND	180	18	ug/kg	
120-12-7	Anthracene	ND	180	18	ug/kg	
56-55-3	Benzo(a)anthracene	ND	180	18	ug/kg	
50-32-8	Benzo(a)pyrene	ND	180	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	180	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	180	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	180	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	180	18	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	180	37	ug/kg	
100-51-6	Benzyl Alcohol	128	180	18	ug/kg	J
91-58-7	2-Chloronaphthalene	ND	180	22	ug/kg	
106-47-8	4-Chloroaniline	ND	180	18	ug/kg	
86-74-8	Carbazole	ND	180	18	ug/kg	
218-01-9	Chrysene	ND	180	18	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	180	18	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	180	18	ug/kg	

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: DPT-36 (5-7)-A
Lab Sample ID: FA12959-4 **Date Sampled:** 03/01/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 90.0
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	180	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	180	27	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	180	18	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	180	18	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	180	18	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	180	21	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	180	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	180	18	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	180	18	ug/kg	
132-64-9	Dibenzofuran	ND	180	18	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	370	37	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	180	37	ug/kg	
84-66-2	Diethyl phthalate	ND	370	37	ug/kg	
131-11-3	Dimethyl phthalate	ND	180	37	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	370	37	ug/kg	
206-44-0	Fluoranthene	ND	180	18	ug/kg	
86-73-7	Fluorene	ND	180	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	180	18	ug/kg	
87-68-3	Hexachlorobutadiene	ND	180	18	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	180	18	ug/kg	
67-72-1	Hexachloroethane	ND	180	18	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	180	18	ug/kg	
78-59-1	Isophorone	ND	180	18	ug/kg	
91-57-6	2-Methylnaphthalene	ND	180	18	ug/kg	
88-74-4	2-Nitroaniline	ND	180	37	ug/kg	
99-09-2	3-Nitroaniline	ND	180	37	ug/kg	
100-01-6	4-Nitroaniline	ND	180	37	ug/kg	
91-20-3	Naphthalene	ND	180	18	ug/kg	
98-95-3	Nitrobenzene	ND	180	18	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	180	18	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	18	ug/kg	
85-01-8	Phenanthrene	ND	180	18	ug/kg	
129-00-0	Pyrene	ND	180	18	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	180	18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	80%		40-102%
4165-62-2	Phenol-d5	86%		41-100%
118-79-6	2,4,6-Tribromophenol	90%		42-108%

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:	DPT-36 (5-7)-A		
Lab Sample ID:	FA12959-4	**Date Sampled:**	03/01/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	90.0
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		40-105%
321-60-8	2-Fluorobiphenyl	82%		43-107%
1718-51-0	Terphenyl-d14	108%		45-119%

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: DPT-36 (12-14)
Lab Sample ID: FA12959-5 **Date Sampled:** 03/01/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8260B **Percent Solids:** 90.4
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	G0092695.D	1	03/04/14	EP	n/a	n/a	VG3373
Run #2							

	Initial Weight
Run #1	7.37 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	38	11	ug/kg	
71-43-2	Benzene [b]	ND	3.8	0.75	ug/kg	
75-27-4	Bromodichloromethane	ND	3.8	0.75	ug/kg	
75-25-2	Bromoform	ND	3.8	0.81	ug/kg	
108-90-7	Chlorobenzene	ND	3.8	0.75	ug/kg	
75-00-3	Chloroethane	ND	3.8	1.7	ug/kg	
67-66-3	Chloroform	ND	3.8	0.85	ug/kg	
75-15-0	Carbon disulfide	ND	3.8	0.75	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.8	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.8	0.75	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.8	0.75	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.8	0.75	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.8	0.75	ug/kg	
124-48-1	Dibromochloromethane	ND	3.8	0.75	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	2.1	3.8	0.75	ug/kg	J
10061-01-5	cis-1,3-Dichloropropene	ND	3.8	0.75	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.8	1.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.8	0.75	ug/kg	
100-41-4	Ethylbenzene	ND	3.8	0.75	ug/kg	
591-78-6	2-Hexanone	ND	19	3.7	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	19	3.8	ug/kg	
74-83-9	Methyl bromide	ND	3.8	1.4	ug/kg	
74-87-3	Methyl chloride	ND	3.8	1.5	ug/kg	
75-09-2	Methylene chloride	ND	7.5	3.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	19	5.6	ug/kg	
100-42-5	Styrene	ND	3.8	0.75	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.8	0.75	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.8	1.1	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.8	1.2	ug/kg	
127-18-4	Tetrachloroethylene	101	3.8	0.95	ug/kg	
108-88-3	Toluene	ND	3.8	0.75	ug/kg	
79-01-6	Trichloroethylene	1.4	3.8	0.77	ug/kg	J

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:	DPT-36 (12-14)		
Lab Sample ID:	FA12959-5	**Date Sampled:**	03/01/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	90.4
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.8	0.77	ug/kg	
1330-20-7	Xylene (total)	ND	11	2.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		75-124%
2037-26-5	Toluene-D8	101%		75-126%
460-00-4	4-Bromofluorobenzene	109%		71-133%
17060-07-0	1,2-Dichloroethane-D4	116%		72-135%

(a) Soil vials were not received within 48 hours of sampling; results are considered minimum values.
(b) Pre-weighed vials were altered in the field; sample weights are estimated.

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: DPT-36 (12-14)
Lab Sample ID: FA12959-5 **Date Sampled:** 03/01/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 90.4
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X033619.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	920	180	ug/kg	
95-57-8	2-Chlorophenol	ND	180	18	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	18	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	19	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	180	20	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	920	180	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	370	74	ug/kg	
95-48-7	2-Methylphenol	ND	180	18	ug/kg	
	3&4-Methylphenol	ND	180	37	ug/kg	
88-75-5	2-Nitrophenol	ND	180	18	ug/kg	
100-02-7	4-Nitrophenol	ND	920	150	ug/kg	
87-86-5	Pentachlorophenol	ND	920	150	ug/kg	
108-95-2	Phenol	ND	180	18	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	24	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	18	ug/kg	
83-32-9	Acenaphthene	ND	180	23	ug/kg	
208-96-8	Acenaphthylene	ND	180	18	ug/kg	
120-12-7	Anthracene	ND	180	18	ug/kg	
56-55-3	Benzo(a)anthracene	ND	180	18	ug/kg	
50-32-8	Benzo(a)pyrene	ND	180	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	180	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	180	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	180	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	180	18	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	180	37	ug/kg	
100-51-6	Benzyl Alcohol	ND	180	18	ug/kg	
91-58-7	2-Chloronaphthalene	ND	180	22	ug/kg	
106-47-8	4-Chloroaniline	ND	180	18	ug/kg	
86-74-8	Carbazole	ND	180	18	ug/kg	
218-01-9	Chrysene	ND	180	18	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	180	18	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	180	18	ug/kg	

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: DPT-36 (12-14)
Lab Sample ID: FA12959-5 **Date Sampled:** 03/01/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 90.4
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	180	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	180	27	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	180	18	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	180	18	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	180	18	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	180	21	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	180	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	180	18	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	180	18	ug/kg	
132-64-9	Dibenzofuran	ND	180	18	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	370	37	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	180	37	ug/kg	
84-66-2	Diethyl phthalate	ND	370	37	ug/kg	
131-11-3	Dimethyl phthalate	ND	180	37	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	370	37	ug/kg	
206-44-0	Fluoranthene	ND	180	18	ug/kg	
86-73-7	Fluorene	ND	180	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	180	18	ug/kg	
87-68-3	Hexachlorobutadiene	ND	180	18	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	180	18	ug/kg	
67-72-1	Hexachloroethane	ND	180	18	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	180	18	ug/kg	
78-59-1	Isophorone	ND	180	18	ug/kg	
91-57-6	2-Methylnaphthalene	ND	180	18	ug/kg	
88-74-4	2-Nitroaniline	ND	180	37	ug/kg	
99-09-2	3-Nitroaniline	ND	180	37	ug/kg	
100-01-6	4-Nitroaniline	ND	180	37	ug/kg	
91-20-3	Naphthalene	ND	180	18	ug/kg	
98-95-3	Nitrobenzene	ND	180	18	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	180	18	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	18	ug/kg	
85-01-8	Phenanthrene	ND	180	18	ug/kg	
129-00-0	Pyrene	ND	180	18	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	180	18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	81%		40-102%
4165-62-2	Phenol-d5	87%		41-100%
118-79-6	2,4,6-Tribromophenol	90%		42-108%

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:	DPT-36 (12-14)		
Lab Sample ID:	FA12959-5	**Date Sampled:**	03/01/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	90.4
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	84%		40-105%
321-60-8	2-Fluorobiphenyl	84%		43-107%
1718-51-0	Terphenyl-d14	110%		45-119%

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: DPT-35 (3-5)
Lab Sample ID: FA12959-6
Matrix: SO - Soil
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/01/14
Date Received: 03/04/14
Percent Solids: 85.0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C097465.D	1	03/04/14	AH	n/a	n/a	VC3897
Run #2	C097483.D	1	03/05/14	AH	n/a	n/a	VC3898

	Initial Weight	Methanol Aliquot
Run #1	8.73 g	
Run #2	6.53 g	10.0 ul

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	34	10	ug/kg	
71-43-2	Benzene	ND	3.4	0.67	ug/kg	
75-27-4	Bromodichloromethane	ND	3.4	0.67	ug/kg	
75-25-2	Bromoform	ND	3.4	0.73	ug/kg	
108-90-7	Chlorobenzene	ND	3.4	0.67	ug/kg	
75-00-3	Chloroethane [a]	ND	3.4	1.5	ug/kg	
67-66-3	Chloroform	1.8	3.4	0.76	ug/kg	J
75-15-0	Carbon disulfide	ND	3.4	0.67	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.4	0.94	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.4	0.67	ug/kg	
75-35-4	1,1-Dichloroethylene	3.0	3.4	0.67	ug/kg	J
107-06-2	1,2-Dichloroethane	ND	3.4	0.67	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.4	0.67	ug/kg	
124-48-1	Dibromochloromethane	ND	3.4	0.67	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	22.2	3.4	0.67	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.4	0.67	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.4	0.90	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.4	0.67	ug/kg	
100-41-4	Ethylbenzene	ND	3.4	0.67	ug/kg	
591-78-6	2-Hexanone	ND	17	3.3	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	17	3.4	ug/kg	
74-83-9	Methyl bromide	ND	3.4	1.3	ug/kg	
74-87-3	Methyl chloride	ND	3.4	1.3	ug/kg	
75-09-2	Methylene chloride	ND	6.7	2.7	ug/kg	
78-93-3	Methyl ethyl ketone	ND	17	5.0	ug/kg	
100-42-5	Styrene	ND	3.4	0.67	ug/kg	
71-55-6	1,1,1-Trichloroethane	24.8	3.4	0.67	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.4	0.95	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.4	1.1	ug/kg	
127-18-4	Tetrachloroethylene	85400 [b]	2700	680	ug/kg	
108-88-3	Toluene	ND	3.4	0.67	ug/kg	
79-01-6	Trichloroethylene	32.2	3.4	0.69	ug/kg	

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:	DPT-35 (3-5)		
Lab Sample ID:	FA12959-6	**Date Sampled:**	03/01/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	85.0
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.4	0.69	ug/kg	
1330-20-7	Xylene (total)	19.9	10	1.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	106%	75-124%
2037-26-5	Toluene-D8	114%	108%	75-126%
460-00-4	4-Bromofluorobenzene	128%	108%	71-133%
17060-07-0	1,2-Dichloroethane-D4	110%	110%	72-135%

(a) Associated BS recovery outside control limits.
(b) Result is from Run# 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: DPT-35 (3-5)
Lab Sample ID: FA12959-6 **Date Sampled:** 03/01/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 85.0
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X033620.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
Run #2							

	Initial Weight	Final Volume
Run #1	29.8 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	990	200	ug/kg	
95-57-8	2-Chlorophenol	ND	200	20	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	200	20	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	200	20	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	200	22	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	990	200	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	390	79	ug/kg	
95-48-7	2-Methylphenol	ND	200	20	ug/kg	
	3&4-Methylphenol	ND	200	39	ug/kg	
88-75-5	2-Nitrophenol	ND	200	20	ug/kg	
100-02-7	4-Nitrophenol	ND	990	160	ug/kg	
87-86-5	Pentachlorophenol	ND	990	160	ug/kg	
108-95-2	Phenol	ND	200	20	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	200	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	200	20	ug/kg	
83-32-9	Acenaphthene	ND	200	25	ug/kg	
208-96-8	Acenaphthylene	ND	200	20	ug/kg	
120-12-7	Anthracene	ND	200	20	ug/kg	
56-55-3	Benzo(a)anthracene	ND	200	20	ug/kg	
50-32-8	Benzo(a)pyrene	ND	200	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	200	20	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	200	20	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	200	22	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	200	20	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	200	39	ug/kg	
100-51-6	Benzyl Alcohol	ND	200	20	ug/kg	
91-58-7	2-Chloronaphthalene	ND	200	23	ug/kg	
106-47-8	4-Chloroaniline	ND	200	20	ug/kg	
86-74-8	Carbazole	ND	200	20	ug/kg	
218-01-9	Chrysene	ND	200	20	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	200	20	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	200	20	ug/kg	

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: DPT-35 (3-5)
Lab Sample ID: FA12959-6 **Date Sampled:** 03/01/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 85.0
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	200	21	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	200	29	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	200	20	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	200	20	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	200	20	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	200	22	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	200	22	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	200	20	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	200	20	ug/kg	
132-64-9	Dibenzofuran	34.5	200	20	ug/kg	J
84-74-2	Di-n-butyl phthalate	76.7	390	39	ug/kg	J
117-84-0	Di-n-octyl phthalate	ND	200	39	ug/kg	
84-66-2	Diethyl phthalate	ND	390	39	ug/kg	
131-11-3	Dimethyl phthalate	ND	200	39	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	463	390	39	ug/kg	
206-44-0	Fluoranthene	ND	200	20	ug/kg	
86-73-7	Fluorene	ND	200	20	ug/kg	
118-74-1	Hexachlorobenzene	ND	200	20	ug/kg	
87-68-3	Hexachlorobutadiene	ND	200	20	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	200	20	ug/kg	
67-72-1	Hexachloroethane	ND	200	20	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	200	20	ug/kg	
78-59-1	Isophorone	557	200	20	ug/kg	
91-57-6	2-Methylnaphthalene	219	200	20	ug/kg	
88-74-4	2-Nitroaniline	ND	200	39	ug/kg	
99-09-2	3-Nitroaniline	ND	200	39	ug/kg	
100-01-6	4-Nitroaniline	ND	200	39	ug/kg	
91-20-3	Naphthalene	82.0	200	20	ug/kg	J
98-95-3	Nitrobenzene	ND	200	20	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	200	20	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	200	20	ug/kg	
85-01-8	Phenanthrene	134	200	20	ug/kg	J
129-00-0	Pyrene	ND	200	20	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	200	20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	81%		40-102%
4165-62-2	Phenol-d5	87%		41-100%
118-79-6	2,4,6-Tribromophenol	96%		42-108%

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:	DPT-35 (3-5)		
Lab Sample ID:	FA12959-6	**Date Sampled:**	03/01/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	85.0
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	83%		40-105%
321-60-8	2-Fluorobiphenyl	86%		43-107%
1718-51-0	Terphenyl-d14	102%		45-119%

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: DPT-35 (10.5-12.5)
Lab Sample ID: FA12959-7 **Date Sampled:** 03/01/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8260B **Percent Solids:** 89.9
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H0084528.D	1	03/04/14	EP	n/a	n/a	VH3204
Run #2 [a]	H0084550.D	1	03/05/14	EP	n/a	n/a	VH3205

	Initial Weight	Methanol Aliquot
Run #1	7.36 g	
Run #2	7.82 g	100 ul

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	38	11	ug/kg	
71-43-2	Benzene [b]	ND	3.8	0.76	ug/kg	
75-27-4	Bromodichloromethane	ND	3.8	0.76	ug/kg	
75-25-2	Bromoform	ND	3.8	0.82	ug/kg	
108-90-7	Chlorobenzene	ND	3.8	0.76	ug/kg	
75-00-3	Chloroethane	ND	3.8	1.7	ug/kg	
67-66-3	Chloroform	ND	3.8	0.85	ug/kg	
75-15-0	Carbon disulfide	ND	3.8	0.76	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.8	1.1	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.8	0.76	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.8	0.76	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.8	0.76	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.8	0.76	ug/kg	
124-48-1	Dibromochloromethane	ND	3.8	0.76	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	10.9	3.8	0.76	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.8	0.76	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.8	1.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.8	0.76	ug/kg	
100-41-4	Ethylbenzene	ND	3.8	0.76	ug/kg	
591-78-6	2-Hexanone	ND	19	3.7	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	19	3.8	ug/kg	
74-83-9	Methyl bromide	ND	3.8	1.4	ug/kg	
74-87-3	Methyl chloride	ND	3.8	1.5	ug/kg	
75-09-2	Methylene chloride	ND	7.6	3.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	19	5.7	ug/kg	
100-42-5	Styrene	ND	3.8	0.76	ug/kg	
71-55-6	1,1,1-Trichloroethane	4.6	3.8	0.76	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.8	1.1	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.8	1.2	ug/kg	
127-18-4	Tetrachloroethylene	449 [c]	210	52	ug/kg	
108-88-3	Toluene	ND	3.8	0.76	ug/kg	
79-01-6	Trichloroethylene	2.3	3.8	0.77	ug/kg	J

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:	DPT-35 (10.5-12.5)		
Lab Sample ID:	FA12959-7	**Date Sampled:**	03/01/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	89.9
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.8	0.77	ug/kg	
1330-20-7	Xylene (total)	ND	11	2.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	88%	75-124%
2037-26-5	Toluene-D8	93%	94%	75-126%
460-00-4	4-Bromofluorobenzene	100%	95%	71-133%
17060-07-0	1,2-Dichloroethane-D4	103%	103%	72-135%

(a) Soil vials were not received within 48 hours of sampling; results are considered minimum values.
(b) Pre-weighed vials were altered in the field; sample weights are estimated.
(c) Result is from Run# 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: DPT-35 (10.5-12.5)
Lab Sample ID: FA12959-7 **Date Sampled:** 03/01/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 89.9
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X033621.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	920	180	ug/kg	
95-57-8	2-Chlorophenol	ND	180	18	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	18	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	19	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	180	20	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	920	180	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	370	74	ug/kg	
95-48-7	2-Methylphenol	ND	180	18	ug/kg	
	3&4-Methylphenol	ND	180	37	ug/kg	
88-75-5	2-Nitrophenol	ND	180	18	ug/kg	
100-02-7	4-Nitrophenol	ND	920	150	ug/kg	
87-86-5	Pentachlorophenol	ND	920	150	ug/kg	
108-95-2	Phenol	ND	180	18	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	24	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	18	ug/kg	
83-32-9	Acenaphthene	ND	180	23	ug/kg	
208-96-8	Acenaphthylene	ND	180	18	ug/kg	
120-12-7	Anthracene	ND	180	18	ug/kg	
56-55-3	Benzo(a)anthracene	ND	180	18	ug/kg	
50-32-8	Benzo(a)pyrene	ND	180	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	180	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	180	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	180	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	180	18	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	180	37	ug/kg	
100-51-6	Benzyl Alcohol	ND	180	18	ug/kg	
91-58-7	2-Chloronaphthalene	ND	180	22	ug/kg	
106-47-8	4-Chloroaniline	ND	180	18	ug/kg	
86-74-8	Carbazole	ND	180	18	ug/kg	
218-01-9	Chrysene	ND	180	18	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	180	18	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	180	18	ug/kg	

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: DPT-35 (10.5-12.5)
Lab Sample ID: FA12959-7 **Date Sampled:** 03/01/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 89.9
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	180	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	180	28	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	180	18	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	180	18	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	180	18	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	180	21	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	180	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	180	18	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	180	18	ug/kg	
132-64-9	Dibenzofuran	ND	180	18	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	370	37	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	180	37	ug/kg	
84-66-2	Diethyl phthalate	ND	370	37	ug/kg	
131-11-3	Dimethyl phthalate	ND	180	37	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	370	37	ug/kg	
206-44-0	Fluoranthene	ND	180	18	ug/kg	
86-73-7	Fluorene	ND	180	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	180	18	ug/kg	
87-68-3	Hexachlorobutadiene	ND	180	18	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	180	18	ug/kg	
67-72-1	Hexachloroethane	ND	180	18	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	180	18	ug/kg	
78-59-1	Isophorone	ND	180	18	ug/kg	
91-57-6	2-Methylnaphthalene	ND	180	18	ug/kg	
88-74-4	2-Nitroaniline	ND	180	37	ug/kg	
99-09-2	3-Nitroaniline	ND	180	37	ug/kg	
100-01-6	4-Nitroaniline	ND	180	37	ug/kg	
91-20-3	Naphthalene	ND	180	18	ug/kg	
98-95-3	Nitrobenzene	ND	180	18	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	180	18	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	18	ug/kg	
85-01-8	Phenanthrene	ND	180	18	ug/kg	
129-00-0	Pyrene	ND	180	18	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	180	18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	86%		40-102%
4165-62-2	Phenol-d5	90%		41-100%
118-79-6	2,4,6-Tribromophenol	95%		42-108%

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:	DPT-35 (10.5-12.5)		
Lab Sample ID:	FA12959-7	**Date Sampled:**	03/01/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	89.9
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	88%		40-105%
321-60-8	2-Fluorobiphenyl	86%		43-107%
1718-51-0	Terphenyl-d14	115%		45-119%

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: DPT-37 (6-8)
Lab Sample ID: FA12959-8 **Date Sampled:** 03/02/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8260B **Percent Solids:** 91.6
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H0084551.D	1	03/05/14	EP	n/a	n/a	VH3205
Run #2							

	Initial Weight
Run #1	6.97 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	39	12	ug/kg	
71-43-2	Benzene [b]	ND	3.9	0.78	ug/kg	
75-27-4	Bromodichloromethane	ND	3.9	0.78	ug/kg	
75-25-2	Bromoform	ND	3.9	0.85	ug/kg	
108-90-7	Chlorobenzene	ND	3.9	0.78	ug/kg	
75-00-3	Chloroethane	ND	3.9	1.8	ug/kg	
67-66-3	Chloroform	ND	3.9	0.88	ug/kg	
75-15-0	Carbon disulfide	ND	3.9	0.78	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.9	1.1	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.9	0.78	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.9	0.78	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.9	0.78	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.9	0.78	ug/kg	
124-48-1	Dibromochloromethane	ND	3.9	0.78	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.9	0.78	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.9	0.78	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.9	1.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.9	0.78	ug/kg	
100-41-4	Ethylbenzene	ND	3.9	0.78	ug/kg	
591-78-6	2-Hexanone	ND	20	3.8	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	20	3.9	ug/kg	
74-83-9	Methyl bromide	ND	3.9	1.5	ug/kg	
74-87-3	Methyl chloride	ND	3.9	1.6	ug/kg	
75-09-2	Methylene chloride	ND	7.8	3.1	ug/kg	
78-93-3	Methyl ethyl ketone	ND	20	5.9	ug/kg	
100-42-5	Styrene	ND	3.9	0.78	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.9	0.78	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.9	1.1	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.9	1.3	ug/kg	
127-18-4	Tetrachloroethylene	47.0	3.9	0.99	ug/kg	
108-88-3	Toluene	ND	3.9	0.78	ug/kg	
79-01-6	Trichloroethylene	ND	3.9	0.80	ug/kg	

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:	DPT-37 (6-8)		
Lab Sample ID:	FA12959-8	**Date Sampled:**	03/02/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	91.6
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.9	0.80	ug/kg	
1330-20-7	Xylene (total)	ND	12	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		75-124%
2037-26-5	Toluene-D8	95%		75-126%
460-00-4	4-Bromofluorobenzene	98%		71-133%
17060-07-0	1,2-Dichloroethane-D4	111%		72-135%

(a) Soil vials were not received within 48 hours of sampling; results are considered minimum values.
(b) Pre-weighed vials were altered in the field; sample weights are estimated.

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: DPT-37 (6-8)
Lab Sample ID: FA12959-8 **Date Sampled:** 03/02/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 91.6
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X033611.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	900	180	ug/kg	
95-57-8	2-Chlorophenol	ND	180	18	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	18	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	19	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	180	20	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	900	180	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	360	72	ug/kg	
95-48-7	2-Methylphenol	ND	180	18	ug/kg	
	3&4-Methylphenol	ND	180	36	ug/kg	
88-75-5	2-Nitrophenol	ND	180	18	ug/kg	
100-02-7	4-Nitrophenol	ND	900	140	ug/kg	
87-86-5	Pentachlorophenol	ND	900	140	ug/kg	
108-95-2	Phenol	ND	180	18	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	23	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	18	ug/kg	
83-32-9	Acenaphthene	ND	180	23	ug/kg	
208-96-8	Acenaphthylene	ND	180	18	ug/kg	
120-12-7	Anthracene	ND	180	18	ug/kg	
56-55-3	Benzo(a)anthracene	ND	180	18	ug/kg	
50-32-8	Benzo(a)pyrene	ND	180	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	180	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	180	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	180	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	180	18	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	180	36	ug/kg	
100-51-6	Benzyl Alcohol	ND	180	18	ug/kg	
91-58-7	2-Chloronaphthalene	ND	180	21	ug/kg	
106-47-8	4-Chloroaniline	ND	180	18	ug/kg	
86-74-8	Carbazole	ND	180	18	ug/kg	
218-01-9	Chrysene	ND	180	18	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	180	18	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	180	18	ug/kg	

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: DPT-37 (6-8)
Lab Sample ID: FA12959-8 **Date Sampled:** 03/02/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 91.6
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	180	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	180	27	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	180	18	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	180	18	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	180	18	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	180	20	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	180	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	180	18	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	180	18	ug/kg	
132-64-9	Dibenzofuran	ND	180	18	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	360	36	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	180	36	ug/kg	
84-66-2	Diethyl phthalate	ND	360	36	ug/kg	
131-11-3	Dimethyl phthalate	ND	180	36	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	360	36	ug/kg	
206-44-0	Fluoranthene	ND	180	18	ug/kg	
86-73-7	Fluorene	ND	180	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	180	18	ug/kg	
87-68-3	Hexachlorobutadiene	ND	180	18	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	180	18	ug/kg	
67-72-1	Hexachloroethane	ND	180	18	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	180	18	ug/kg	
78-59-1	Isophorone	ND	180	18	ug/kg	
91-57-6	2-Methylnaphthalene	ND	180	18	ug/kg	
88-74-4	2-Nitroaniline	ND	180	36	ug/kg	
99-09-2	3-Nitroaniline	ND	180	36	ug/kg	
100-01-6	4-Nitroaniline	ND	180	36	ug/kg	
91-20-3	Naphthalene	ND	180	18	ug/kg	
98-95-3	Nitrobenzene	ND	180	18	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	180	18	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	18	ug/kg	
85-01-8	Phenanthrene	ND	180	18	ug/kg	
129-00-0	Pyrene	ND	180	18	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	180	18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	77%		40-102%
4165-62-2	Phenol-d5	83%		41-100%
118-79-6	2,4,6-Tribromophenol	84%		42-108%

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:	DPT-37 (6-8)		
Lab Sample ID:	FA12959-8	**Date Sampled:**	03/02/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	91.6
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	78%		40-105%
321-60-8	2-Fluorobiphenyl	77%		43-107%
1718-51-0	Terphenyl-d14	103%		45-119%

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: DPT-38 (8-10)
Lab Sample ID: FA12959-9 **Date Sampled:** 03/02/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8260B **Percent Solids:** 90.3
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H0084530.D	1	03/04/14	EP	n/a	n/a	VH3204
Run #2							

	Initial Weight
Run #1	8.37 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	33	9.9	ug/kg	
71-43-2	Benzene [b]	ND	3.3	0.66	ug/kg	
75-27-4	Bromodichloromethane	ND	3.3	0.66	ug/kg	
75-25-2	Bromoform	ND	3.3	0.71	ug/kg	
108-90-7	Chlorobenzene	ND	3.3	0.66	ug/kg	
75-00-3	Chloroethane	ND	3.3	1.5	ug/kg	
67-66-3	Chloroform	ND	3.3	0.75	ug/kg	
75-15-0	Carbon disulfide	ND	3.3	0.66	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.3	0.92	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.3	0.66	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.3	0.66	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.3	0.66	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.3	0.66	ug/kg	
124-48-1	Dibromochloromethane	ND	3.3	0.66	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.3	0.66	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.3	0.66	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.3	0.89	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.3	0.66	ug/kg	
100-41-4	Ethylbenzene	ND	3.3	0.66	ug/kg	
591-78-6	2-Hexanone	ND	17	3.2	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	17	3.3	ug/kg	
74-83-9	Methyl bromide	ND	3.3	1.2	ug/kg	
74-87-3	Methyl chloride	ND	3.3	1.3	ug/kg	
75-09-2	Methylene chloride	ND	6.6	2.6	ug/kg	
78-93-3	Methyl ethyl ketone	ND	17	5.0	ug/kg	
100-42-5	Styrene	ND	3.3	0.66	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.3	0.66	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.3	0.93	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.3	1.1	ug/kg	
127-18-4	Tetrachloroethylene	13.6	3.3	0.83	ug/kg	
108-88-3	Toluene	ND	3.3	0.66	ug/kg	
79-01-6	Trichloroethylene	ND	3.3	0.67	ug/kg	

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:	DPT-38 (8-10)		
Lab Sample ID:	FA12959-9	**Date Sampled:**	03/02/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	90.3
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.3	0.67	ug/kg	
1330-20-7	Xylene (total)	ND	9.9	1.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		75-124%
2037-26-5	Toluene-D8	94%		75-126%
460-00-4	4-Bromofluorobenzene	101%		71-133%
17060-07-0	1,2-Dichloroethane-D4	111%		72-135%

(a) Soil vials were not received within 48 hours of sampling; results are considered minimum values.
(b) Pre-weighed vials were altered in the field; sample weights are estimated.

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: DPT-38 (8-10)
Lab Sample ID: FA12959-9 **Date Sampled:** 03/02/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 90.3
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X033623.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	910	180	ug/kg	
95-57-8	2-Chlorophenol	ND	180	18	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	18	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	19	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	180	20	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	910	180	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	360	73	ug/kg	
95-48-7	2-Methylphenol	ND	180	18	ug/kg	
	3&4-Methylphenol	ND	180	36	ug/kg	
88-75-5	2-Nitrophenol	ND	180	18	ug/kg	
100-02-7	4-Nitrophenol	ND	910	150	ug/kg	
87-86-5	Pentachlorophenol	ND	910	150	ug/kg	
108-95-2	Phenol	ND	180	18	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	23	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	18	ug/kg	
83-32-9	Acenaphthene	ND	180	23	ug/kg	
208-96-8	Acenaphthylene	ND	180	18	ug/kg	
120-12-7	Anthracene	ND	180	18	ug/kg	
56-55-3	Benzo(a)anthracene	ND	180	18	ug/kg	
50-32-8	Benzo(a)pyrene	ND	180	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	180	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	180	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	180	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	180	18	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	180	36	ug/kg	
100-51-6	Benzyl Alcohol	ND	180	18	ug/kg	
91-58-7	2-Chloronaphthalene	ND	180	22	ug/kg	
106-47-8	4-Chloroaniline	ND	180	18	ug/kg	
86-74-8	Carbazole	ND	180	18	ug/kg	
218-01-9	Chrysene	ND	180	18	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	180	18	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	180	18	ug/kg	

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: DPT-38 (8-10)
Lab Sample ID: FA12959-9 **Date Sampled:** 03/02/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 90.3
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	180	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	180	27	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	180	18	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	180	18	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	180	18	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	180	21	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	180	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	180	18	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	180	18	ug/kg	
132-64-9	Dibenzofuran	ND	180	18	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	360	36	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	180	36	ug/kg	
84-66-2	Diethyl phthalate	ND	360	36	ug/kg	
131-11-3	Dimethyl phthalate	ND	180	36	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	360	36	ug/kg	
206-44-0	Fluoranthene	ND	180	18	ug/kg	
86-73-7	Fluorene	ND	180	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	180	18	ug/kg	
87-68-3	Hexachlorobutadiene	ND	180	18	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	180	18	ug/kg	
67-72-1	Hexachloroethane	ND	180	18	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	180	18	ug/kg	
78-59-1	Isophorone	ND	180	18	ug/kg	
91-57-6	2-Methylnaphthalene	ND	180	18	ug/kg	
88-74-4	2-Nitroaniline	ND	180	36	ug/kg	
99-09-2	3-Nitroaniline	ND	180	36	ug/kg	
100-01-6	4-Nitroaniline	ND	180	36	ug/kg	
91-20-3	Naphthalene	ND	180	18	ug/kg	
98-95-3	Nitrobenzene	ND	180	18	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	180	18	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	18	ug/kg	
85-01-8	Phenanthrene	ND	180	18	ug/kg	
129-00-0	Pyrene	ND	180	18	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	180	18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	73%		40-102%
4165-62-2	Phenol-d5	77%		41-100%
118-79-6	2,4,6-Tribromophenol	81%		42-108%

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:	DPT-38 (8-10)		
Lab Sample ID:	FA12959-9	**Date Sampled:**	03/02/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	90.3
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%		40-105%
321-60-8	2-Fluorobiphenyl	74%		43-107%
1718-51-0	Terphenyl-d14	98%		45-119%

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: DPT-39 (8-10)-D
Lab Sample ID: FA12959-10
Matrix: AQ - Equipment Blank
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/02/14
Date Received: 03/04/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	Z23275.D	1	03/05/14	CP	n/a	n/a	VZ924
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
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:	DPT-39 (8-10)-D		
Lab Sample ID:	FA12959-10	**Date Sampled:**	03/02/14
Matrix:	AQ - Equipment Blank	**Date Received:**	03/04/14
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	105%		79-125%
2037-26-5	Toluene-D8	100%		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
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:	DPT-39 (8-10)-D		
Lab Sample ID:	FA12959-10	**Date Sampled:**	03/02/14
Matrix:	AQ - Equipment Blank	**Date Received:**	03/04/14
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	T011866.D	1	03/07/14	FS	03/06/14	OP50725	ST563
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid [a]	ND	48	9.6	ug/l	
95-57-8	2-Chlorophenol	ND	4.8	0.50	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.8	0.48	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.8	0.55	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	0.48	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	5.2	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.6	1.9	ug/l	
95-48-7	2-Methylphenol	ND	4.8	0.48	ug/l	
	3&4-Methylphenol	ND	4.8	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	0.57	ug/l	
100-02-7	4-Nitrophenol	ND	24	4.8	ug/l	
87-86-5	Pentachlorophenol	ND	24	4.8	ug/l	
108-95-2	Phenol	ND	4.8	0.48	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.8	0.94	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	0.53	ug/l	
83-32-9	Acenaphthene	ND	4.8	0.48	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.48	ug/l	
120-12-7	Anthracene	ND	4.8	0.59	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.62	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.63	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.69	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.77	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.49	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	4.8	0.64	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.8	0.78	ug/l	
100-51-6	Benzyl Alcohol	ND	4.8	0.96	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.8	0.53	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	0.48	ug/l	
86-74-8	Carbazole	ND	4.8	0.59	ug/l	
218-01-9	Chrysene	ND	4.8	0.69	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.8	0.53	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.8	0.66	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: DPT-39 (8-10)-D
Lab Sample ID: FA12959-10 **Date Sampled:** 03/02/14
Matrix: AQ - Equipment Blank **Date Received:** 03/04/14
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	4.8	0.56	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.8	0.52	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.8	0.48	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.8	0.48	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.8	0.48	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	4.8	0.55	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.8	0.60	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	4.8	0.87	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.78	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.51	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.8	0.96	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.8	0.96	ug/l	
84-66-2	Diethyl phthalate	ND	4.8	0.96	ug/l	
131-11-3	Dimethyl phthalate	ND	4.8	0.61	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.8	1.5	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.67	ug/l	
86-73-7	Fluorene	ND	4.8	0.48	ug/l	
118-74-1	Hexachlorobenzene	ND	4.8	0.64	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.8	0.48	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	4.8	0.96	ug/l	
67-72-1	Hexachloroethane	ND	4.8	0.48	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.60	ug/l	
78-59-1	Isophorone	ND	4.8	0.48	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.51	ug/l	
88-74-4	2-Nitroaniline	ND	4.8	1.1	ug/l	
99-09-2	3-Nitroaniline	ND	4.8	0.58	ug/l	
100-01-6	4-Nitroaniline	ND	4.8	0.73	ug/l	
91-20-3	Naphthalene	ND	4.8	0.48	ug/l	
98-95-3	Nitrobenzene	ND	4.8	0.48	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.8	0.48	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	0.51	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.57	ug/l	
129-00-0	Pyrene	ND	4.8	0.78	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	34%		14-67%
4165-62-2	Phenol-d5	21%		10-50%
118-79-6	2,4,6-Tribromophenol	69%		33-118%

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:	DPT-39 (8-10)-D		
Lab Sample ID:	FA12959-10	**Date Sampled:**	03/02/14
Matrix:	AQ - Equipment Blank	**Date Received:**	03/04/14
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	78%		42-108%
321-60-8	2-Fluorobiphenyl	69%		40-106%
1718-51-0	Terphenyl-d14	89%		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: DPT-39 (8-10)
Lab Sample ID: FA12959-11 **Date Sampled:** 03/02/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8260B **Percent Solids:** 84.6
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H0084531.D	1	03/04/14	EP	n/a	n/a	VH3204
Run #2							

	Initial Weight
Run #1	7.79 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	38	11	ug/kg	
71-43-2	Benzene [a]	ND	3.8	0.76	ug/kg	
75-27-4	Bromodichloromethane	ND	3.8	0.76	ug/kg	
75-25-2	Bromoform	ND	3.8	0.82	ug/kg	
108-90-7	Chlorobenzene	ND	3.8	0.76	ug/kg	
75-00-3	Chloroethane	ND	3.8	1.7	ug/kg	
67-66-3	Chloroform	ND	3.8	0.86	ug/kg	
75-15-0	Carbon disulfide	ND	3.8	0.76	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.8	1.1	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.8	0.76	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.8	0.76	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.8	0.76	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.8	0.76	ug/kg	
124-48-1	Dibromochloromethane	ND	3.8	0.76	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.8	0.76	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.8	0.76	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.8	1.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.8	0.76	ug/kg	
100-41-4	Ethylbenzene	ND	3.8	0.76	ug/kg	
591-78-6	2-Hexanone	ND	19	3.7	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	19	3.8	ug/kg	
74-83-9	Methyl bromide	ND	3.8	1.4	ug/kg	
74-87-3	Methyl chloride	ND	3.8	1.5	ug/kg	
75-09-2	Methylene chloride	ND	7.6	3.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	19	5.7	ug/kg	
100-42-5	Styrene	ND	3.8	0.76	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.8	0.76	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.8	1.1	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.8	1.2	ug/kg	
127-18-4	Tetrachloroethylene	ND	3.8	0.96	ug/kg	
108-88-3	Toluene	ND	3.8	0.76	ug/kg	
79-01-6	Trichloroethylene	ND	3.8	0.77	ug/kg	

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:	DPT-39 (8-10)		
Lab Sample ID:	FA12959-11	**Date Sampled:**	03/02/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	84.6
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.8	0.77	ug/kg	
1330-20-7	Xylene (total)	ND	11	2.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		75-124%
2037-26-5	Toluene-D8	92%		75-126%
460-00-4	4-Bromofluorobenzene	97%		71-133%
17060-07-0	1,2-Dichloroethane-D4	114%		72-135%

(a) Pre-weighed vials were altered in the field; sample weights are estimated.

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: DPT-39 (8-10)
Lab Sample ID: FA12959-11 **Date Sampled:** 03/02/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 84.6
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X033624.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	990	200	ug/kg	
95-57-8	2-Chlorophenol	ND	200	20	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	200	20	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	200	20	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	200	22	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	990	200	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	400	79	ug/kg	
95-48-7	2-Methylphenol	ND	200	20	ug/kg	
	3&4-Methylphenol	ND	200	40	ug/kg	
88-75-5	2-Nitrophenol	ND	200	20	ug/kg	
100-02-7	4-Nitrophenol	ND	990	160	ug/kg	
87-86-5	Pentachlorophenol	ND	990	160	ug/kg	
108-95-2	Phenol	ND	200	20	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	200	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	200	20	ug/kg	
83-32-9	Acenaphthene	ND	200	25	ug/kg	
208-96-8	Acenaphthylene	ND	200	20	ug/kg	
120-12-7	Anthracene	ND	200	20	ug/kg	
56-55-3	Benzo(a)anthracene	ND	200	20	ug/kg	
50-32-8	Benzo(a)pyrene	ND	200	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	200	20	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	200	20	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	200	22	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	200	20	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	200	40	ug/kg	
100-51-6	Benzyl Alcohol	ND	200	20	ug/kg	
91-58-7	2-Chloronaphthalene	ND	200	24	ug/kg	
106-47-8	4-Chloroaniline	ND	200	20	ug/kg	
86-74-8	Carbazole	ND	200	20	ug/kg	
218-01-9	Chrysene	ND	200	20	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	200	20	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	200	20	ug/kg	

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: DPT-39 (8-10)
Lab Sample ID: FA12959-11 **Date Sampled:** 03/02/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 84.6
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	200	21	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	200	29	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	200	20	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	200	20	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	200	20	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	200	22	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	200	22	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	200	20	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	200	20	ug/kg	
132-64-9	Dibenzofuran	ND	200	20	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	400	40	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	200	40	ug/kg	
84-66-2	Diethyl phthalate	ND	400	40	ug/kg	
131-11-3	Dimethyl phthalate	ND	200	40	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	136	400	40	ug/kg	J
206-44-0	Fluoranthene	ND	200	20	ug/kg	
86-73-7	Fluorene	ND	200	20	ug/kg	
118-74-1	Hexachlorobenzene	ND	200	20	ug/kg	
87-68-3	Hexachlorobutadiene	ND	200	20	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	200	20	ug/kg	
67-72-1	Hexachloroethane	ND	200	20	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	200	20	ug/kg	
78-59-1	Isophorone	ND	200	20	ug/kg	
91-57-6	2-Methylnaphthalene	ND	200	20	ug/kg	
88-74-4	2-Nitroaniline	ND	200	40	ug/kg	
99-09-2	3-Nitroaniline	ND	200	40	ug/kg	
100-01-6	4-Nitroaniline	ND	200	40	ug/kg	
91-20-3	Naphthalene	ND	200	20	ug/kg	
98-95-3	Nitrobenzene	ND	200	20	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	200	20	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	200	20	ug/kg	
85-01-8	Phenanthrene	ND	200	20	ug/kg	
129-00-0	Pyrene	ND	200	20	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	200	20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	73%		40-102%
4165-62-2	Phenol-d5	77%		41-100%
118-79-6	2,4,6-Tribromophenol	81%		42-108%

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:	DPT-39 (8-10)		
Lab Sample ID:	FA12959-11	**Date Sampled:**	03/02/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	84.6
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	73%		40-105%
321-60-8	2-Fluorobiphenyl	73%		43-107%
1718-51-0	Terphenyl-d14	101%		45-119%

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: DPT-41 (6-8)
Lab Sample ID: FA12959-12 **Date Sampled:** 03/02/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8260B **Percent Solids:** 87.0
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H0084532.D	1	03/04/14	EP	n/a	n/a	VH3204
Run #2							

	Initial Weight
Run #1	7.31 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	39	12	ug/kg	
71-43-2	Benzene [a]	ND	3.9	0.79	ug/kg	
75-27-4	Bromodichloromethane	ND	3.9	0.79	ug/kg	
75-25-2	Bromoform	ND	3.9	0.85	ug/kg	
108-90-7	Chlorobenzene	ND	3.9	0.79	ug/kg	
75-00-3	Chloroethane	ND	3.9	1.8	ug/kg	
67-66-3	Chloroform	ND	3.9	0.89	ug/kg	
75-15-0	Carbon disulfide	ND	3.9	0.79	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.9	1.1	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.9	0.79	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.9	0.79	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.9	0.79	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.9	0.79	ug/kg	
124-48-1	Dibromochloromethane	ND	3.9	0.79	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.9	0.79	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.9	0.79	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.9	1.1	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.9	0.79	ug/kg	
100-41-4	Ethylbenzene	ND	3.9	0.79	ug/kg	
591-78-6	2-Hexanone	ND	20	3.9	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	20	3.9	ug/kg	
74-83-9	Methyl bromide	ND	3.9	1.5	ug/kg	
74-87-3	Methyl chloride	ND	3.9	1.6	ug/kg	
75-09-2	Methylene chloride	ND	7.9	3.1	ug/kg	
78-93-3	Methyl ethyl ketone	ND	20	5.9	ug/kg	
100-42-5	Styrene	ND	3.9	0.79	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.9	0.79	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.9	1.1	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.9	1.3	ug/kg	
127-18-4	Tetrachloroethylene	2.5	3.9	0.99	ug/kg	J
108-88-3	Toluene	ND	3.9	0.79	ug/kg	
79-01-6	Trichloroethylene	ND	3.9	0.80	ug/kg	

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:	DPT-41 (6-8)		
Lab Sample ID:	FA12959-12	**Date Sampled:**	03/02/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	87.0
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.9	0.80	ug/kg	
1330-20-7	Xylene (total)	ND	12	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		75-124%
2037-26-5	Toluene-D8	92%		75-126%
460-00-4	4-Bromofluorobenzene	100%		71-133%
17060-07-0	1,2-Dichloroethane-D4	110%		72-135%

(a) Pre-weighed vials were altered in the field; sample weights are estimated.

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: DPT-41 (6-8)
Lab Sample ID: FA12959-12 **Date Sampled:** 03/02/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 87.0
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X033625.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	950	190	ug/kg	
95-57-8	2-Chlorophenol	ND	190	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	20	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	21	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	950	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	380	76	ug/kg	
95-48-7	2-Methylphenol	ND	190	19	ug/kg	
	3&4-Methylphenol	ND	190	38	ug/kg	
88-75-5	2-Nitrophenol	ND	190	19	ug/kg	
100-02-7	4-Nitrophenol	ND	950	150	ug/kg	
87-86-5	Pentachlorophenol	ND	950	150	ug/kg	
108-95-2	Phenol	ND	190	19	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	19	ug/kg	
83-32-9	Acenaphthene	ND	190	24	ug/kg	
208-96-8	Acenaphthylene	ND	190	19	ug/kg	
120-12-7	Anthracene	ND	190	19	ug/kg	
56-55-3	Benzo(a)anthracene	ND	190	19	ug/kg	
50-32-8	Benzo(a)pyrene	ND	190	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	21	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	190	38	ug/kg	
100-51-6	Benzyl Alcohol	106	190	19	ug/kg	J
91-58-7	2-Chloronaphthalene	ND	190	23	ug/kg	
106-47-8	4-Chloroaniline	ND	190	19	ug/kg	
86-74-8	Carbazole	ND	190	19	ug/kg	
218-01-9	Chrysene	ND	190	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	19	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	19	ug/kg	

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: DPT-41 (6-8)
Lab Sample ID: FA12959-12 **Date Sampled:** 03/02/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 87.0
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	190	20	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	28	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	22	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	21	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	19	ug/kg	
132-64-9	Dibenzofuran	ND	190	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	380	38	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	190	38	ug/kg	
84-66-2	Diethyl phthalate	ND	380	38	ug/kg	
131-11-3	Dimethyl phthalate	ND	190	38	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	380	38	ug/kg	
206-44-0	Fluoranthene	ND	190	19	ug/kg	
86-73-7	Fluorene	ND	190	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	19	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	19	ug/kg	
78-59-1	Isophorone	ND	190	19	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	19	ug/kg	
88-74-4	2-Nitroaniline	ND	190	38	ug/kg	
99-09-2	3-Nitroaniline	ND	190	38	ug/kg	
100-01-6	4-Nitroaniline	ND	190	38	ug/kg	
91-20-3	Naphthalene	ND	190	19	ug/kg	
98-95-3	Nitrobenzene	ND	190	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	19	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	19	ug/kg	
85-01-8	Phenanthrene	ND	190	19	ug/kg	
129-00-0	Pyrene	ND	190	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	77%		40-102%
4165-62-2	Phenol-d5	83%		41-100%
118-79-6	2,4,6-Tribromophenol	85%		42-108%

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:	DPT-41 (6-8)		
Lab Sample ID:	FA12959-12	**Date Sampled:**	03/02/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	87.0
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	80%		40-105%
321-60-8	2-Fluorobiphenyl	81%		43-107%
1718-51-0	Terphenyl-d14	106%		45-119%

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:	DPT-39 (8-10)-C		
Lab Sample ID:	FA12959-13	**Date Sampled:**	03/02/14
Matrix:	AQ - Trip Blank Soil	**Date Received:**	03/04/14
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]	Z23276.D	1	03/05/14	CP	n/a	n/a	VZ924
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
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:	DPT-39 (8-10)-C		
Lab Sample ID:	FA12959-13	**Date Sampled:**	03/02/14
Matrix:	AQ - Trip Blank Soil	**Date Received:**	03/04/14
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	104%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	98%		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: DPT-42 (8-10)
Lab Sample ID: FA12959-14 **Date Sampled:** 03/03/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8260B **Percent Solids:** 87.9
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H0084533.D	1	03/04/14	EP	n/a	n/a	VH3204
Run #2							

	Initial Weight
Run #1	7.78 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	37	11	ug/kg	
71-43-2	Benzene [b]	ND	3.7	0.73	ug/kg	
75-27-4	Bromodichloromethane	ND	3.7	0.73	ug/kg	
75-25-2	Bromoform	ND	3.7	0.79	ug/kg	
108-90-7	Chlorobenzene	ND	3.7	0.73	ug/kg	
75-00-3	Chloroethane	ND	3.7	1.7	ug/kg	
67-66-3	Chloroform	ND	3.7	0.83	ug/kg	
75-15-0	Carbon disulfide	ND	3.7	0.73	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.7	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.7	0.73	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.7	0.73	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.7	0.73	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.7	0.73	ug/kg	
124-48-1	Dibromochloromethane	ND	3.7	0.73	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.7	0.73	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.7	0.73	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.7	0.98	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.7	0.73	ug/kg	
100-41-4	Ethylbenzene	ND	3.7	0.73	ug/kg	
591-78-6	2-Hexanone	ND	18	3.6	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	18	3.7	ug/kg	
74-83-9	Methyl bromide	ND	3.7	1.4	ug/kg	
74-87-3	Methyl chloride	ND	3.7	1.5	ug/kg	
75-09-2	Methylene chloride	ND	7.3	2.9	ug/kg	
78-93-3	Methyl ethyl ketone	ND	18	5.5	ug/kg	
100-42-5	Styrene	ND	3.7	0.73	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.7	0.73	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.7	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.7	1.2	ug/kg	
127-18-4	Tetrachloroethylene	5.0	3.7	0.92	ug/kg	
108-88-3	Toluene	ND	3.7	0.73	ug/kg	
79-01-6	Trichloroethylene	ND	3.7	0.75	ug/kg	

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:	DPT-42 (8-10)		
Lab Sample ID:	FA12959-14	**Date Sampled:**	03/03/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	87.9
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.7	0.75	ug/kg	
1330-20-7	Xylene (total)	ND	11	1.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		75-124%
2037-26-5	Toluene-D8	94%		75-126%
460-00-4	4-Bromofluorobenzene	98%		71-133%
17060-07-0	1,2-Dichloroethane-D4	108%		72-135%

(a) Soil vials were not received within 48 hours of sampling; results are considered minimum values.
(b) Pre-weighed vials were altered in the field; sample weights are estimated.

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:	DPT-42 (8-10)		
Lab Sample ID:	FA12959-14	**Date Sampled:**	03/03/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	87.9
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X033626.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	940	190	ug/kg	
95-57-8	2-Chlorophenol	ND	190	19	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	19	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	19	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	21	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	940	190	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	370	75	ug/kg	
95-48-7	2-Methylphenol	ND	190	19	ug/kg	
	3&4-Methylphenol	ND	190	37	ug/kg	
88-75-5	2-Nitrophenol	ND	190	19	ug/kg	
100-02-7	4-Nitrophenol	ND	940	150	ug/kg	
87-86-5	Pentachlorophenol	ND	940	150	ug/kg	
108-95-2	Phenol	ND	190	19	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	24	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	19	ug/kg	
83-32-9	Acenaphthene	ND	190	24	ug/kg	
208-96-8	Acenaphthylene	ND	190	19	ug/kg	
120-12-7	Anthracene	ND	190	19	ug/kg	
56-55-3	Benzo(a)anthracene	ND	190	19	ug/kg	
50-32-8	Benzo(a)pyrene	ND	190	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	190	19	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	190	37	ug/kg	
100-51-6	Benzyl Alcohol	ND	190	19	ug/kg	
91-58-7	2-Chloronaphthalene	ND	190	22	ug/kg	
106-47-8	4-Chloroaniline	ND	190	19	ug/kg	
86-74-8	Carbazole	ND	190	19	ug/kg	
218-01-9	Chrysene	ND	190	19	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	190	19	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	190	19	ug/kg	

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: DPT-42 (8-10)
Lab Sample ID: FA12959-14 **Date Sampled:** 03/03/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 87.9
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	190	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	190	28	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	190	19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	190	19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	190	19	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	190	21	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	190	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	19	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	190	19	ug/kg	
132-64-9	Dibenzofuran	ND	190	19	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	370	37	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	190	37	ug/kg	
84-66-2	Diethyl phthalate	ND	370	37	ug/kg	
131-11-3	Dimethyl phthalate	ND	190	37	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	370	37	ug/kg	
206-44-0	Fluoranthene	ND	190	19	ug/kg	
86-73-7	Fluorene	ND	190	19	ug/kg	
118-74-1	Hexachlorobenzene	ND	190	19	ug/kg	
87-68-3	Hexachlorobutadiene	ND	190	19	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	190	19	ug/kg	
67-72-1	Hexachloroethane	ND	190	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	19	ug/kg	
78-59-1	Isophorone	ND	190	19	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	19	ug/kg	
88-74-4	2-Nitroaniline	ND	190	37	ug/kg	
99-09-2	3-Nitroaniline	ND	190	37	ug/kg	
100-01-6	4-Nitroaniline	ND	190	37	ug/kg	
91-20-3	Naphthalene	ND	190	19	ug/kg	
98-95-3	Nitrobenzene	ND	190	19	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	190	19	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	19	ug/kg	
85-01-8	Phenanthrene	ND	190	19	ug/kg	
129-00-0	Pyrene	ND	190	19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	190	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	75%		40-102%
4165-62-2	Phenol-d5	80%		41-100%
118-79-6	2,4,6-Tribromophenol	81%		42-108%

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:	DPT-42 (8-10)		
Lab Sample ID:	FA12959-14	**Date Sampled:**	03/03/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	87.9
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	76%		40-105%
321-60-8	2-Fluorobiphenyl	77%		43-107%
1718-51-0	Terphenyl-d14	101%		45-119%

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: DPT-40 (9-11)
Lab Sample ID: FA12959-15 **Date Sampled:** 03/03/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8260B **Percent Solids:** 80.5
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H0084536.D	1	03/04/14	EP	n/a	n/a	VH3204
Run #2							

	Initial Weight
Run #1	7.39 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	42	13	ug/kg	
71-43-2	Benzene [b]	ND	4.2	0.84	ug/kg	
75-27-4	Bromodichloromethane	ND	4.2	0.84	ug/kg	
75-25-2	Bromoform	ND	4.2	0.91	ug/kg	
108-90-7	Chlorobenzene	ND	4.2	0.84	ug/kg	
75-00-3	Chloroethane	ND	4.2	1.9	ug/kg	
67-66-3	Chloroform	ND	4.2	0.95	ug/kg	
75-15-0	Carbon disulfide	ND	4.2	0.84	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.2	1.2	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.2	0.84	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	4.2	0.84	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.2	0.84	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.2	0.84	ug/kg	
124-48-1	Dibromochloromethane	ND	4.2	0.84	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	4.2	0.84	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.2	0.84	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	4.2	1.1	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.2	0.84	ug/kg	
100-41-4	Ethylbenzene	ND	4.2	0.84	ug/kg	
591-78-6	2-Hexanone	ND	21	4.1	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	21	4.2	ug/kg	
74-83-9	Methyl bromide	ND	4.2	1.6	ug/kg	
74-87-3	Methyl chloride	ND	4.2	1.7	ug/kg	
75-09-2	Methylene chloride	ND	8.4	3.4	ug/kg	
78-93-3	Methyl ethyl ketone	ND	21	6.3	ug/kg	
100-42-5	Styrene	ND	4.2	0.84	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.2	0.84	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.2	1.2	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.2	1.4	ug/kg	
127-18-4	Tetrachloroethylene	11.6	4.2	1.1	ug/kg	
108-88-3	Toluene	ND	4.2	0.84	ug/kg	
79-01-6	Trichloroethylene	ND	4.2	0.86	ug/kg	

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:	DPT-40 (9-11)		
Lab Sample ID:	FA12959-15	**Date Sampled:**	03/03/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	80.5
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	4.2	0.86	ug/kg	
1330-20-7	Xylene (total)	ND	13	2.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		75-124%
2037-26-5	Toluene-D8	94%		75-126%
460-00-4	4-Bromofluorobenzene	98%		71-133%
17060-07-0	1,2-Dichloroethane-D4	113%		72-135%

(a) Soil vials were not received within 48 hours of sampling; results are considered minimum values.
(b) Pre-weighed vials were altered in the field; sample weights are estimated.

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: DPT-40 (9-11)
Lab Sample ID: FA12959-15 **Date Sampled:** 03/03/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 80.5
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X033627.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	1000	210	ug/kg	
95-57-8	2-Chlorophenol	ND	210	21	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	210	21	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	210	21	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	210	23	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1000	210	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	410	83	ug/kg	
95-48-7	2-Methylphenol	ND	210	21	ug/kg	
	3&4-Methylphenol	ND	210	41	ug/kg	
88-75-5	2-Nitrophenol	ND	210	21	ug/kg	
100-02-7	4-Nitrophenol	ND	1000	170	ug/kg	
87-86-5	Pentachlorophenol	ND	1000	170	ug/kg	
108-95-2	Phenol	ND	210	21	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	210	27	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	210	21	ug/kg	
83-32-9	Acenaphthene	ND	210	26	ug/kg	
208-96-8	Acenaphthylene	ND	210	21	ug/kg	
120-12-7	Anthracene	ND	210	21	ug/kg	
56-55-3	Benzo(a)anthracene	ND	210	21	ug/kg	
50-32-8	Benzo(a)pyrene	ND	210	21	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	210	21	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	210	21	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	210	23	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	210	21	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	210	41	ug/kg	
100-51-6	Benzyl Alcohol	ND	210	21	ug/kg	
91-58-7	2-Chloronaphthalene	ND	210	25	ug/kg	
106-47-8	4-Chloroaniline	ND	210	21	ug/kg	
86-74-8	Carbazole	ND	210	21	ug/kg	
218-01-9	Chrysene	ND	210	21	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	210	21	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	210	21	ug/kg	

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: DPT-40 (9-11)
Lab Sample ID: FA12959-15 **Date Sampled:** 03/03/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 80.5
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	210	22	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	210	31	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	210	21	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	210	21	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	210	21	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	210	24	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	210	23	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	210	21	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	210	21	ug/kg	
132-64-9	Dibenzofuran	ND	210	21	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	410	41	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	210	41	ug/kg	
84-66-2	Diethyl phthalate	ND	410	41	ug/kg	
131-11-3	Dimethyl phthalate	ND	210	41	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	410	41	ug/kg	
206-44-0	Fluoranthene	ND	210	21	ug/kg	
86-73-7	Fluorene	ND	210	21	ug/kg	
118-74-1	Hexachlorobenzene	ND	210	21	ug/kg	
87-68-3	Hexachlorobutadiene	ND	210	21	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	210	21	ug/kg	
67-72-1	Hexachloroethane	ND	210	21	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	210	21	ug/kg	
78-59-1	Isophorone	ND	210	21	ug/kg	
91-57-6	2-Methylnaphthalene	ND	210	21	ug/kg	
88-74-4	2-Nitroaniline	ND	210	41	ug/kg	
99-09-2	3-Nitroaniline	ND	210	41	ug/kg	
100-01-6	4-Nitroaniline	ND	210	41	ug/kg	
91-20-3	Naphthalene	ND	210	21	ug/kg	
98-95-3	Nitrobenzene	ND	210	21	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	210	21	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	210	21	ug/kg	
85-01-8	Phenanthrene	ND	210	21	ug/kg	
129-00-0	Pyrene	ND	210	21	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	210	21	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	68% [a]		40-102%
4165-62-2	Phenol-d5	76% [a]		41-100%
118-79-6	2,4,6-Tribromophenol	87% [a]		42-108%

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:	DPT-40 (9-11)		
Lab Sample ID:	FA12959-15	**Date Sampled:**	03/03/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	80.5
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	78% [a]		40-105%
321-60-8	2-Fluorobiphenyl	77% [a]		43-107%
1718-51-0	Terphenyl-d14	104% [a]		45-119%

(a) Surrogate recoveries corrected for double spike.

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: DPT-44 (7-9)
Lab Sample ID: FA12959-16 **Date Sampled:** 03/03/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8260B **Percent Solids:** 87.7
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H0084537.D	1	03/04/14	EP	n/a	n/a	VH3204
Run #2							

	Initial Weight
Run #1	8.96 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	32	9.5	ug/kg	
71-43-2	Benzene [b]	ND	3.2	0.64	ug/kg	
75-27-4	Bromodichloromethane	ND	3.2	0.64	ug/kg	
75-25-2	Bromoform	ND	3.2	0.69	ug/kg	
108-90-7	Chlorobenzene	ND	3.2	0.64	ug/kg	
75-00-3	Chloroethane	ND	3.2	1.4	ug/kg	
67-66-3	Chloroform	ND	3.2	0.72	ug/kg	
75-15-0	Carbon disulfide	ND	3.2	0.64	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.2	0.88	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.2	0.64	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.2	0.64	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.2	0.64	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.2	0.64	ug/kg	
124-48-1	Dibromochloromethane	ND	3.2	0.64	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.2	0.64	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.2	0.64	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.2	0.85	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.2	0.64	ug/kg	
100-41-4	Ethylbenzene	ND	3.2	0.64	ug/kg	
591-78-6	2-Hexanone	ND	16	3.1	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	16	3.2	ug/kg	
74-83-9	Methyl bromide	ND	3.2	1.2	ug/kg	
74-87-3	Methyl chloride	ND	3.2	1.3	ug/kg	
75-09-2	Methylene chloride	ND	6.4	2.5	ug/kg	
78-93-3	Methyl ethyl ketone	ND	16	4.8	ug/kg	
100-42-5	Styrene	ND	3.2	0.64	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.2	0.64	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.2	0.90	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.2	1.0	ug/kg	
127-18-4	Tetrachloroethylene	24.3	3.2	0.80	ug/kg	
108-88-3	Toluene	ND	3.2	0.64	ug/kg	
79-01-6	Trichloroethylene	ND	3.2	0.65	ug/kg	

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:	DPT-44 (7-9)		
Lab Sample ID:	FA12959-16	**Date Sampled:**	03/03/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	87.7
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.2	0.65	ug/kg	
1330-20-7	Xylene (total)	ND	9.5	1.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		75-124%
2037-26-5	Toluene-D8	94%		75-126%
460-00-4	4-Bromofluorobenzene	96%		71-133%
17060-07-0	1,2-Dichloroethane-D4	110%		72-135%

(a) Soil vials were not received within 48 hours of sampling; results are considered minimum values.
(b) Pre-weighed vials were altered in the field; sample weights are estimated.

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: DPT-43 (5-7)
Lab Sample ID: FA12959-17 **Date Sampled:** 03/03/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8260B **Percent Solids:** 87.7
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H0084538.D	1	03/04/14	EP	n/a	n/a	VH3204
Run #2							

	Initial Weight
Run #1	7.14 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	24.6	40	12	ug/kg	J
71-43-2	Benzene [b]	ND	4.0	0.80	ug/kg	
75-27-4	Bromodichloromethane	ND	4.0	0.80	ug/kg	
75-25-2	Bromoform	ND	4.0	0.86	ug/kg	
108-90-7	Chlorobenzene	ND	4.0	0.80	ug/kg	
75-00-3	Chloroethane	ND	4.0	1.8	ug/kg	
67-66-3	Chloroform	ND	4.0	0.90	ug/kg	
75-15-0	Carbon disulfide	ND	4.0	0.80	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.0	1.1	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.0	0.80	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	4.0	0.80	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.0	0.80	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.0	0.80	ug/kg	
124-48-1	Dibromochloromethane	ND	4.0	0.80	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	4.0	0.80	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.0	0.80	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	4.0	1.1	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.0	0.80	ug/kg	
100-41-4	Ethylbenzene	ND	4.0	0.80	ug/kg	
591-78-6	2-Hexanone	ND	20	3.9	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	20	4.0	ug/kg	
74-83-9	Methyl bromide	ND	4.0	1.5	ug/kg	
74-87-3	Methyl chloride	ND	4.0	1.6	ug/kg	
75-09-2	Methylene chloride	ND	8.0	3.2	ug/kg	
78-93-3	Methyl ethyl ketone	ND	20	6.0	ug/kg	
100-42-5	Styrene	ND	4.0	0.80	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.0	0.80	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.0	1.1	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.0	1.3	ug/kg	
127-18-4	Tetrachloroethylene	12.1	4.0	1.0	ug/kg	
108-88-3	Toluene	ND	4.0	0.80	ug/kg	
79-01-6	Trichloroethylene	ND	4.0	0.81	ug/kg	

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:	DPT-43 (5-7)		
Lab Sample ID:	FA12959-17	**Date Sampled:**	03/03/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	87.7
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	4.0	0.81	ug/kg	
1330-20-7	Xylene (total)	ND	12	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		75-124%
2037-26-5	Toluene-D8	93%		75-126%
460-00-4	4-Bromofluorobenzene	97%		71-133%
17060-07-0	1,2-Dichloroethane-D4	112%		72-135%

(a) Soil vials were not received within 48 hours of sampling; results are considered minimum values.
(b) Pre-weighed vials were altered in the field; sample weights are estimated.

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:	DPT-43 (11-12)		
Lab Sample ID:	FA12959-18	**Date Sampled:**	03/03/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	85.6
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H0084539.D	1	03/04/14	EP	n/a	n/a	VH3204
Run #2 [b]	H0084552.D	1	03/05/14	EP	n/a	n/a	VH3205

	Initial Weight	Methanol Aliquot
Run #1	7.37 g	
Run #2	7.76 g	100 ul

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	40	12	ug/kg	
71-43-2	Benzene [c]	ND	4.0	0.79	ug/kg	
75-27-4	Bromodichloromethane	ND	4.0	0.79	ug/kg	
75-25-2	Bromoform	ND	4.0	0.86	ug/kg	
108-90-7	Chlorobenzene	ND	4.0	0.79	ug/kg	
75-00-3	Chloroethane	ND	4.0	1.8	ug/kg	
67-66-3	Chloroform	ND	4.0	0.90	ug/kg	
75-15-0	Carbon disulfide	ND	4.0	0.79	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.0	1.1	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.0	0.79	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	4.0	0.79	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.0	0.79	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.0	0.79	ug/kg	
124-48-1	Dibromochloromethane	ND	4.0	0.79	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	2.9	4.0	0.79	ug/kg	J
10061-01-5	cis-1,3-Dichloropropene	ND	4.0	0.79	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	4.0	1.1	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.0	0.79	ug/kg	
100-41-4	Ethylbenzene	ND	4.0	0.79	ug/kg	
591-78-6	2-Hexanone	ND	20	3.9	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	20	4.0	ug/kg	
74-83-9	Methyl bromide	ND	4.0	1.5	ug/kg	
74-87-3	Methyl chloride	ND	4.0	1.6	ug/kg	
75-09-2	Methylene chloride	ND	7.9	3.2	ug/kg	
78-93-3	Methyl ethyl ketone	ND	20	5.9	ug/kg	
100-42-5	Styrene	ND	4.0	0.79	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.0	0.79	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.0	1.1	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.0	1.3	ug/kg	
127-18-4	Tetrachloroethylene	535 [d]	230	58	ug/kg	
108-88-3	Toluene	ND	4.0	0.79	ug/kg	
79-01-6	Trichloroethylene	3.1	4.0	0.81	ug/kg	J

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:	DPT-43 (11-12)		
Lab Sample ID:	FA12959-18	**Date Sampled:**	03/03/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	85.6
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	4.0	0.81	ug/kg	
1330-20-7	Xylene (total)	ND	12	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%	90%	75-124%
2037-26-5	Toluene-D8	92%	92%	75-126%
460-00-4	4-Bromofluorobenzene	101%	96%	71-133%
17060-07-0	1,2-Dichloroethane-D4	113%	104%	72-135%

(a) Soil vials were not received within 48 hours of sampling; results are considered minimum values.
(b) Soil vials were not received within 48 hours of sampling.
(c) Pre-weighed vials were altered in the field; sample weights are estimated.
(d) Result is from Run# 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: DPT-40 (2-4)
Lab Sample ID: FA12959-19 **Date Sampled:** 03/03/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8260B **Percent Solids:** 94.4
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H0084553.D	1	03/05/14	EP	n/a	n/a	VH3205
Run #2							

	Initial Weight
Run #1	8.86 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	30	9.0	ug/kg	
71-43-2	Benzene [b]	ND	3.0	0.60	ug/kg	
75-27-4	Bromodichloromethane	ND	3.0	0.60	ug/kg	
75-25-2	Bromoform	ND	3.0	0.65	ug/kg	
108-90-7	Chlorobenzene	ND	3.0	0.60	ug/kg	
75-00-3	Chloroethane	ND	3.0	1.4	ug/kg	
67-66-3	Chloroform	ND	3.0	0.68	ug/kg	
75-15-0	Carbon disulfide	ND	3.0	0.60	ug/kg	
56-23-5	Carbon tetrachloride	ND	3.0	0.83	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3.0	0.60	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3.0	0.60	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3.0	0.60	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3.0	0.60	ug/kg	
124-48-1	Dibromochloromethane	ND	3.0	0.60	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3.0	0.60	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	3.0	0.60	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3.0	0.80	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	3.0	0.60	ug/kg	
100-41-4	Ethylbenzene	ND	3.0	0.60	ug/kg	
591-78-6	2-Hexanone	ND	15	2.9	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	15	3.0	ug/kg	
74-83-9	Methyl bromide	ND	3.0	1.1	ug/kg	
74-87-3	Methyl chloride	ND	3.0	1.2	ug/kg	
75-09-2	Methylene chloride	ND	6.0	2.4	ug/kg	
78-93-3	Methyl ethyl ketone	ND	15	4.5	ug/kg	
100-42-5	Styrene	ND	3.0	0.60	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3.0	0.60	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.0	0.84	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3.0	0.96	ug/kg	
127-18-4	Tetrachloroethylene	7.7	3.0	0.75	ug/kg	
108-88-3	Toluene	ND	3.0	0.60	ug/kg	
79-01-6	Trichloroethylene	ND	3.0	0.61	ug/kg	

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:	DPT-40 (2-4)		
Lab Sample ID:	FA12959-19	**Date Sampled:**	03/03/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8260B	**Percent Solids:**	94.4
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	3.0	0.61	ug/kg	
1330-20-7	Xylene (total)	ND	9.0	1.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		75-124%
2037-26-5	Toluene-D8	94%		75-126%
460-00-4	4-Bromofluorobenzene	101%		71-133%
17060-07-0	1,2-Dichloroethane-D4	110%		72-135%

(a) Soil vials were not received within 48 hours of sampling; results are considered minimum values.
(b) Pre-weighed vials were altered in the field; sample weights are estimated.

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:	DPT-40 (2-4)		
Lab Sample ID:	FA12959-19	**Date Sampled:**	03/03/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	94.4
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X033628.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
Run #2							

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

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	890	180	ug/kg	
95-57-8	2-Chlorophenol	ND	180	18	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	18	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	18	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	180	20	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	890	180	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	360	71	ug/kg	
95-48-7	2-Methylphenol	ND	180	18	ug/kg	
	3&4-Methylphenol	ND	180	36	ug/kg	
88-75-5	2-Nitrophenol	ND	180	18	ug/kg	
100-02-7	4-Nitrophenol	ND	890	140	ug/kg	
87-86-5	Pentachlorophenol	ND	890	140	ug/kg	
108-95-2	Phenol	ND	180	18	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	23	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	18	ug/kg	
83-32-9	Acenaphthene	ND	180	23	ug/kg	
208-96-8	Acenaphthylene	ND	180	18	ug/kg	
120-12-7	Anthracene	ND	180	18	ug/kg	
56-55-3	Benzo(a)anthracene	ND	180	18	ug/kg	
50-32-8	Benzo(a)pyrene	ND	180	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	180	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	180	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	180	19	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	180	18	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	180	36	ug/kg	
100-51-6	Benzyl Alcohol	87.8	180	18	ug/kg	J
91-58-7	2-Chloronaphthalene	ND	180	21	ug/kg	
106-47-8	4-Chloroaniline	ND	180	18	ug/kg	
86-74-8	Carbazole	ND	180	18	ug/kg	
218-01-9	Chrysene	ND	180	18	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	180	18	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	180	18	ug/kg	

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: DPT-40 (2-4)
Lab Sample ID: FA12959-19 **Date Sampled:** 03/03/14
Matrix: SO - Soil **Date Received:** 03/04/14
Method: SW846 8270D SW846 3550C **Percent Solids:** 94.4
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	180	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	180	27	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	180	18	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	180	18	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	180	18	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	180	20	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	180	20	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	180	18	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	180	18	ug/kg	
132-64-9	Dibenzofuran	ND	180	18	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	360	36	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	180	36	ug/kg	
84-66-2	Diethyl phthalate	ND	360	36	ug/kg	
131-11-3	Dimethyl phthalate	ND	180	36	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	360	36	ug/kg	
206-44-0	Fluoranthene	ND	180	18	ug/kg	
86-73-7	Fluorene	ND	180	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	180	18	ug/kg	
87-68-3	Hexachlorobutadiene	ND	180	18	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	180	18	ug/kg	
67-72-1	Hexachloroethane	ND	180	18	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	180	18	ug/kg	
78-59-1	Isophorone	ND	180	18	ug/kg	
91-57-6	2-Methylnaphthalene	ND	180	18	ug/kg	
88-74-4	2-Nitroaniline	ND	180	36	ug/kg	
99-09-2	3-Nitroaniline	ND	180	36	ug/kg	
100-01-6	4-Nitroaniline	ND	180	36	ug/kg	
91-20-3	Naphthalene	ND	180	18	ug/kg	
98-95-3	Nitrobenzene	ND	180	18	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	180	18	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	18	ug/kg	
85-01-8	Phenanthrene	ND	180	18	ug/kg	
129-00-0	Pyrene	ND	180	18	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	180	18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	72%		40-102%
4165-62-2	Phenol-d5	75%		41-100%
118-79-6	2,4,6-Tribromophenol	75%		42-108%

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:	DPT-40 (2-4)		
Lab Sample ID:	FA12959-19	**Date Sampled:**	03/03/14
Matrix:	SO - Soil	**Date Received:**	03/04/14
Method:	SW846 8270D SW846 3550C	**Percent Solids:**	94.4
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%		40-105%
321-60-8	2-Fluorobiphenyl	72%		43-107%
1718-51-0	Terphenyl-d14	98%		45-119%

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

FA12959

AECOM

Chain of Custody and Analytical Request

Page 1 of 2
Project Number: 60269713 (0349)
Chain of Custody Number (1): 030114-01
LIMS Number:

Project Name / Location: UTC Delaware Spray Technologies Site, Banberg SC
Client Name: UTC
Collected by: LAlexander, RMorgan
Project Manager: Walter Gerald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.)	Sample Analysis Requested: TCL VOCs	TCL SVOCs	metals	hex chrome	COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
DPT-34(8-10)	01-MAR-2014	0955	X	X		8-10	X	X	X	X	S	1
DPT-34(8-10)-a		0955	X	X		8-10	X	X	X	X	S	2
DPT-36(5-7)		1200	X	X		5-7	X	X			S	3
DPT-36(5-7)-a		1200	X	X		5-7	X	X			S	4
DPT-36(12-14)		1215	X	X		12-14	X	X			S	5
DPT-35(3-5)		1520	X	X		3-5	X	X			S high PID (200-800ppm)	6
DPT-35(3-5)-matrix		1520	X	X		3-5	X	X			S high PID (200-800ppm)	6
DPT-35(10.5-12.5)	↓	1620	X	X		10.5-12.5	X	X			S	7
DPT-37(6-8)	02-MAR-2014	0950	X	X		6-8	X	X			S	8
DPT-38(8-10)		1010	X	X		8-10	X	X			S	9
DPT-39(8-10)-d		1240		X		8-10	X	X			A; hand auger rinsate	10
DPT-39(8-10)		1305	X	X		8-10	X	X			S	11
DPT-41(6-8)		1335	X	X		6-8	X	X			S	12
DPT-39(8-10)-c	↓	1240		X				X			A; triplblank	13
DPT-42(8-10)	03-MAR-2014	1020	X	X		8-10	X	X			S	14

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	LAlexander	3/3/14	1800			
2.	FE	03-04-14	1230		030414	
3.						1230

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:
Method of Shipment: FedEx
Analytical Lab: Accutest
Lab Recipient:
Shipped: X
Airbill #: 8047 3475 6280
Location: Orlando FL
Date: Time: 8047 3475 6290

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

VOCs are grab, all else is composite
Aqueous VOCs are unpreserved – 7 day holding time

24, 2.2

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

FA12959

AECOM

Chain of Custody and Analytical Request

Page 2 of 2
Project Number: 60269713.03.02.02
Chain of Custody Number [1]: 030114-01
LIMS Number:

Project Name / Location: UTC Delaware Spray Technologies SG RI
Client Name: UTC
Collected by: LAlexander RMorgan
Project Manager: WalterGerald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.)	Sample Analysis Requested: TCL VOCs (8260B)	TCL SVOCs (8270D)	Moisture	COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
DPT-40(9-11)	03-MAR-2014	1110	X	X		9-11	XX			S	15
DPT-44(7-9)		1320	X	X		7-9	X		X	S	16
DPT-43(5-7)		1325	X	X		5-7	X		X	S	17
DPT-43(11-12)	↓	1520	X	X		11-12	X		X	S	18
trip blank											

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	[signature]	3/3/14	1800	[signature]		
2.	[signature]	03-04-14	1230	[signature]	03/04/14	1230
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:
Method of Shipment: FedEx
Analytical Lab: Accutest
Lab Recipient:
Shipped: X
Airbill #: 8047 3475 6290
Location: Orlando FL
Date:
Time:
8047 3475 6280

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

VOCs are grab; rest are composite

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

5.1 5

FA12959: Chain of Custody
Page 2 of 5

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA12959 CLIENT: Utc PROJECT: Oclawa Spray

DATE/TIME RECEIVED: 03-04-14 1230 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 2

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

AIRBILL NUMBERS: 8047 3475 6280/6290

COOLER INFORMATION

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

TRIP BLANK INFORMATION

- [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 2.6
- [ ] CORRECTED TEMPS: 2.4, 2.2

SAMPLE INFORMATION

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

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS: Samples Frozen 03-04-14 1230. Received Samples 1-9,14 OUT OF hold time. Received 1 Extra Sample FD DPT-46 (2-4) 3-3-14 0925 2 DI vials. Unused 8 oz Jar Will be Sample # 19. Extra Labels on all Soil vials. 3 Vials For trip Blank

TECHNICIAN SIGNATURE/DATE R Will 03-04-14 REVIEWER SIGNATURE/DATE K 3-4-14

NF 12/10

receipt confirmation 122910.xls

5.1 5

FA12959: Chain of Custody

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FA12959: Chain of Custody
Page 4 of 5

Job Change Order: FA12959_3/6/2014

Requested Date:	3/6/2014	**Received Date:**	3/4/2014
Account Name:	United Technologies Corporation	**Due Date:**	3/18/2014
Project Description:	AECOMSCG: Delavan Spray Technologies;	**Deliverable:**	COMMBN
CSR:	HW	**TAT (Days):**	14

Sample #: FA12959-1 **Change:** Please add pH

DPT-34 (8-10)

Sample #: FA12959-2 **Change:** Please add pH

DPT-34 (8-10)A

Above Changes Doria C. at AECOM **Date:** 3/6/2014

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.

Page 1 of 1

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: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG3373-MB	G0092682.D	1	03/04/14	EP	n/a	n/a	VG3373

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

FA12959-3, FA12959-4, FA12959-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	15	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.1	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.3	ug/kg	
67-66-3	Chloroform	ND	5.0	1.1	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	1.0	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.4	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.3	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	
591-78-6	2-Hexanone	ND	25	4.9	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	5.0	ug/kg	
74-83-9	Methyl bromide	ND	5.0	1.9	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.0	ug/kg	
75-09-2	Methylene chloride	ND	10	4.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.4	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.6	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/kg	
108-88-3	Toluene	ND	5.0	1.0	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.7	ug/kg	

Method Blank Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG3373-MB	G0092682.D	1	03/04/14	EP	n/a	n/a	VG3373

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

FA12959-3, FA12959-4, FA12959-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	75-124%
2037-26-5	Toluene-D8	104%	75-126%
460-00-4	4-Bromofluorobenzene	108%	71-133%
17060-07-0	1,2-Dichloroethane-D4	112%	72-135%

Method Blank Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC3897-MB	C097449.D	1	03/04/14	AH	n/a	n/a	VC3897

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

FA12959-6

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	15	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.1	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.3	ug/kg	
67-66-3	Chloroform	ND	5.0	1.1	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	1.0	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.4	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.3	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	
591-78-6	2-Hexanone	ND	25	4.9	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	5.0	ug/kg	
74-83-9	Methyl bromide	ND	5.0	1.9	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.0	ug/kg	
75-09-2	Methylene chloride	ND	10	4.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.4	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.6	ug/kg	
108-88-3	Toluene	ND	5.0	1.0	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.7	ug/kg	

Method Blank Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC3897-MB	C097449.D	1	03/04/14	AH	n/a	n/a	VC3897

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

FA12959-6

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	113%	75-124%
2037-26-5	Toluene-D8	106%	75-126%
460-00-4	4-Bromofluorobenzene	103%	71-133%
17060-07-0	1,2-Dichloroethane-D4	114%	72-135%

Method Blank Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH3204-MB	H0084527.D	1	03/04/14	EP	n/a	n/a	VH3204

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

FA12959-1, FA12959-7, FA12959-9, FA12959-11, FA12959-12, FA12959-14, FA12959-15, FA12959-16, FA12959-17, FA12959-18

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	15	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.1	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.3	ug/kg	
67-66-3	Chloroform	ND	5.0	1.1	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	1.0	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.4	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.3	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	
591-78-6	2-Hexanone	ND	25	4.9	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	5.0	ug/kg	
74-83-9	Methyl bromide	ND	5.0	1.9	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.0	ug/kg	
75-09-2	Methylene chloride	ND	10	4.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.4	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.6	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/kg	
108-88-3	Toluene	ND	5.0	1.0	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.7	ug/kg	

Method Blank Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH3204-MB	H0084527.D	1	03/04/14	EP	n/a	n/a	VH3204

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

FA12959-1, FA12959-7, FA12959-9, FA12959-11, FA12959-12, FA12959-14, FA12959-15, FA12959-16, FA12959-17, FA12959-18

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	104%	75-124%
2037-26-5	Toluene-D8	97%	75-126%
460-00-4	4-Bromofluorobenzene	96%	71-133%
17060-07-0	1,2-Dichloroethane-D4	109%	72-135%

Method Blank Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH3205-MB	H0084546.D	1	03/05/14	EP	n/a	n/a	VH3205

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

FA12959-1, FA12959-2, FA12959-7, FA12959-8, FA12959-18, FA12959-19

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	15	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.1	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.3	ug/kg	
67-66-3	Chloroform	ND	5.0	1.1	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	1.0	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.4	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.3	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	
591-78-6	2-Hexanone	ND	25	4.9	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	25	5.0	ug/kg	
74-83-9	Methyl bromide	ND	5.0	1.9	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.0	ug/kg	
75-09-2	Methylene chloride	ND	10	4.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	25	7.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.4	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.6	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/kg	
108-88-3	Toluene	ND	5.0	1.0	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.7	ug/kg	

Method Blank Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH3205-MB	H0084546.D	1	03/05/14	EP	n/a	n/a	VH3205

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

FA12959-1, FA12959-2, FA12959-7, FA12959-8, FA12959-18, FA12959-19

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	107%	75-124%
2037-26-5	Toluene-D8	94%	75-126%
460-00-4	4-Bromofluorobenzene	97%	71-133%
17060-07-0	1,2-Dichloroethane-D4	107%	72-135%

Method Blank Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ924-MB	Z23255.D	1	03/05/14	CP	n/a	n/a	VZ924

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

FA12959-10, FA12959-13

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: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ924-MB	Z23255.D	1	03/05/14	CP	n/a	n/a	VZ924

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

FA12959-10, FA12959-13

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	79-125%
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

Method Blank Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC3898-MB	C097471.D	1	03/05/14	AH	n/a	n/a	VC3898

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

FA12959-6

CAS No.	Compound	Result	RL	MDL	Units	Q
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	106%	75-124%
2037-26-5	Toluene-D8	109%	75-126%
460-00-4	4-Bromofluorobenzene	102%	71-133%
17060-07-0	1,2-Dichloroethane-D4	114%	72-135%

Blank Spike Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG3373-BS	G0092681.D	1	03/04/14	EP	n/a	n/a	VG3373

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

FA12959-3, FA12959-4, FA12959-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	240	96	61-152
71-43-2	Benzene	50	47.3	95	76-126
75-27-4	Bromodichloromethane	50	51.8	104	74-130
75-25-2	Bromoform	50	53.9	108	76-127
108-90-7	Chlorobenzene	50	56.4	113	81-129
75-00-3	Chloroethane	50	44.8	90	68-133
67-66-3	Chloroform	50	49.8	100	72-123
75-15-0	Carbon disulfide	50	42.0	84	72-122
56-23-5	Carbon tetrachloride	50	47.6	95	78-133
75-34-3	1,1-Dichloroethane	50	48.0	96	73-125
75-35-4	1,1-Dichloroethylene	50	48.0	96	81-136
107-06-2	1,2-Dichloroethane	50	51.5	103	74-128
78-87-5	1,2-Dichloropropane	50	50.1	100	74-125
124-48-1	Dibromochloromethane	50	55.2	110	76-127
156-59-2	cis-1,2-Dichloroethylene	50	47.1	94	74-126
10061-01-5	cis-1,3-Dichloropropene	50	50.0	100	80-123
156-60-5	trans-1,2-Dichloroethylene	50	47.4	95	70-127
10061-02-6	trans-1,3-Dichloropropene	50	58.6	117	75-131
100-41-4	Ethylbenzene	50	50.5	101	77-123
591-78-6	2-Hexanone	250	246	98	72-133
108-10-1	4-Methyl-2-pentanone	250	252	101	76-132
74-83-9	Methyl bromide	50	50.3	101	65-139
74-87-3	Methyl chloride	50	45.9	92	71-144
75-09-2	Methylene chloride	50	48.1	96	74-137
78-93-3	Methyl ethyl ketone	250	236	94	75-137
100-42-5	Styrene	50	52.0	104	78-125
71-55-6	1,1,1-Trichloroethane	50	48.1	96	70-129
79-34-5	1,1,2,2-Tetrachloroethane	50	54.1	108	71-126
79-00-5	1,1,2-Trichloroethane	50	50.4	101	74-124
127-18-4	Tetrachloroethylene	50	51.9	104	79-130
108-88-3	Toluene	50	51.7	103	76-124
79-01-6	Trichloroethylene	50	48.2	96	75-128
75-01-4	Vinyl chloride	50	47.4	95	76-141
1330-20-7	Xylene (total)	150	159	106	80-129

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG3373-BS	G0092681.D	1	03/04/14	EP	n/a	n/a	VG3373

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

FA12959-3, FA12959-4, FA12959-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	106%	75-124%
2037-26-5	Toluene-D8	109%	75-126%
460-00-4	4-Bromofluorobenzene	108%	71-133%
17060-07-0	1,2-Dichloroethane-D4	106%	72-135%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC3897-BS	C097448.D	1	03/04/14	AH	n/a	n/a	VC3897

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

FA12959-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	284	114	61-152
71-43-2	Benzene	50	58.3	117	76-126
75-27-4	Bromodichloromethane	50	60.3	121	74-130
75-25-2	Bromoform	50	51.0	102	76-127
108-90-7	Chlorobenzene	50	57.6	115	81-129
75-00-3	Chloroethane	50	71.6	143*	68-133
67-66-3	Chloroform	50	57.3	115	72-123
75-15-0	Carbon disulfide	50	51.2	102	72-122
56-23-5	Carbon tetrachloride	50	56.4	113	78-133
75-34-3	1,1-Dichloroethane	50	57.3	115	73-125
75-35-4	1,1-Dichloroethylene	50	58.4	117	81-136
107-06-2	1,2-Dichloroethane	50	61.0	122	74-128
78-87-5	1,2-Dichloropropane	50	58.2	116	74-125
124-48-1	Dibromochloromethane	50	55.7	111	76-127
156-59-2	cis-1,2-Dichloroethylene	50	55.9	112	74-126
10061-01-5	cis-1,3-Dichloropropene	50	57.5	115	80-123
156-60-5	trans-1,2-Dichloroethylene	50	55.8	112	70-127
10061-02-6	trans-1,3-Dichloropropene	50	60.3	121	75-131
100-41-4	Ethylbenzene	50	56.7	113	77-123
591-78-6	2-Hexanone	250	281	112	72-133
108-10-1	4-Methyl-2-pentanone	250	282	113	76-132
74-83-9	Methyl bromide	50	62.7	125	65-139
74-87-3	Methyl chloride	50	66.6	133	71-144
75-09-2	Methylene chloride	50	59.2	118	74-137
78-93-3	Methyl ethyl ketone	250	281	112	75-137
100-42-5	Styrene	50	57.1	114	78-125
71-55-6	1,1,1-Trichloroethane	50	56.8	114	70-129
79-34-5	1,1,2,2-Tetrachloroethane	50	53.7	107	71-126
79-00-5	1,1,2-Trichloroethane	50	54.8	110	74-124
108-88-3	Toluene	50	55.7	111	76-124
79-01-6	Trichloroethylene	50	57.0	114	75-128
75-01-4	Vinyl chloride	50	65.3	131	76-141
1330-20-7	Xylene (total)	150	173	115	80-129

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC3897-BS	C097448.D	1	03/04/14	AH	n/a	n/a	VC3897

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

FA12959-6

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	106%	75-124%
2037-26-5	Toluene-D8	112%	75-126%
460-00-4	4-Bromofluorobenzene	104%	71-133%
17060-07-0	1,2-Dichloroethane-D4	113%	72-135%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH3204-BS	H0084526.D	1	03/04/14	EP	n/a	n/a	VH3204

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

FA12959-1, FA12959-7, FA12959-9, FA12959-11, FA12959-12, FA12959-14, FA12959-15, FA12959-16, FA12959-17, FA12959-18

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	267	107	61-152
71-43-2	Benzene	50	53.3	107	76-126
75-27-4	Bromodichloromethane	50	56.5	113	74-130
75-25-2	Bromoform	50	49.9	100	76-127
108-90-7	Chlorobenzene	50	56.3	113	81-129
75-00-3	Chloroethane	50	52.6	105	68-133
67-66-3	Chloroform	50	50.8	102	72-123
75-15-0	Carbon disulfide	50	56.4	113	72-122
56-23-5	Carbon tetrachloride	50	53.4	107	78-133
75-34-3	1,1-Dichloroethane	50	50.4	101	73-125
75-35-4	1,1-Dichloroethylene	50	51.6	103	81-136
107-06-2	1,2-Dichloroethane	50	56.5	113	74-128
78-87-5	1,2-Dichloropropane	50	54.3	109	74-125
124-48-1	Dibromochloromethane	50	45.0	90	76-127
156-59-2	cis-1,2-Dichloroethylene	50	52.4	105	74-126
10061-01-5	cis-1,3-Dichloropropene	50	54.8	110	80-123
156-60-5	trans-1,2-Dichloroethylene	50	51.2	102	70-127
10061-02-6	trans-1,3-Dichloropropene	50	50.2	100	75-131
100-41-4	Ethylbenzene	50	51.9	104	77-123
591-78-6	2-Hexanone	250	263	105	72-133
108-10-1	4-Methyl-2-pentanone	250	268	107	76-132
74-83-9	Methyl bromide	50	48.3	97	65-139
74-87-3	Methyl chloride	50	53.1	106	71-144
75-09-2	Methylene chloride	50	46.6	93	74-137
78-93-3	Methyl ethyl ketone	250	273	109	75-137
100-42-5	Styrene	50	54.0	108	78-125
71-55-6	1,1,1-Trichloroethane	50	53.9	108	70-129
79-34-5	1,1,2,2-Tetrachloroethane	50	57.2	114	71-126
79-00-5	1,1,2-Trichloroethane	50	53.3	107	74-124
127-18-4	Tetrachloroethylene	50	49.7	99	79-130
108-88-3	Toluene	50	51.9	104	76-124
79-01-6	Trichloroethylene	50	51.9	104	75-128
75-01-4	Vinyl chloride	50	51.9	104	76-141
1330-20-7	Xylene (total)	150	167	111	80-129

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH3204-BS	H0084526.D	1	03/04/14	EP	n/a	n/a	VH3204

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

FA12959-1, FA12959-7, FA12959-9, FA12959-11, FA12959-12, FA12959-14, FA12959-15, FA12959-16, FA12959-17, FA12959-18

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	75-124%
2037-26-5	Toluene-D8	96%	75-126%
460-00-4	4-Bromofluorobenzene	97%	71-133%
17060-07-0	1,2-Dichloroethane-D4	97%	72-135%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH3205-BS	H0084545.D	1	03/05/14	EP	n/a	n/a	VH3205

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

FA12959-1, FA12959-2, FA12959-7, FA12959-8, FA12959-18, FA12959-19

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	258	103	61-152
71-43-2	Benzene	50	53.3	107	76-126
75-27-4	Bromodichloromethane	50	57.2	114	74-130
75-25-2	Bromoform	50	49.6	99	76-127
108-90-7	Chlorobenzene	50	58.1	116	81-129
75-00-3	Chloroethane	50	47.5	95	68-133
67-66-3	Chloroform	50	50.5	101	72-123
75-15-0	Carbon disulfide	50	55.7	111	72-122
56-23-5	Carbon tetrachloride	50	53.1	106	78-133
75-34-3	1,1-Dichloroethane	50	48.5	97	73-125
75-35-4	1,1-Dichloroethylene	50	50.0	100	81-136
107-06-2	1,2-Dichloroethane	50	54.9	110	74-128
78-87-5	1,2-Dichloropropane	50	54.6	109	74-125
124-48-1	Dibromochloromethane	50	46.9	94	76-127
156-59-2	cis-1,2-Dichloroethylene	50	51.8	104	74-126
10061-01-5	cis-1,3-Dichloropropene	50	55.3	111	80-123
156-60-5	trans-1,2-Dichloroethylene	50	49.9	100	70-127
10061-02-6	trans-1,3-Dichloropropene	50	50.0	100	75-131
100-41-4	Ethylbenzene	50	52.3	105	77-123
591-78-6	2-Hexanone	250	256	102	72-133
108-10-1	4-Methyl-2-pentanone	250	261	104	76-132
74-83-9	Methyl bromide	50	48.0	96	65-139
74-87-3	Methyl chloride	50	50.5	101	71-144
75-09-2	Methylene chloride	50	45.3	91	74-137
78-93-3	Methyl ethyl ketone	250	274	110	75-137
100-42-5	Styrene	50	54.7	109	78-125
71-55-6	1,1,1-Trichloroethane	50	54.6	109	70-129
79-34-5	1,1,2,2-Tetrachloroethane	50	54.6	109	71-126
79-00-5	1,1,2-Trichloroethane	50	53.4	107	74-124
127-18-4	Tetrachloroethylene	50	52.2	104	79-130
108-88-3	Toluene	50	52.1	104	76-124
79-01-6	Trichloroethylene	50	53.1	106	75-128
75-01-4	Vinyl chloride	50	50.2	100	76-141
1330-20-7	Xylene (total)	150	167	111	80-129

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH3205-BS	H0084545.D	1	03/05/14	EP	n/a	n/a	VH3205

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

FA12959-1, FA12959-2, FA12959-7, FA12959-8, FA12959-18, FA12959-19

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	75-124%
2037-26-5	Toluene-D8	96%	75-126%
460-00-4	4-Bromofluorobenzene	97%	71-133%
17060-07-0	1,2-Dichloroethane-D4	93%	72-135%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ924-BS	Z23256.D	1	03/05/14	CP	n/a	n/a	VZ924

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

FA12959-10, FA12959-13

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	105	84	50-147
71-43-2	Benzene	25	24.8	99	81-122
75-27-4	Bromodichloromethane	25	25.1	100	79-123
75-25-2	Bromoform	25	25.3	101	66-123
108-90-7	Chlorobenzene	25	27.5	110	82-124
75-00-3	Chloroethane	25	30.2	121	62-144
67-66-3	Chloroform	25	25.0	100	80-124
75-15-0	Carbon disulfide	25	28.3	113	66-148
56-23-5	Carbon tetrachloride	25	27.0	108	76-136
75-34-3	1,1-Dichloroethane	25	24.9	100	81-122
75-35-4	1,1-Dichloroethylene	25	26.7	107	78-137
107-06-2	1,2-Dichloroethane	25	27.5	110	75-125
78-87-5	1,2-Dichloropropane	25	25.2	101	76-124
124-48-1	Dibromochloromethane	25	27.4	110	78-122
156-59-2	cis-1,2-Dichloroethylene	25	25.4	102	78-120
10061-01-5	cis-1,3-Dichloropropene	25	26.1	104	75-118
156-60-5	trans-1,2-Dichloroethylene	25	25.3	101	76-127
10061-02-6	trans-1,3-Dichloropropene	25	28.3	113	80-120
100-41-4	Ethylbenzene	25	24.6	98	81-121
591-78-6	2-Hexanone	125	105	84	61-129
108-10-1	4-Methyl-2-pentanone	125	109	87	66-122
74-83-9	Methyl bromide	25	29.4	118	59-143
74-87-3	Methyl chloride	25	37.0	148	50-159
75-09-2	Methylene chloride	25	26.7	107	69-135
78-93-3	Methyl ethyl ketone	125	113	90	56-143
100-42-5	Styrene	25	23.6	94	78-119
71-55-6	1,1,1-Trichloroethane	25	26.3	105	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	24.8	99	72-120
79-00-5	1,1,2-Trichloroethane	25	26.4	106	76-119
127-18-4	Tetrachloroethylene	25	27.4	110	76-135
108-88-3	Toluene	25	28.6	114	80-120
79-01-6	Trichloroethylene	25	25.8	103	81-126
75-01-4	Vinyl chloride	25	36.7	147	69-159
1330-20-7	Xylene (total)	75	77.3	103	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ924-BS	Z23256.D	1	03/05/14	CP	n/a	n/a	VZ924

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

FA12959-10, FA12959-13

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	105%	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	94%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC3898-BS	C097470.D	1	03/05/14	AH	n/a	n/a	VC3898

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

FA12959-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
127-18-4	Tetrachloroethylene	50	51.1	102	79-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	75-124%
2037-26-5	Toluene-D8	116%	75-126%
460-00-4	4-Bromofluorobenzene	106%	71-133%
17060-07-0	1,2-Dichloroethane-D4	110%	72-135%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12937-3MS	G0092691.D	1	03/04/14	EP	n/a	n/a	VG3373
FA12937-3MSD	G0092692.D	1	03/04/14	EP	n/a	n/a	VG3373
FA12937-3	G0092685.D	1	03/04/14	EP	n/a	n/a	VG3373

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

FA12959-3, FA12959-4, FA12959-5

CAS No.	Compound	FA12937-3 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	40 U		353	261	74	235	74	10	61-152/27
71-43-2	Benzene	4.0 U		70.6	58.4	83	51.8	81	12	76-126/26
75-27-4	Bromodichloromethane	4.0 U		70.6	62.5	89	56.1	88	11	74-130/25
75-25-2	Bromoform	4.0 U		70.6	67.2	95	62.7	98	7	76-127/26
108-90-7	Chlorobenzene	4.0 U		70.6	68.5	97	62.9	99	9	81-129/29
75-00-3	Chloroethane	4.0 U		70.6	52.8	75	43.2	68	20	68-133/29
67-66-3	Chloroform	4.0 U		70.6	60.7	86	53.6	84	12	72-123/26
75-15-0	Carbon disulfide	4.0 U		70.6	51.5	73	44.7	70*	14	72-122/29
56-23-5	Carbon tetrachloride	4.0 U		70.6	56.8	80	50.8	80	11	78-133/29
75-34-3	1,1-Dichloroethane	4.0 U		70.6	59.1	84	51.8	81	13	73-125/27
75-35-4	1,1-Dichloroethylene	4.0 U		70.6	56.2	80*	50.1	79*	11	81-136/28
107-06-2	1,2-Dichloroethane	4.0 U		70.6	63.3	90	55.9	88	12	74-128/23
78-87-5	1,2-Dichloropropane	4.0 U		70.6	60.4	86	54.5	85	10	74-125/25
124-48-1	Dibromochloromethane	4.0 U		70.6	70.3	100	63.2	99	11	76-127/27
156-59-2	cis-1,2-Dichloroethylene	4.0 U		70.6	58.3	83	51.9	81	12	74-126/26
10061-01-5	cis-1,3-Dichloropropene	4.0 U		70.6	60.4	86	54.8	86	10	80-123/26
156-60-5	trans-1,2-Dichloroethylene	4.0 U		70.6	55.1	78	49.3	77	11	70-127/27
10061-02-6	trans-1,3-Dichloropropene	4.0 U		70.6	73.6	104	66.1	104	11	75-131/28
100-41-4	Ethylbenzene	4.0 U		70.6	65.3	93	58.3	91	11	77-123/31
591-78-6	2-Hexanone	20 U		353	306	87	286	90	7	72-133/26
108-10-1	4-Methyl-2-pentanone	20 U		353	320	91	299	94	7	76-132/26
74-83-9	Methyl bromide	4.0 U		70.6	67.5	96	52.4	82	25	65-139/31
74-87-3	Methyl chloride	4.0 U		70.6	54.7	77	47.8	75	13	71-144/27
75-09-2	Methylene chloride	8.1 U		70.6	59.3	84	51.7	81	14	74-137/28
78-93-3	Methyl ethyl ketone	20 U		353	278	79	259	81	7	75-137/25
100-42-5	Styrene	4.0 U		70.6	65.9	93	60.1	94	9	78-125/30
71-55-6	1,1,1-Trichloroethane	4.0 U		70.6	57.6	82	51.5	81	11	70-129/27
79-34-5	1,1,2,2-Tetrachloroethane	4.0 U		70.6	71.5	101	62.5	98	13	71-126/30
79-00-5	1,1,2-Trichloroethane	4.0 U		70.6	67.2	95	60.8	95	10	74-124/28
127-18-4	Tetrachloroethylene	4.0 U		70.6	61.2	87	56.2	88	9	79-130/31
108-88-3	Toluene	4.0 U		70.6	64.7	92	59.8	94	8	76-124/30
79-01-6	Trichloroethylene	4.0 U		70.6	56.3	80	51.9	81	8	75-128/27
75-01-4	Vinyl chloride	4.0 U		70.6	55.3	78	48.0	75*	14	76-141/27
1330-20-7	Xylene (total)	12 U		212	204	96	184	96	10	80-129/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12937-3MS	G0092691.D	1	03/04/14	EP	n/a	n/a	VG3373
FA12937-3MSD	G0092692.D	1	03/04/14	EP	n/a	n/a	VG3373
FA12937-3	G0092685.D	1	03/04/14	EP	n/a	n/a	VG3373

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

FA12959-3, FA12959-4, FA12959-5

CAS No.	Surrogate Recoveries	MS	MSD	FA12937-3	Limits
1868-53-7	Dibromofluoromethane	99%	99%	101%	75-124%
2037-26-5	Toluene-D8	111%	110%	104%	75-126%
460-00-4	4-Bromofluorobenzene	114%	109%	113%	71-133%
17060-07-0	1,2-Dichloroethane-D4	104%	102%	113%	72-135%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12959-14MS	H0084534.D	1	03/04/14	EP	n/a	n/a	VH3204
FA12959-14MSD	H0084535.D	1	03/04/14	EP	n/a	n/a	VH3204
FA12959-14 [a]	H0084533.D	1	03/04/14	EP	n/a	n/a	VH3204

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

FA12959-1, FA12959-7, FA12959-9, FA12959-11, FA12959-12, FA12959-14, FA12959-15, FA12959-16, FA12959-17, FA12959-18

CAS No.	Compound	FA12959-14 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		326	278	85	256	84	8	61-152/27
71-43-2	Benzene	ND		65.2	60.1	92	57.7	94	4	76-126/26
75-27-4	Bromodichloromethane	ND		65.2	65.0	100	62.0	101	5	74-130/25
75-25-2	Bromoform	ND		65.2	56.7	87	54.1	88	5	76-127/26
108-90-7	Chlorobenzene	ND		65.2	65.7	101	61.8	101	6	81-129/29
75-00-3	Chloroethane	ND		65.2	64.0	98	59.7	97	7	68-133/29
67-66-3	Chloroform	ND		65.2	61.3	94	59.4	97	3	72-123/26
75-15-0	Carbon disulfide	ND		65.2	63.6	97	59.3	97	7	72-122/29
56-23-5	Carbon tetrachloride	ND		65.2	59.8	92	57.2	93	4	78-133/29
75-34-3	1,1-Dichloroethane	ND		65.2	57.7	88	55.5	91	4	73-125/27
75-35-4	1,1-Dichloroethylene	ND		65.2	59.0	90	55.2	90	7	81-136/28
107-06-2	1,2-Dichloroethane	ND		65.2	64.8	99	61.7	101	5	74-128/23
78-87-5	1,2-Dichloropropane	ND		65.2	62.4	96	58.9	96	6	74-125/25
124-48-1	Dibromochloromethane	ND		65.2	52.9	81	49.9	81	6	76-127/27
156-59-2	cis-1,2-Dichloroethylene	ND		65.2	61.8	95	58.7	96	5	74-126/26
10061-01-5	cis-1,3-Dichloropropene	ND		65.2	61.1	94	59.8	98	2	80-123/26
156-60-5	trans-1,2-Dichloroethylene	ND		65.2	59.0	90	55.7	91	6	70-127/27
10061-02-6	trans-1,3-Dichloropropene	ND		65.2	56.0	86	53.0	86	6	75-131/28
100-41-4	Ethylbenzene	ND		65.2	60.0	92	57.2	93	5	77-123/31
591-78-6	2-Hexanone	ND		326	295	90	285	93	3	72-133/26
108-10-1	4-Methyl-2-pentanone	ND		326	309	95	290	95	6	76-132/26
74-83-9	Methyl bromide	ND		65.2	60.0	92	54.7	89	9	65-139/31
74-87-3	Methyl chloride	ND		65.2	59.0	90	57.3	93	3	71-144/27
75-09-2	Methylene chloride	ND		65.2	55.1	84	51.1	83	8	74-137/28
78-93-3	Methyl ethyl ketone	ND		326	294	90	283	92	4	75-137/25
100-42-5	Styrene	ND		65.2	62.3	96	60.2	98	3	78-125/30
71-55-6	1,1,1-Trichloroethane	ND		65.2	61.8	95	58.8	96	5	70-129/27
79-34-5	1,1,2,2-Tetrachloroethane	ND		65.2	64.0	98	61.3	100	4	71-126/30
79-00-5	1,1,2-Trichloroethane	ND		65.2	63.7	98	59.0	96	8	74-124/28
127-18-4	Tetrachloroethylene	5.0		65.2	55.4	77*	54.5	81	2	79-130/31
108-88-3	Toluene	ND		65.2	60.0	92	56.8	93	5	76-124/30
79-01-6	Trichloroethylene	ND		65.2	60.0	92	57.1	93	5	75-128/27
75-01-4	Vinyl chloride	ND		65.2	58.5	90	54.8	89	7	76-141/27
1330-20-7	Xylene (total)	ND		196	190	97	182	99	4	80-129/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12959-14MS	H0084534.D	1	03/04/14	EP	n/a	n/a	VH3204
FA12959-14MSD	H0084535.D	1	03/04/14	EP	n/a	n/a	VH3204
FA12959-14 [a]	H0084533.D	1	03/04/14	EP	n/a	n/a	VH3204

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

FA12959-1, FA12959-7, FA12959-9, FA12959-11, FA12959-12, FA12959-14, FA12959-15, FA12959-16, FA12959-17, FA12959-18

CAS No.	Surrogate Recoveries	MS	MSD	FA12959-14	Limits
1868-53-7	Dibromofluoromethane	97%	99%	105%	75-124%
2037-26-5	Toluene-D8	96%	94%	94%	75-126%
460-00-4	4-Bromofluorobenzene	98%	97%	98%	71-133%
17060-07-0	1,2-Dichloroethane-D4	93%	94%	108%	72-135%

(a) Soil vials were not received within 48 hours of sampling; results are considered minimum values.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12959-6MS	C097466.D	1	03/04/14	AH	n/a	n/a	VC3897
FA12959-6MSD	C097467.D	1	03/04/14	AH	n/a	n/a	VC3897
FA12959-6	C097465.D	1	03/04/14	AH	n/a	n/a	VC3897

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

FA12959-6

CAS No.	Compound	FA12959-6 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		196	133	68	153	78	14	61-152/27
71-43-2	Benzene	ND		39.3	29.9	76	35.9	91	18	76-126/26
75-27-4	Bromodichloromethane	ND		39.3	30.7	78	35.4	90	14	74-130/25
75-25-2	Bromoform	ND		39.3	25.2	64*	32.7	83	26	76-127/26
108-90-7	Chlorobenzene	ND		39.3	28.2	72*	33.9	86	18	81-129/29
75-00-3	Chloroethane	ND		39.3	32.6	83	41.8	106	25	68-133/29
67-66-3	Chloroform	1.8	J	39.3	29.9	72	37.1	90	21	72-123/26
75-15-0	Carbon disulfide	ND		39.3	21.4	54*	26.4	67*	21	72-122/29
56-23-5	Carbon tetrachloride	ND		39.3	23.8	61*	31.0	79	26	78-133/29
75-34-3	1,1-Dichloroethane	ND		39.3	28.9	74	35.1	89	19	73-125/27
75-35-4	1,1-Dichloroethylene	3.0	J	39.3	28.1	64*	34.1	79*	19	81-136/28
107-06-2	1,2-Dichloroethane	ND		39.3	31.9	81	35.0	89	9	74-128/23
78-87-5	1,2-Dichloropropane	ND		39.3	31.4	80	35.0	89	11	74-125/25
124-48-1	Dibromochloromethane	ND		39.3	32.7	83	36.2	92	10	76-127/27
156-59-2	cis-1,2-Dichloroethylene	22.2		39.3	39.8	45*	64.7	108	48*	74-126/26
10061-01-5	cis-1,3-Dichloropropene	ND		39.3	28.6	73*	32.0	81	11	80-123/26
156-60-5	trans-1,2-Dichloroethylene	ND		39.3	25.3	64*	30.0	76	17	70-127/27
10061-02-6	trans-1,3-Dichloropropene	ND		39.3	10.2	26*	11.1	28*	8	75-131/28
100-41-4	Ethylbenzene	ND		39.3	24.8	63*	29.6	75*	18	77-123/31
591-78-6	2-Hexanone	ND		196	197	100	204	103	3	72-133/26
108-10-1	4-Methyl-2-pentanone	ND		196	158	80	162	82	3	76-132/26
74-83-9	Methyl bromide	ND		39.3	28.2	72	36.0	91	24	65-139/31
74-87-3	Methyl chloride	ND		39.3	31.8	81	37.9	96	18	71-144/27
75-09-2	Methylene chloride	ND		39.3	27.2	69*	33.2	84	20	74-137/28
78-93-3	Methyl ethyl ketone	ND		196	171	87	179	91	5	75-137/25
100-42-5	Styrene	ND		39.3	21.7	55*	28.8	73*	28	78-125/30
71-55-6	1,1,1-Trichloroethane	24.8		39.3	35.4	27*	60.4	90	52*	70-129/27
79-34-5	1,1,2,2-Tetrachloroethane	ND		39.3	1590	4049*	498	1263*	105*	71-126/30
79-00-5	1,1,2-Trichloroethane	ND		39.3	30.0	76	34.6	88	14	74-124/28
108-88-3	Toluene	ND		39.3	29.5	75*	34.5	88	16	76-124/30
79-01-6	Trichloroethylene	32.2		39.3	50.5	47*	68.8	93	31*	75-128/27
75-01-4	Vinyl chloride	ND		39.3	29.8	76	35.3	90	17	76-141/27
1330-20-7	Xylene (total)	19.9		118	93.4	62*	104	71*	11	80-129/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12959-6MS	C097466.D	1	03/04/14	AH	n/a	n/a	VC3897
FA12959-6MSD	C097467.D	1	03/04/14	AH	n/a	n/a	VC3897
FA12959-6	C097465.D	1	03/04/14	AH	n/a	n/a	VC3897

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

FA12959-6

CAS No.	Surrogate Recoveries	MS	MSD	FA12959-6	Limits
1868-53-7	Dibromofluoromethane	101%	101%	104%	75-124%
2037-26-5	Toluene-D8	120%	117%	114%	75-126%
460-00-4	4-Bromofluorobenzene	143%*	134%*	128%	71-133%
17060-07-0	1,2-Dichloroethane-D4	102%	95%	110%	72-135%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12959-8MS	H0084554.D	1	03/05/14	EP	n/a	n/a	VH3205
FA12959-8MSD	H0084555.D	1	03/05/14	EP	n/a	n/a	VH3205
FA12959-8 [a]	H0084551.D	1	03/05/14	EP	n/a	n/a	VH3205

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

FA12959-1, FA12959-2, FA12959-7, FA12959-8, FA12959-18, FA12959-19

CAS No.	Compound	FA12959-8 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		339	337	99	360	107	7	61-152/27
71-43-2	Benzene	ND		67.9	66.6	98	65.3	97	2	76-126/26
75-27-4	Bromodichloromethane	ND		67.9	70.9	104	70.5	105	1	74-130/25
75-25-2	Bromoform	ND		67.9	62.3	92	63.8	95	2	76-127/26
108-90-7	Chlorobenzene	ND		67.9	70.8	104	68.8	102	3	81-129/29
75-00-3	Chloroethane	ND		67.9	61.8	91	60.5	90	2	68-133/29
67-66-3	Chloroform	ND		67.9	67.5	99	66.0	98	2	72-123/26
75-15-0	Carbon disulfide	ND		67.9	69.5	102	68.1	101	2	72-122/29
56-23-5	Carbon tetrachloride	ND		67.9	66.0	97	66.3	98	0	78-133/29
75-34-3	1,1-Dichloroethane	ND		67.9	63.4	93	61.1	91	4	73-125/27
75-35-4	1,1-Dichloroethylene	ND		67.9	62.5	92	62.1	92	1	81-136/28
107-06-2	1,2-Dichloroethane	ND		67.9	72.2	106	70.0	104	3	74-128/23
78-87-5	1,2-Dichloropropane	ND		67.9	66.9	99	67.0	99	0	74-125/25
124-48-1	Dibromochloromethane	ND		67.9	57.8	85	56.4	84	2	76-127/27
156-59-2	cis-1,2-Dichloroethylene	ND		67.9	68.0	100	65.8	98	3	74-126/26
10061-01-5	cis-1,3-Dichloropropene	ND		67.9	68.5	101	68.4	102	0	80-123/26
156-60-5	trans-1,2-Dichloroethylene	ND		67.9	65.2	96	63.2	94	3	70-127/27
10061-02-6	trans-1,3-Dichloropropene	ND		67.9	60.8	90	59.8	89	2	75-131/28
100-41-4	Ethylbenzene	ND		67.9	64.5	95	63.6	94	1	77-123/31
591-78-6	2-Hexanone	ND		339	304	90	313	93	3	72-133/26
108-10-1	4-Methyl-2-pentanone	ND		339	313	92	322	96	3	76-132/26
74-83-9	Methyl bromide	ND		67.9	59.5	88	64.8	96	9	65-139/31
74-87-3	Methyl chloride	ND		67.9	61.7	91	63.7	95	3	71-144/27
75-09-2	Methylene chloride	ND		67.9	66.1	97	63.0	93	5	74-137/28
78-93-3	Methyl ethyl ketone	ND		339	311	92	326	97	5	75-137/25
100-42-5	Styrene	ND		67.9	67.2	99	65.0	96	3	78-125/30
71-55-6	1,1,1-Trichloroethane	ND		67.9	69.1	102	66.8	99	3	70-129/27
79-34-5	1,1,2,2-Tetrachloroethane	ND		67.9	68.7	101	69.5	103	1	71-126/30
79-00-5	1,1,2-Trichloroethane	ND		67.9	67.0	99	65.3	97	3	74-124/28
127-18-4	Tetrachloroethylene	47.0		67.9	64.1	25*	60.9	21*	5	79-130/31
108-88-3	Toluene	ND		67.9	63.9	94	62.4	93	2	76-124/30
79-01-6	Trichloroethylene	ND		67.9	67.3	99	65.2	97	3	75-128/27
75-01-4	Vinyl chloride	ND		67.9	60.9	90	63.0	93	3	76-141/27
1330-20-7	Xylene (total)	ND		204	205	101	199	98	3	80-129/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12959-8MS	H0084554.D	1	03/05/14	EP	n/a	n/a	VH3205
FA12959-8MSD	H0084555.D	1	03/05/14	EP	n/a	n/a	VH3205
FA12959-8 [a]	H0084551.D	1	03/05/14	EP	n/a	n/a	VH3205

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

FA12959-1, FA12959-2, FA12959-7, FA12959-8, FA12959-18, FA12959-19

CAS No.	Surrogate Recoveries	MS	MSD	FA12959-8	Limits
1868-53-7	Dibromofluoromethane	98%	97%	106%	75-124%
2037-26-5	Toluene-D8	93%	94%	95%	75-126%
460-00-4	4-Bromofluorobenzene	96%	97%	98%	71-133%
17060-07-0	1,2-Dichloroethane-D4	98%	99%	111%	72-135%

(a) Soil vials were not received within 48 hours of sampling; results are considered minimum values.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12956-2MS	C097486.D	1	03/05/14	AH	n/a	n/a	VC3898
FA12956-2MSD	C097487.D	1	03/05/14	AH	n/a	n/a	VC3898
FA12956-2 [a]	C097476.D	1	03/05/14	AH	n/a	n/a	VC3898

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

FA12959-6

CAS No.	Compound	FA12956-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	ND		3590	3240	90	3280	91	1	79-130/31

CAS No.	Surrogate Recoveries	MS	MSD	FA12956-2	Limits
1868-53-7	Dibromofluoromethane	104%	102%	107%	75-124%
2037-26-5	Toluene-D8	113%	116%	111%	75-126%
460-00-4	4-Bromofluorobenzene	110%	108%	106%	71-133%
17060-07-0	1,2-Dichloroethane-D4	106%	103%	113%	72-135%

(a) Dilution required due to matrix interference (non-target compounds above calibration range).

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12912-1MS	Z23277.D	1	03/05/14	CP	n/a	n/a	VZ924
FA12912-1MSD	Z23278.D	1	03/05/14	CP	n/a	n/a	VZ924
FA12912-1	Z23257.D	1	03/05/14	CP	n/a	n/a	VZ924

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

FA12959-10, FA12959-13

CAS No.	Compound	FA12912-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	120	96	126	101	5	50-147/21
71-43-2	Benzene	ND		25	24.4	98	24.1	96	1	81-122/14
75-27-4	Bromodichloromethane	ND		25	24.9	100	22.4	90	11	79-123/19
75-25-2	Bromoform	ND		25	22.2	89	19.8	79	11	66-123/21
108-90-7	Chlorobenzene	ND		25	26.6	106	26.0	104	2	82-124/14
75-00-3	Chloroethane	ND		25	31.4	126	31.3	125	0	62-144/20
67-66-3	Chloroform	ND		25	25.1	100	24.6	98	2	80-124/15
75-15-0	Carbon disulfide	ND		25	24.8	99	21.1	84	16	66-148/23
56-23-5	Carbon tetrachloride	ND		25	25.8	103	23.0	92	11	76-136/23
75-34-3	1,1-Dichloroethane	ND		25	25.0	100	24.9	100	0	81-122/15
75-35-4	1,1-Dichloroethylene	ND		25	25.4	102	25.9	104	2	78-137/18
107-06-2	1,2-Dichloroethane	ND		25	28.0	112	27.6	110	1	75-125/14
78-87-5	1,2-Dichloropropane	ND		25	25.2	101	24.4	98	3	76-124/14
124-48-1	Dibromochloromethane	ND		25	25.5	102	23.5	94	8	78-122/19
156-59-2	cis-1,2-Dichloroethylene	ND		25	23.9	96	23.8	95	0	78-120/15
10061-01-5	cis-1,3-Dichloropropene	ND		25	21.9	88	19.6	78	11	75-118/23
156-60-5	trans-1,2-Dichloroethylene	ND		25	24.6	98	24.2	97	2	76-127/17
10061-02-6	trans-1,3-Dichloropropene	ND		25	26.4	106	23.8	95	10	80-120/22
100-41-4	Ethylbenzene	ND		25	24.6	98	24.2	97	2	81-121/14
591-78-6	2-Hexanone	ND		125	103	82	109	87	6	61-129/18
108-10-1	4-Methyl-2-pentanone	ND		125	108	86	112	90	4	66-122/16
74-83-9	Methyl bromide	ND		25	28.0	112	27.6	110	1	59-143/19
74-87-3	Methyl chloride	ND		25	38.8	155	38.6	154	1	50-159/19
75-09-2	Methylene chloride	ND		25	27.1	108	26.8	107	1	69-135/16
78-93-3	Methyl ethyl ketone	ND		125	93.5	75	98.4	79	5	56-143/18
100-42-5	Styrene	ND		25	22.4	90	21.0	84	6	78-119/23
71-55-6	1,1,1-Trichloroethane	ND		25	25.5	102	24.8	99	3	75-130/16
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	24.5	98	25.2	101	3	72-120/14
79-00-5	1,1,2-Trichloroethane	ND		25	25.8	103	26.0	104	1	76-119/14
127-18-4	Tetrachloroethylene	ND		25	25.7	103	25.4	102	1	76-135/16
108-88-3	Toluene	ND		25	27.7	111	27.8	111	0	80-120/14
79-01-6	Trichloroethylene	ND		25	24.7	99	24.1	96	2	81-126/15
75-01-4	Vinyl chloride	ND		25	38.6	154	37.7	151	2	69-159/18
1330-20-7	Xylene (total)	ND		75	74.1	99	73.4	98	1	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12912-1MS	Z23277.D	1	03/05/14	CP	n/a	n/a	VZ924
FA12912-1MSD	Z23278.D	1	03/05/14	CP	n/a	n/a	VZ924
FA12912-1	Z23257.D	1	03/05/14	CP	n/a	n/a	VZ924

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

FA12959-10, FA12959-13

CAS No.	Surrogate Recoveries	MS	MSD	FA12912-1	Limits
1868-53-7	Dibromofluoromethane	105%	105%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	102%	99%	79-125%
2037-26-5	Toluene-D8	93%	94%	98%	85-112%
460-00-4	4-Bromofluorobenzene	92%	94%	96%	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: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50714-MB	X033610.D	1	03/07/14	FS	03/05/14	OP50714	SX1581

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12959-1, FA12959-2, FA12959-3, FA12959-4, FA12959-5, FA12959-6, FA12959-7, FA12959-8, FA12959-9, FA12959-11, FA12959-12, FA12959-14, FA12959-15, FA12959-19

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	830	170	ug/kg	
95-57-8	2-Chlorophenol	ND	170	17	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	17	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	17	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	18	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	830	170	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	67	ug/kg	
95-48-7	2-Methylphenol	ND	170	17	ug/kg	
	3&4-Methylphenol	ND	170	33	ug/kg	
88-75-5	2-Nitrophenol	ND	170	17	ug/kg	
100-02-7	4-Nitrophenol	ND	830	130	ug/kg	
87-86-5	Pentachlorophenol	ND	830	130	ug/kg	
108-95-2	Phenol	ND	170	17	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	21	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	17	ug/kg	
83-32-9	Acenaphthene	ND	170	21	ug/kg	
208-96-8	Acenaphthylene	ND	170	17	ug/kg	
120-12-7	Anthracene	ND	170	17	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	18	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	17	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	17	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	20	ug/kg	
106-47-8	4-Chloroaniline	ND	170	17	ug/kg	
86-74-8	Carbazole	ND	170	17	ug/kg	
218-01-9	Chrysene	ND	170	17	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	17	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	17	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	17	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	25	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	170	17	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	17	ug/kg	

Method Blank Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50714-MB	X033610.D	1	03/07/14	FS	03/05/14	OP50714	SX1581

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12959-1, FA12959-2, FA12959-3, FA12959-4, FA12959-5, FA12959-6, FA12959-7, FA12959-8, FA12959-9, FA12959-11, FA12959-12, FA12959-14, FA12959-15, FA12959-19

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	170	17	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	19	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	18	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	170	17	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	17	ug/kg	
132-64-9	Dibenzofuran	ND	170	17	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	330	33	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	170	33	ug/kg	
84-66-2	Diethyl phthalate	ND	330	33	ug/kg	
131-11-3	Dimethyl phthalate	ND	170	33	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	33	ug/kg	
206-44-0	Fluoranthene	ND	170	17	ug/kg	
86-73-7	Fluorene	ND	170	17	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	17	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	17	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	17	ug/kg	
67-72-1	Hexachloroethane	ND	170	17	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	17	ug/kg	
78-59-1	Isophorone	ND	170	17	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	17	ug/kg	
88-74-4	2-Nitroaniline	ND	170	33	ug/kg	
99-09-2	3-Nitroaniline	ND	170	33	ug/kg	
100-01-6	4-Nitroaniline	ND	170	33	ug/kg	
91-20-3	Naphthalene	ND	170	17	ug/kg	
98-95-3	Nitrobenzene	ND	170	17	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	17	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	17	ug/kg	
85-01-8	Phenanthrene	ND	170	17	ug/kg	
129-00-0	Pyrene	ND	170	17	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	170	17	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	75%	40-102%
4165-62-2	Phenol-d5	81%	41-100%

Method Blank Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50714-MB	X033610.D	1	03/07/14	FS	03/05/14	OP50714	SX1581

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12959-1, FA12959-2, FA12959-3, FA12959-4, FA12959-5, FA12959-6, FA12959-7, FA12959-8, FA12959-9, FA12959-11, FA12959-12, FA12959-14, FA12959-15, FA12959-19

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	86%	42-108%
4165-60-0	Nitrobenzene-d5	77%	40-105%
321-60-8	2-Fluorobiphenyl	77%	43-107%
1718-51-0	Terphenyl-d14	113%	45-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
4161-60-8	2-Pentanone, 4-hydroxy-	1.72	760	ug/kg	JN
123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	1.85	27000	ug/kg	JN
108-84-9	4-Methyl-2-pentyl acetate	2.13	560	ug/kg	JN
79-34-5	Ethane, 1,1,2,2-tetrachloro-	2.16	210	ug/kg	JN
	Total TIC, Semi-Volatile		28530	ug/kg	J

Method Blank Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50725-MB	T011862.D	1	03/07/14	FS	03/06/14	OP50725	ST563

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12959-10

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: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50725-MB	T011862.D	1	03/07/14	FS	03/06/14	OP50725	ST563

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12959-10

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	42%	14-67%
4165-62-2	Phenol-d5	27%	10-50%

Method Blank Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50725-MB	T011862.D	1	03/07/14	FS	03/06/14	OP50725	ST563

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12959-10

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	66%	33-118%
4165-60-0	Nitrobenzene-d5	86%	42-108%
321-60-8	2-Fluorobiphenyl	78%	40-106%
1718-51-0	Terphenyl-d14	95%	39-121%

Blank Spike Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50714-BS	X033609.D	1	03/07/14	FS	03/05/14	OP50714	SX1581

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12959-1, FA12959-2, FA12959-3, FA12959-4, FA12959-5, FA12959-6, FA12959-7, FA12959-8, FA12959-9, FA12959-11, FA12959-12, FA12959-14, FA12959-15, FA12959-19

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
65-85-0	Benzoic Acid	3330	2700	81	36-118
95-57-8	2-Chlorophenol	1670	1190	71	48-104
59-50-7	4-Chloro-3-methyl phenol	1670	1240	74	52-108
120-83-2	2,4-Dichlorophenol	1670	1140	68	51-105
105-67-9	2,4-Dimethylphenol	1670	1270	76	43-96
51-28-5	2,4-Dinitrophenol	3330	2450	74	40-119
534-52-1	4,6-Dinitro-o-cresol	3330	2640	79	64-121
95-48-7	2-Methylphenol	1670	1230	74	46-107
	3&4-Methylphenol	3330	2520	76	44-111
88-75-5	2-Nitrophenol	1670	1190	71	49-104
100-02-7	4-Nitrophenol	3330	2030	61	56-116
87-86-5	Pentachlorophenol	3330	2660	80	61-114
108-95-2	Phenol	1670	1250	75	45-110
95-95-4	2,4,5-Trichlorophenol	1670	1240	74	58-112
88-06-2	2,4,6-Trichlorophenol	1670	1270	76	56-109
83-32-9	Acenaphthene	1670	1280	77	56-109
208-96-8	Acenaphthylene	1670	1300	78	56-106
120-12-7	Anthracene	1670	1320	79	61-110
56-55-3	Benzo(a)anthracene	1670	1380	83	66-111
50-32-8	Benzo(a)pyrene	1670	1350	81	59-104
205-99-2	Benzo(b)fluoranthene	1670	1390	83	67-113
191-24-2	Benzo(g,h,i)perylene	1670	1360	82	67-113
207-08-9	Benzo(k)fluoranthene	1670	1430	86	67-114
101-55-3	4-Bromophenyl phenyl ether	1670	1110	67	62-110
85-68-7	Butyl benzyl phthalate	1670	1350	81	65-113
100-51-6	Benzyl Alcohol	1670	1320	79	53-108
91-58-7	2-Chloronaphthalene	1670	1180	71	53-106
106-47-8	4-Chloroaniline	1670	1000	60	30-115
86-74-8	Carbazole	1670	1260	76	60-111
218-01-9	Chrysene	1670	1400	84	65-112
111-91-1	bis(2-Chloroethoxy)methane	1670	1210	73	48-105
111-44-4	bis(2-Chloroethyl)ether	1670	1210	73	46-103
108-60-1	bis(2-Chloroisopropyl)ether	1670	1320	79	40-110
7005-72-3	4-Chlorophenyl phenyl ether	1670	1160	70	58-106
95-50-1	1,2-Dichlorobenzene	1670	1030	62	44-102
541-73-1	1,3-Dichlorobenzene	1670	1040	62	42-100

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50714-BS	X033609.D	1	03/07/14	FS	03/05/14	OP50714	SX1581

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12959-1, FA12959-2, FA12959-3, FA12959-4, FA12959-5, FA12959-6, FA12959-7, FA12959-8, FA12959-9, FA12959-11, FA12959-12, FA12959-14, FA12959-15, FA12959-19

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
106-46-7	1,4-Dichlorobenzene	1670	1090	65	40-106
121-14-2	2,4-Dinitrotoluene	1670	1210	73	59-109
606-20-2	2,6-Dinitrotoluene	1670	1210	73	61-107
91-94-1	3,3'-Dichlorobenzidine	1670	1200	72	36-114
53-70-3	Dibenzo(a,h)anthracene	1670	1390	83	68-115
132-64-9	Dibenzofuran	1670	1240	74	57-108
84-74-2	Di-n-butyl phthalate	1670	1180	71	63-108
117-84-0	Di-n-octyl phthalate	1670	1390	83	64-119
84-66-2	Diethyl phthalate	1670	1090	65	61-109
131-11-3	Dimethyl phthalate	1670	1110	67	59-108
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1380	83	64-115
206-44-0	Fluoranthene	1670	1240	74	60-108
86-73-7	Fluorene	1670	1260	76	58-109
118-74-1	Hexachlorobenzene	1670	1300	78	59-111
87-68-3	Hexachlorobutadiene	1670	1100	66	41-108
77-47-4	Hexachlorocyclopentadiene	1670	1040	62	49-110
67-72-1	Hexachloroethane	1670	1080	65	40-105
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1240	74	66-116
78-59-1	Isophorone	1670	1250	75	42-89
91-57-6	2-Methylnaphthalene	1670	1170	70	47-106
88-74-4	2-Nitroaniline	1670	1390	83	56-123
99-09-2	3-Nitroaniline	1670	1100	66	41-111
100-01-6	4-Nitroaniline	1670	1190	71	54-113
91-20-3	Naphthalene	1670	1240	74	44-104
98-95-3	Nitrobenzene	1670	1190	71	43-108
621-64-7	N-Nitroso-di-n-propylamine	1670	1410	85	48-108
86-30-6	N-Nitrosodiphenylamine	1670	1410	85	62-110
85-01-8	Phenanthrene	1670	1350	81	63-111
129-00-0	Pyrene	1670	1380	83	65-115
120-82-1	1,2,4-Trichlorobenzene	1670	1050	63	45-100

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	72%	40-102%
4165-62-2	Phenol-d5	78%	41-100%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50714-BS	X033609.D	1	03/07/14	FS	03/05/14	OP50714	SX1581

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12959-1, FA12959-2, FA12959-3, FA12959-4, FA12959-5, FA12959-6, FA12959-7, FA12959-8, FA12959-9, FA12959-11, FA12959-12, FA12959-14, FA12959-15, FA12959-19

CAS No.	Surrogate Recoveries	BSP	Limits
118-79-6	2,4,6-Tribromophenol	81%	42-108%
4165-60-0	Nitrobenzene-d5	74%	40-105%
321-60-8	2-Fluorobiphenyl	74%	43-107%
1718-51-0	Terphenyl-d14	94%	45-119%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50725-BS	T011861.D	1	03/07/14	FS	03/06/14	OP50725	ST563

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12959-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	100	7.1	7* [a]	10-69
95-57-8	2-Chlorophenol	50	34.9	70	52-98
59-50-7	4-Chloro-3-methyl phenol	50	40.0	80	54-103
120-83-2	2,4-Dichlorophenol	50	39.5	79	53-103
105-67-9	2,4-Dimethylphenol	50	40.0	80	43-90
51-28-5	2,4-Dinitrophenol	100	87.7	88	44-112
534-52-1	4,6-Dinitro-o-cresol	100	82.7	83	66-121
95-48-7	2-Methylphenol	50	29.6	59	43-90
	3&4-Methylphenol	100	54.8	55	36-88
88-75-5	2-Nitrophenol	50	43.2	86	53-102
100-02-7	4-Nitrophenol	100	32.3	32	18-62
87-86-5	Pentachlorophenol	100	87.0	87	61-115
108-95-2	Phenol	50	14.9	30	19-56
95-95-4	2,4,5-Trichlorophenol	50	41.8	84	62-109
88-06-2	2,4,6-Trichlorophenol	50	42.7	85	59-107
83-32-9	Acenaphthene	50	41.4	83	61-107
208-96-8	Acenaphthylene	50	44.8	90	60-104
120-12-7	Anthracene	50	42.2	84	65-108
56-55-3	Benzo(a)anthracene	50	40.8	82	66-111
50-32-8	Benzo(a)pyrene	50	40.6	81	62-107
205-99-2	Benzo(b)fluoranthene	50	41.2	82	65-114
191-24-2	Benzo(g,h,i)perylene	50	47.0	94	66-116
207-08-9	Benzo(k)fluoranthene	50	40.1	80	65-114
101-55-3	4-Bromophenyl phenyl ether	50	35.9	72	65-109
85-68-7	Butyl benzyl phthalate	50	37.6	75	65-112
100-51-6	Benzyl Alcohol	50	32.4	65	46-94
91-58-7	2-Chloronaphthalene	50	42.4	85	57-103
106-47-8	4-Chloroaniline	50	40.5	81	49-105
86-74-8	Carbazole	50	43.5	87	59-113
218-01-9	Chrysene	50	44.3	89	66-111
111-91-1	bis(2-Chloroethoxy)methane	50	41.2	82	51-102
111-44-4	bis(2-Chloroethyl)ether	50	36.1	72	53-100
108-60-1	bis(2-Chloroisopropyl)ether	50	36.3	73	45-106
7005-72-3	4-Chlorophenyl phenyl ether	50	42.6	85	62-105
95-50-1	1,2-Dichlorobenzene	50	33.5	67	48-97
541-73-1	1,3-Dichlorobenzene	50	34.2	68	45-95

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50725-BS	T011861.D	1	03/07/14	FS	03/06/14	OP50725	ST563

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12959-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
106-46-7	1,4-Dichlorobenzene	50	34.5	69	45-98
121-14-2	2,4-Dinitrotoluene	50	42.0	84	61-110
606-20-2	2,6-Dinitrotoluene	50	43.7	87	63-108
91-94-1	3,3'-Dichlorobenzidine	50	39.5	79	46-117
53-70-3	Dibenzo(a,h)anthracene	50	42.6	85	66-119
132-64-9	Dibenzofuran	50	42.3	85	61-106
84-74-2	Di-n-butyl phthalate	50	37.3	75	65-107
117-84-0	Di-n-octyl phthalate	50	33.7	67	62-118
84-66-2	Diethyl phthalate	50	38.6	77	64-108
131-11-3	Dimethyl phthalate	50	38.7	77	63-106
117-81-7	bis(2-Ethylhexyl)phthalate	50	36.7	73	61-117
206-44-0	Fluoranthene	50	44.2	88	63-106
86-73-7	Fluorene	50	43.8	88	62-108
118-74-1	Hexachlorobenzene	50	39.8	80	63-108
87-68-3	Hexachlorobutadiene	50	40.6	81	42-102
77-47-4	Hexachlorocyclopentadiene	50	31.7	63	39-102
67-72-1	Hexachloroethane	50	35.6	71	42-100
193-39-5	Indeno(1,2,3-cd)pyrene	50	44.1	88	64-119
78-59-1	Isophorone	50	40.6	81	43-87
91-57-6	2-Methylnaphthalene	50	43.5	87	51-102
88-74-4	2-Nitroaniline	50	43.8	88	54-128
99-09-2	3-Nitroaniline	50	42.6	85	56-106
100-01-6	4-Nitroaniline	50	44.5	89	55-120
91-20-3	Naphthalene	50	41.6	83	47-100
98-95-3	Nitrobenzene	50	39.9	80	50-104
621-64-7	N-Nitroso-di-n-propylamine	50	40.7	81	52-104
86-30-6	N-Nitrosodiphenylamine	50	43.3	87	64-108
85-01-8	Phenanthrene	50	43.2	86	66-110
129-00-0	Pyrene	50	44.1	88	64-113
120-82-1	1,2,4-Trichlorobenzene	50	38.2	76	45-97

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	44%	14-67%
4165-62-2	Phenol-d5	27%	10-50%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50725-BS	T011861.D	1	03/07/14	FS	03/06/14	OP50725	ST563

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12959-10

CAS No.	Surrogate Recoveries	BSP	Limits
118-79-6	2,4,6-Tribromophenol	90%	33-118%
4165-60-0	Nitrobenzene-d5	85%	42-108%
321-60-8	2-Fluorobiphenyl	89%	40-106%
1718-51-0	Terphenyl-d14	102%	39-121%

(a) Sporadic marginal failure.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50714-MS	X033614.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
OP50714-MSD	X033615.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
FA12959-6	X033620.D	1	03/07/14	FS	03/05/14	OP50714	SX1581

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12959-1, FA12959-2, FA12959-3, FA12959-4, FA12959-5, FA12959-6, FA12959-7, FA12959-8, FA12959-9, FA12959-11, FA12959-12, FA12959-14, FA12959-15, FA12959-19

CAS No.	Compound	FA12959-6 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		3900	4280	110	4280	111	0	36-118/41
95-57-8	2-Chlorophenol	ND		1950	1450	74	1440	74	1	48-104/26
59-50-7	4-Chloro-3-methyl phenol	ND		1950	1670	86	1610	83	4	52-108/21
120-83-2	2,4-Dichlorophenol	ND		1950	1450	74	1420	73	2	51-105/27
105-67-9	2,4-Dimethylphenol	ND		1950	1580	81	1620	84	3	43-96/23
51-28-5	2,4-Dinitrophenol	ND		3900	3340	86	3120	81	7	40-119/32
534-52-1	4,6-Dinitro-o-cresol	ND		3900	3250	83	3150	81	3	64-121/29
95-48-7	2-Methylphenol	ND		1950	1510	78	1540	80	2	46-107/24
	3&4-Methylphenol	ND		3900	3150	81	3150	81	0	44-111/24
88-75-5	2-Nitrophenol	ND		1950	1600	82	1620	84	1	49-104/27
100-02-7	4-Nitrophenol	ND		3900	2690	69	2560	66	5	56-116/23
87-86-5	Pentachlorophenol	ND		3900	3880	100	3630	94	7	61-114/23
108-95-2	Phenol	ND		1950	1530	79	1560	81	2	45-110/24
95-95-4	2,4,5-Trichlorophenol	ND		1950	1670	86	1630	84	2	58-112/22
88-06-2	2,4,6-Trichlorophenol	ND		1950	1710	88	1630	84	5	56-109/25
83-32-9	Acenaphthene	ND		1950	1670	86	1600	83	4	56-109/23
208-96-8	Acenaphthylene	ND		1950	1680	86	1600	83	5	56-106/23
120-12-7	Anthracene	ND		1950	1670	86	1610	83	4	61-110/21
56-55-3	Benzo(a)anthracene	ND		1950	1720	88	1680	87	2	66-111/23
50-32-8	Benzo(a)pyrene	ND		1950	1680	86	1590	82	6	59-104/23
205-99-2	Benzo(b)fluoranthene	ND		1950	1730	89	1600	83	8	67-113/24
191-24-2	Benzo(g,h,i)perylene	ND		1950	1920	99	1800	93	6	67-113/21
207-08-9	Benzo(k)fluoranthene	ND		1950	1660	85	1650	85	1	67-114/22
101-55-3	4-Bromophenyl phenyl ether	ND		1950	1390	71	1380	71	1	62-110/21
85-68-7	Butyl benzyl phthalate	ND		1950	1690	87	1620	84	4	65-113/20
100-51-6	Benzyl Alcohol	ND		1950	1580	81	1630	84	3	53-108/24
91-58-7	2-Chloronaphthalene	ND		1950	1510	78	1440	74	5	53-106/23
106-47-8	4-Chloroaniline	ND		1950	1100	56	1160	60	5	30-115/30
86-74-8	Carbazole	ND		1950	1700	87	1670	86	2	60-111/19
218-01-9	Chrysene	ND		1950	1770	91	1710	88	3	65-112/25
111-91-1	bis(2-Chloroethoxy)methane	ND		1950	1550	80	1610	83	4	48-105/24
111-44-4	bis(2-Chloroethyl)ether	ND		1950	1490	76	1490	77	0	46-103/27
108-60-1	bis(2-Chloroisopropyl)ether	ND		1950	1480	76	1450	75	2	40-110/25
7005-72-3	4-Chlorophenyl phenyl ether	ND		1950	1570	81	1500	78	5	58-106/21
95-50-1	1,2-Dichlorobenzene	ND		1950	1250	64	1200	62	4	44-102/28
541-73-1	1,3-Dichlorobenzene	ND		1950	1260	65	1180	61	7	42-100/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50714-MS	X033614.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
OP50714-MSD	X033615.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
FA12959-6	X033620.D	1	03/07/14	FS	03/05/14	OP50714	SX1581

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12959-1, FA12959-2, FA12959-3, FA12959-4, FA12959-5, FA12959-6, FA12959-7, FA12959-8, FA12959-9, FA12959-11, FA12959-12, FA12959-14, FA12959-15, FA12959-19

CAS No.	Compound	FA12959-6 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
106-46-7	1,4-Dichlorobenzene	ND		1950	1330	68	1240	64	7	40-106/29
121-14-2	2,4-Dinitrotoluene	ND		1950	1610	83	1560	81	3	59-109/20
606-20-2	2,6-Dinitrotoluene	ND		1950	1600	82	1520	79	5	61-107/22
91-94-1	3,3'-Dichlorobenzidine	ND		1950	291	15*	1040	54	113*	36-114/28
53-70-3	Dibenzo(a,h)anthracene	ND		1950	1870	96	1760	91	6	68-115/23
132-64-9	Dibenzofuran	34.5	J	1950	1600	80	1570	79	2	57-108/22
84-74-2	Di-n-butyl phthalate	76.7	J	1950	1540	75	1490	73	3	63-108/19
117-84-0	Di-n-octyl phthalate	ND		1950	1580	81	1580	82	0	64-119/21
84-66-2	Diethyl phthalate	ND		1950	1450	74	1350	70	7	61-109/20
131-11-3	Dimethyl phthalate	ND		1950	1480	76	1420	73	4	59-108/20
117-81-7	bis(2-Ethylhexyl)phthalate	463		1950	2130	86	1950	77	9	64-115/23
206-44-0	Fluoranthene	ND		1950	1580	81	1540	80	3	60-108/25
86-73-7	Fluorene	ND		1950	1680	86	1590	82	6	58-109/21
118-74-1	Hexachlorobenzene	ND		1950	1730	89	1700	88	2	59-111/21
87-68-3	Hexachlorobutadiene	ND		1950	1380	71	1340	69	3	41-108/27
77-47-4	Hexachlorocyclopentadiene	ND		1950	1120	58	1050	54	6	49-110/31
67-72-1	Hexachloroethane	ND		1950	1400	72	1320	68	6	40-105/32
193-39-5	Indeno(1,2,3-cd)pyrene	ND		1950	1720	88	1610	83	7	66-116/22
78-59-1	Isophorone	557		1950	1450	46	1510	49	4	42-89/22
91-57-6	2-Methylnaphthalene	219		1950	1570	69	1610	72	3	47-106/27
88-74-4	2-Nitroaniline	ND		1950	1730	89	1800	93	4	56-123/24
99-09-2	3-Nitroaniline	ND		1950	1340	69	1360	70	1	41-111/25
100-01-6	4-Nitroaniline	ND		1950	1300	67	1490	77	14	54-113/22
91-20-3	Naphthalene	82.0	J	1950	1570	76	1540	75	2	44-104/27
98-95-3	Nitrobenzene	ND		1950	1390	71	1430	74	3	43-108/25
621-64-7	N-Nitroso-di-n-propylamine	ND		1950	1750	90	1870	97	7	48-108/27
86-30-6	N-Nitrosodiphenylamine	ND		1950	1840	94	1800	93	2	62-110/21
85-01-8	Phenanthrene	134	J	1950	1830	87	1730	82	6	63-111/22
129-00-0	Pyrene	ND		1950	1740	89	1680	87	4	65-115/25
120-82-1	1,2,4-Trichlorobenzene	ND		1950	1320	68	1280	66	3	45-100/26

CAS No.	Surrogate Recoveries	MS	MSD	FA12959-6	Limits
367-12-4	2-Fluorophenol	75%	80%	81%	40-102%
4165-62-2	Phenol-d5	80%	85%	87%	41-100%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50714-MS	X033614.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
OP50714-MSD	X033615.D	1	03/07/14	FS	03/05/14	OP50714	SX1581
FA12959-6	X033620.D	1	03/07/14	FS	03/05/14	OP50714	SX1581

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12959-1, FA12959-2, FA12959-3, FA12959-4, FA12959-5, FA12959-6, FA12959-7, FA12959-8, FA12959-9, FA12959-11, FA12959-12, FA12959-14, FA12959-15, FA12959-19

CAS No.	Surrogate Recoveries	MS	MSD	FA12959-6	Limits
118-79-6	2,4,6-Tribromophenol	96%	95%	96%	42-108%
4165-60-0	Nitrobenzene-d5	72%	82%	83%	40-105%
321-60-8	2-Fluorobiphenyl	82%	83%	86%	43-107%
1718-51-0	Terphenyl-d14	102%	104%	102%	45-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50725-MS	T011864.D	1	03/07/14	FS	03/06/14	OP50725	ST563
OP50725-MSD	T011865.D	1	03/07/14	FS	03/06/14	OP50725	ST563
FA12855-1	T011863.D	1	03/07/14	FS	03/06/14	OP50725	ST563

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12959-10

CAS No.	Compound	FA12855-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		192	44.1	23	64.5	34	38	10-69/39
95-57-8	2-Chlorophenol	ND		96.2	70.7	74	74.1	77	5	52-98/25
59-50-7	4-Chloro-3-methyl phenol	ND		96.2	79.2	82	86.5	90	9	54-103/23
120-83-2	2,4-Dichlorophenol	ND		96.2	78.5	82	84.1	87	7	53-103/26
105-67-9	2,4-Dimethylphenol	ND		96.2	79.0	82	77.8	81	2	43-90/27
51-28-5	2,4-Dinitrophenol	ND		192	184	96	191	99	4	44-112/25
534-52-1	4,6-Dinitro-o-cresol	ND		192	163	85	185	96	13	66-121/23
95-48-7	2-Methylphenol	ND		96.2	65.2	68	72.7	76	11	43-90/28
	3&4-Methylphenol	ND		192	129	67	142	74	10	36-88/28
88-75-5	2-Nitrophenol	ND		96.2	77.3	80	81.2	84	5	53-102/29
100-02-7	4-Nitrophenol	ND		192	89.8	47	114	59	24	18-62/33
87-86-5	Pentachlorophenol	ND		192	174	90	183	95	5	61-115/26
108-95-2	Phenol	ND		96.2	42.8	45	49.4	51	14	19-56/35
95-95-4	2,4,5-Trichlorophenol	ND		96.2	74.0	77	72.9	76	1	62-109/22
88-06-2	2,4,6-Trichlorophenol	ND		96.2	78.0	81	78.1	81	0	59-107/23
83-32-9	Acenaphthene	ND		96.2	80.6	84	85.4	89	6	61-107/22
208-96-8	Acenaphthylene	ND		96.2	82.4	86	85.0	88	3	60-104/22
120-12-7	Anthracene	ND		96.2	81.3	85	86.4	90	6	65-108/20
56-55-3	Benzo(a)anthracene	ND		96.2	80.5	84	83.7	87	4	66-111/22
50-32-8	Benzo(a)pyrene	ND		96.2	78.1	81	78.6	82	1	62-107/23
205-99-2	Benzo(b)fluoranthene	ND		96.2	79.7	83	76.2	79	4	65-114/23
191-24-2	Benzo(g,h,i)perylene	ND		96.2	79.1	82	85.4	89	8	66-116/23
207-08-9	Benzo(k)fluoranthene	ND		96.2	82.1	85	80.0	83	3	65-114/24
101-55-3	4-Bromophenyl phenyl ether	ND		96.2	69.1	72	76.9	80	11	65-109/23
85-68-7	Butyl benzyl phthalate	ND		96.2	70.1	73	69.0	72	2	65-112/24
100-51-6	Benzyl Alcohol	ND		96.2	71.8	75	81.6	85	13	46-94/27
91-58-7	2-Chloronaphthalene	ND		96.2	76.8	80	75.9	79	1	57-103/23
106-47-8	4-Chloroaniline	ND		96.2	79.5	83	81.7	85	3	49-105/27
86-74-8	Carbazole	ND		96.2	84.2	88	89.0	93	6	59-113/21
218-01-9	Chrysene	ND		96.2	89.2	93	90.3	94	1	66-111/22
111-91-1	bis(2-Chloroethoxy)methane	ND		96.2	76.1	79	80.3	84	5	51-102/28
111-44-4	bis(2-Chloroethyl)ether	ND		96.2	78.3	81	74.6	78	5	53-100/27
108-60-1	bis(2-Chloroisopropyl)ether	ND		96.2	75.1	78	74.2	77	1	45-106/26
7005-72-3	4-Chlorophenyl phenyl ether	ND		96.2	78.3	81	79.3	82	1	62-105/20
95-50-1	1,2-Dichlorobenzene	ND		96.2	65.7	68	70.1	73	6	48-97/24
541-73-1	1,3-Dichlorobenzene	ND		96.2	67.9	71	71.4	74	5	45-95/25

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50725-MS	T011864.D	1	03/07/14	FS	03/06/14	OP50725	ST563
OP50725-MSD	T011865.D	1	03/07/14	FS	03/06/14	OP50725	ST563
FA12855-1	T011863.D	1	03/07/14	FS	03/06/14	OP50725	ST563

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12959-10

CAS No.	Compound	FA12855-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
106-46-7	1,4-Dichlorobenzene	ND		96.2	71.4	74	74.0	77	4	45-98/25
121-14-2	2,4-Dinitrotoluene	ND		96.2	75.8	79	78.4	82	3	61-110/21
606-20-2	2,6-Dinitrotoluene	ND		96.2	82.6	86	80.9	84	2	63-108/21
91-94-1	3,3'-Dichlorobenzidine	ND		96.2	79.8	83	78.6	82	2	46-117/29
53-70-3	Dibenzo(a,h)anthracene	ND		96.2	78.9	82	78.0	81	1	66-119/24
132-64-9	Dibenzofuran	ND		96.2	81.6	85	83.2	87	2	61-106/21
84-74-2	Di-n-butyl phthalate	ND		96.2	67.1	70	75.0	78	11	65-107/21
117-84-0	Di-n-octyl phthalate	ND		96.2	59.7	62	59.7	62	0	62-118/24
84-66-2	Diethyl phthalate	ND		96.2	71.0	74	73.7	77	4	64-108/21
131-11-3	Dimethyl phthalate	ND		96.2	69.7	72	71.8	75	3	63-106/22
117-81-7	bis(2-Ethylhexyl)phthalate	ND		96.2	73.4	76	69.2	72	6	61-117/23
206-44-0	Fluoranthene	ND		96.2	79.9	83	88.4	92	10	63-106/21
86-73-7	Fluorene	ND		96.2	84.1	87	86.2	90	2	62-108/20
118-74-1	Hexachlorobenzene	ND		96.2	76.5	80	90.6	94	17	63-108/22
87-68-3	Hexachlorobutadiene	ND		96.2	83.9	87	78.8	82	6	42-102/28
77-47-4	Hexachlorocyclopentadiene	ND		96.2	57.3	60	52.6	55	9	39-102/29
67-72-1	Hexachloroethane	ND		96.2	67.9	71	71.8	75	6	42-100/29
193-39-5	Indeno(1,2,3-cd)pyrene	ND		96.2	77.9	81	80.3	84	3	64-119/24
78-59-1	Isophorone	ND		96.2	76.3	79	79.9	83	5	43-87/25
91-57-6	2-Methylnaphthalene	ND		96.2	80.0	83	81.4	85	2	51-102/26
88-74-4	2-Nitroaniline	ND		96.2	76.4	79	82.9	86	8	54-128/24
99-09-2	3-Nitroaniline	ND		96.2	77.7	81	83.3	87	7	56-106/27
100-01-6	4-Nitroaniline	ND		96.2	79.1	82	84.1	87	6	55-120/24
91-20-3	Naphthalene	ND		96.2	81.6	85	84.6	88	4	47-100/29
98-95-3	Nitrobenzene	ND		96.2	77.9	81	82.0	85	5	50-104/28
621-64-7	N-Nitroso-di-n-propylamine	ND		96.2	80.6	84	82.1	85	2	52-104/25
86-30-6	N-Nitrosodiphenylamine	ND		96.2	85.6	89	95.7	100	11	64-108/23
85-01-8	Phenanthrene	ND		96.2	84.6	88	88.3	92	4	66-110/21
129-00-0	Pyrene	ND		96.2	85.0	88	82.6	86	3	64-113/23
120-82-1	1,2,4-Trichlorobenzene	ND		96.2	75.9	79	77.8	81	2	45-97/28

CAS No.	Surrogate Recoveries	MS	MSD	FA12855-1	Limits
367-12-4	2-Fluorophenol	54%	61%	36%	14-67%
4165-62-2	Phenol-d5	40%	48%	22%	10-50%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA12959
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50725-MS	T011864.D	1	03/07/14	FS	03/06/14	OP50725	ST563
OP50725-MSD	T011865.D	1	03/07/14	FS	03/06/14	OP50725	ST563
FA12855-1	T011863.D	1	03/07/14	FS	03/06/14	OP50725	ST563

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA12959-10

CAS No.	Surrogate Recoveries	MS	MSD	FA12855-1	Limits
118-79-6	2,4,6-Tribromophenol	89%	100%	71%	33-118%
4165-60-0	Nitrobenzene-d5	81%	84%	75%	42-108%
321-60-8	2-Fluorobiphenyl	82%	77%	72%	40-106%
1718-51-0	Terphenyl-d14	98%	98%	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: FA12959
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26920 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/14

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.042	.0025	.0042	-0.00060	<0.042

Associated samples MP26920: FA12959-1, FA12959-2

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: FA12959
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26920 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/14 03/07/14

Metal	FA12917-3 Original	DUP	RPD	QC Limits	FA12917-3 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.021	0.022	4.7	0-20	0.021	0.32	0.261	114.4	80-120

Associated samples MP26920: FA12959-1, FA12959-2

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: FA12959
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26920 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/14

Metal	FA12917-3 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.021	0.34	0.27	118.3	6.1	20

Associated samples MP26920: FA12959-1, FA12959-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12959
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26920
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 03/07/14

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.25	0.25	100.0	80-120

Associated samples MP26920: FA12959-1, FA12959-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12959
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26920
Matrix Type: SOLID

Methods: SW846 7471B
Units: ug/l

Prep Date: 03/07/14

Metal	FA12917-3 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.251	0.00	100.0(a)	0-10

Associated samples MP26920: FA12959-1, FA12959-2

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).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA12959
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26934
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/11/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.75	1.6		
Antimony	1.0	.1	.1	0.070	<1.0
Arsenic	0.50	.1	.1	-0.030	<0.50
Barium	10	.05	.05		
Beryllium	0.25	.025	.025	0.0	<0.25
Cadmium	0.20	.025	.025	0.0	<0.20
Calcium	250	2.5	2.5		
Chromium	0.50	.05	.05	0.020	<0.50
Cobalt	2.5	.025	.025		
Copper	1.3	.05	.05	0.050	<1.3
Iron	15	.85	1.3		
Lead	1.0	.055	.08	0.010	<1.0
Magnesium	250	2.5	2.5		
Manganese	0.75	.025	.025		
Molybdenum	2.5	.025	.03		
Nickel	2.0	.025	.025	0.015	<2.0
Potassium	500	10	10		
Selenium	1.0	.12	.15	0.0050	<1.0
Silver	0.50	.033	.033	0.0	<0.50
Sodium	500	25	25		
Strontium	0.50	.02	.025		
Thallium	0.50	.075	.075	-0.060	<0.50
Tin	2.5	.035	.035		
Titanium	0.50	.045	.045		
Vanadium	2.5	.025	.025		
Zinc	1.0	.15	.15	0.18	<1.0

Associated samples MP26934: FA12959-1, FA12959-2

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: FA12959
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26934
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date:			03/11/14					03/11/14	
Metal	FA12917-1 Original	DUP	RPD	QC Limits	FA12917-1 Original	MS	Spikelot MPFLICP2 % Rec		QC Limits
Aluminum	anr								
Antimony	0.0	0.0	NC	0-20	0.0	18.3	24.4	75.0N(b)	80-120
Arsenic	0.28	0.45	46.6 (a)	0-20	0.28	86.0	97.6	87.8	80-120
Barium	anr								
Beryllium	0.0	0.029	200.0(a)	0-20	0.0	2.5	2.44	102.5	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	2.3	2.44	94.3	80-120
Calcium									
Chromium	1.3	1.4	7.4	0-20	1.3	11.1	9.76	100.4	80-120
Cobalt									
Copper	0.33	0.44	28.6 (a)	0-20	0.33	13.2	12.2	105.5	80-120
Iron									
Lead	1.2	1.6	28.6 (a)	0-20	1.2	24.9	24.4	97.1	80-120
Magnesium									
Manganese									
Molybdenum									
Nickel	0.38	0.38	0.0	0-20	0.38	23.8	24.4	96.0	80-120
Potassium									
Selenium	0.0	0.0	NC	0-20	0.0	86.1	97.6	88.2	80-120
Silver	0.0	0.0	NC	0-20	0.0	2.3	2.44	94.3	80-120
Sodium									
Strontium									
Thallium	0.0	0.0	NC	0-20	0.0	92.0	97.6	94.3	80-120
Tin									
Titanium									
Vanadium									
Zinc	1.1	1.2	8.7	0-20	1.1	24.7	24.4	96.7	80-120

Associated samples MP26934: FA12959-1, FA12959-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.
(b) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA12959
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26934
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/11/14

Metal	FA12917-1 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	0.0	21.0	26.8	78.3N(a)	13.7	20
Arsenic	0.28	96.2	107	89.4	11.2	20
Barium	anr					
Beryllium	0.0	2.8	2.68	104.4	11.3	20
Cadmium	0.0	2.6	2.68	97.0	12.2	20
Calcium						
Chromium	1.3	12.1	10.7	100.7	8.6	20
Cobalt						
Copper	0.33	14.6	13.4	106.4	10.1	20
Iron						
Lead	1.2	27.3	26.8	97.3	9.2	20
Magnesium						
Manganese						
Molybdenum						
Nickel	0.38	26.5	26.8	97.4	10.7	20
Potassium						
Selenium	0.0	96.1	107	89.6	11.0	20
Silver	0.0	2.5	2.68	93.2	8.3	20
Sodium						
Strontium						
Thallium	0.0	101	107	94.2	9.3	20
Tin						
Titanium						
Vanadium						
Zinc	1.1	27.3	26.8	97.7	10.0	20

Associated samples MP26934: FA12959-1, FA12959-2

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) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA12959
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26934
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/11/14

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr			
Antimony	25.9	25	103.6	80-120
Arsenic	96.4	100	96.4	80-120
Barium	anr			
Beryllium	2.6	2.5	104.0	80-120
Cadmium	2.5	2.5	100.0	80-120
Calcium				
Chromium	10.6	10	106.0	80-120
Cobalt				
Copper	13.7	12.5	109.6	80-120
Iron				
Lead	24.5	25	98.0	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel	25.4	25	101.6	80-120
Potassium				
Selenium	95.2	100	95.2	80-120
Silver	2.5	2.5	100.0	80-120
Sodium				
Strontium				
Thallium	96.4	100	96.4	80-120
Tin				
Titanium				
Vanadium				
Zinc	25.7	25	102.8	80-120

Associated samples MP26934: FA12959-1, FA12959-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA12959
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26934
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/11/14

Metal	FA12917-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	0.00	0.00	NC	0-10
Arsenic	5.40	0.00	100.0(a)	0-10
Barium	anr			
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	26.0	25.5	1.9	0-10
Cobalt				
Copper	6.40	9.10	42.2 (a)	0-10
Iron				
Lead	22.9	27.0	17.9 (a)	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	7.40	8.10	9.5	0-10
Potassium				
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium				
Zinc	20.6	27.0	31.1 (a)	0-10

Associated samples MP26934: FA12959-1, FA12959-2

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: FA12959
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26934
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/11/14

Metal	Sample ml	Final ml	FA12917-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10			99.8	0.2	5	100	99.8	80-120
Arsenic	9.8	10	5.4	5.292	99.7	0.2	5	100	94.4	80-120
Barium										
Beryllium	9.8	10			52	0.2	2.5	50	104.0	80-120
Cadmium	9.8	10			50	0.2	2.5	50	100.0	80-120
Calcium										
Chromium	9.8	10	26	25.48	77.1	0.2	2.5	50	103.2	80-120
Cobalt										
Copper	9.8	10	6.4	6.272	112.4	0.2	5	100	106.1	80-120
Iron										
Lead	9.8	10	22.9	22.442	72.3	0.2	2.5	50	99.7	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel	9.8	10	7.4	7.252	107.2	0.2	5	100	99.9	80-120
Potassium										
Selenium	9.8	10			88.3	0.2	5	100	88.3	80-120
Silver	9.8	10			48.6	0.2	2.5	50	97.2	80-120
Sodium										
Strontium										
Thallium	9.8	10			95.5	0.2	5	100	95.5	80-120
Tin										
Titanium										
Vanadium										
Zinc	9.8	10	20.6	20.188	270.8	0.2	12.5	250	100.2	80-120

Associated samples MP26934: FA12959-1, FA12959-2

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

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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: FA12959
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
Chromium, Hexavalent	GN60625	2.0	0.0	mg/kg	20.0	19.7	98.3	75-125%

Associated Samples:
Batch GN60625: FA12959-1, FA12959-2
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA12959
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
Chromium, Hexavalent	GN60625	FA12814-11	mg/kg	1.4	1.2	12.1	0-20%
Solids, Percent	GN60434	FA12959-4	%	90	90	0.0	0-5%
Solids, Percent	GN60472	FA13060-1	%	80	80.2	0.2	0-5%
Solids, Percent	GN60474	FA12998-2	%	84.2	84.8	0.7	0-5%
Solids, Percent	GN60506	FA12959-3	%	89.7	90.2	0.6	0-5%
pH	GN60674	FA12959-1	su	3.87	3.92	1.3	0-10%

Associated Samples:
Batch GN60434: FA12959-4, FA12959-5, FA12959-6, FA12959-7, FA12959-8, FA12959-12
Batch GN60472: FA12959-15, FA12959-19
Batch GN60474: FA12959-1, FA12959-2, FA12959-9, FA12959-11, FA12959-14
Batch GN60506: FA12959-3, FA12959-16, FA12959-17, FA12959-18
Batch GN60625: FA12959-1, FA12959-2
Batch GN60674: FA12959-1, FA12959-2
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA12959
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
Chromium, Hexavalent	GN60625	FA12814-11	mg/kg	1.4	657.6	740	112.4	75-125%
Chromium, Hexavalent	GN60625	FA12814-11	mg/kg	1.4	23.3	27.7	113.2	75-125%

Associated Samples:
Batch GN60625: FA12959-1, FA12959-2
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Southeast
ACCUTEST
LABORATORIES

04/08/14

Technical Report for

United Technologies Corporation

AECOMSCG: Delavan Spray Technologies; Bamberg, SC

60314964

Accutest Job Number: FA13018

Sampling Date: 03/05/14

Report to:

AECOM Environment

doria.cullom@aecom.com

ATTN: Doria Cullom

Total number of pages in report: **96**

NELAP ACCREDITED TNI LABORATORY

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

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Heather Wandrey 407-425-6700

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Accutest Laboratories

Sample Summary

United Technologies Corporation

Job No: FA13018

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA13018-1	03/05/14	10:10	RMLA	03/06/14	AQ	Ground Water	MW-3-C
FA13018-2	03/05/14	10:10	RMLA	03/06/14	AQ	Ground Water	MW-3
FA13018-2D	03/05/14	10:10	RMLA	03/06/14	AQ	Water Dup/MSD	MW-3
FA13018-2S	03/05/14	10:10	RMLA	03/06/14	AQ	Water Matrix Spike	MW-3
FA13018-3	03/05/14	10:25	RMLA	03/06/14	AQ	Ground Water	MW-5
FA13018-4	03/05/14	15:10	RMLA	03/06/14	AQ	Ground Water	MW-10
FA13018-5	03/05/14	14:23	RMLA	03/06/14	AQ	Ground Water	MW-3D
FA13018-6	03/05/14	15:37	RMLA	03/06/14	AQ	Ground Water	MW-3D1
FA13018-7	03/05/14	16:35	RMLA	03/06/14	AQ	Ground Water	MW-10D
FA13018-8	03/05/14	17:03	RMLA	03/06/14	AQ	Ground Water	MW-7

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: United Technologies Corporation **Job No:** FA13018

Site: AECOMSCG: Delavan Spray Technologies; Bamberg, SC **Report Date** 3/18/2014 11:55:33 AM

8 Samples were collected on 03/05/2014 and were received at Accutest SE on 03/06/2014 properly preserved, at 2.4 Deg. C and intact. These Samples received an Accutest job number of FA13018. 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:** VN3268

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA13018-2MS, FA13018-2MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Acetone are outside control limits. Blank Spike recovery is biased high. Analyte is non-detect in associated samples; therefore data integrity is not compromised.

Matrix Spike Duplicate Recovery(s) for Tetrachloroethylene are outside control limits. Probable cause is due to matrix interference.

FA13018-1: Sample was not preserved to a pH < 2.

FA13018-2: Sample was not preserved to a pH < 2.

FA13018-3: Sample was not preserved to a pH < 2.

FA13018-5: Sample was not preserved to a pH < 2.

FA13018-6: Sample was not preserved to a pH < 2.

FA13018-7: Sample was not preserved to a pH < 2.

FA13018-8: Sample was not preserved to a pH < 2.

FA13018-1 for Acetone: Associated BS recovery outside control limits.

FA13018-2 for Acetone: Associated BS recovery outside control limits.

FA13018-3 for Acetone: Associated BS recovery outside control limits.

FA13018-5 for Acetone: Associated BS recovery outside control limits.

FA13018-6 for Acetone: Associated BS recovery outside control limits.

FA13018-7 for Acetone: Associated BS recovery outside control limits.

FA13018-8 for Acetone: Associated BS recovery outside control limits.

Matrix: AQ **Batch ID:** VN3272

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA13008-12MS, FA13008-12MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Acetone are outside control limits. Blank Spike recovery is biased high. Analyte is non-detect in associated sample; therefore data integrity is not compromised.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for Acetone are outside control limits. Probable cause is due to matrix interference.

FA13018-4: Sample was not preserved to a pH < 2.

FA13018-5: Sample was not preserved to a pH < 2.

FA13018-4 for Acetone: Associated BS recovery outside control limits.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ **Batch ID:** OP50772

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) FA13018-2MS, FA13018-2MSD were used as the QC samples indicated.

Volatiles by GC By Method RSKSOP-147/175

Matrix: AQ **Batch ID:** GFF909

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA13018-2DUP, FA13018-2MS were used as the QC samples indicated.

Matrix: AQ **Batch ID:** GFF910

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA13018-5DUP, FA13112-3MS were used as the QC samples indicated.

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** MP26926

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) FA13018-2DUP, FA13018-2MS, FA13018-2MSD, FA13018-2PS, FA13018-2SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Zinc are outside control limits for sample MP26926-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 7470A

Matrix: AQ **Batch ID:** MP26941

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) FA13018-2DUP, FA13018-2MS, FA13018-2MSD, FA13018-2SDL were used as the QC samples for metals.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP23574

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) FA13018-2MS, FA13018-2MSD were used as the QC samples for Chloride, Nitrogen, Nitrate, Nitrogen, Nitrite, Sulfate.

Wet Chemistry By Method SM5310 B-11/SW9060A

Matrix: AQ **Batch ID:** GP23601

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) FA13018-2DUP, FA13018-2MS 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: March 18, 2014

Lovelie Metzgar, QA Officer (signature on file)

Summary of Hits

Job Number: FA13018
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 03/05/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA13018-1	**MW-3-C**					
No hits reported in this sample.						
FA13018-2	**MW-3**					
Tetrachloroethylene [a]		45.1	1.0	0.26	ug/l	SW846 8260B
Trichloroethylene [a]		1.1	1.0	0.30	ug/l	SW846 8260B
Methane		7.6	0.50	0.16	ug/l	RSKSOP-147/175
Zinc		5.8 J	20	3.0	ug/l	SW846 6010C
Chloride		2.3	2.0	0.80	mg/l	EPA 300/SW846 9056A
Nitrogen, Nitrate		0.56	0.10	0.050	mg/l	EPA 300/SW846 9056A
Sulfate		1.5 J	2.0	0.60	mg/l	EPA 300/SW846 9056A
Total Organic Carbon		0.42 J	1.0	0.23	mg/l	SM5310 B-11/SW9060A
FA13018-3	**MW-5**					
Tetrachloroethylene [a]		11.7	1.0	0.26	ug/l	SW846 8260B
Zinc		5.7 J	20	3.0	ug/l	SW846 6010C
FA13018-4	**MW-10**					
1,1-Dichloroethylene [a]		0.36 J	1.0	0.25	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [a]		13.9	1.0	0.33	ug/l	SW846 8260B
Tetrachloroethylene [a]		93.2	1.0	0.26	ug/l	SW846 8260B
Trichloroethylene [a]		15.1	1.0	0.30	ug/l	SW846 8260B
Methane		14.9	0.50	0.16	ug/l	RSKSOP-147/175
Zinc		5.4 J	20	3.0	ug/l	SW846 6010C
Chloride		2.4	2.0	0.80	mg/l	EPA 300/SW846 9056A
Sulfate		5.4	2.0	0.60	mg/l	EPA 300/SW846 9056A
Total Organic Carbon		0.76 J	1.0	0.23	mg/l	SM5310 B-11/SW9060A
FA13018-5	**MW-3D**					
1,1-Dichloroethylene [a]		10.4	1.0	0.25	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [a]		7.0	1.0	0.33	ug/l	SW846 8260B
Tetrachloroethylene [a]		204	5.0	1.3	ug/l	SW846 8260B
Trichloroethylene [a]		6.0	1.0	0.30	ug/l	SW846 8260B
Methane		7.6	0.50	0.16	ug/l	RSKSOP-147/175
Chloride		6.8	2.0	0.80	mg/l	EPA 300/SW846 9056A
Nitrogen, Nitrate		1.1	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		0.26 J	1.0	0.23	mg/l	SM5310 B-11/SW9060A

Summary of Hits

Job Number: FA13018
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 03/05/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method

FA13018-6 **MW-3D1**

No hits reported in this sample.

FA13018-7 **MW-10D**

No hits reported in this sample.

FA13018-8 **MW-7**

No hits reported in this sample.

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

Southeast ACCUTEST LABORATORIES

4

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MW-3-C
Lab Sample ID: FA13018-1
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/05/14
Date Received: 03/06/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	N0074830.D	1	03/10/14	RB	n/a	n/a	VN3268
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	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-3-C		
Lab Sample ID:	FA13018-1	**Date Sampled:**	03/05/14
Matrix:	AQ - Ground Water	**Date Received:**	03/06/14
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	96%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	99%		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:	FA13018-2	**Date Sampled:**	03/05/14
Matrix:	AQ - Ground Water	**Date Received:**	03/06/14
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]	N0074831.D	1	03/10/14	RB	n/a	n/a	VN3268
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	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	45.1	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	1.1	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-3		
Lab Sample ID:	FA13018-2	**Date Sampled:**	03/05/14
Matrix:	AQ - Ground Water	**Date Received:**	03/06/14
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	98%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	99%		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: FA13018-2 **Date Sampled:** 03/05/14
Matrix: AQ - Ground Water **Date Received:** 03/06/14
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	X033658.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN TCL List

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	

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: FA13018-2 **Date Sampled:** 03/05/14
Matrix: AQ - Ground Water **Date Received:** 03/06/14
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	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	
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	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	46%		14-67%
4165-62-2	Phenol-d5	30%		10-50%
118-79-6	2,4,6-Tribromophenol	99%		33-118%

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-3		
Lab Sample ID:	FA13018-2	**Date Sampled:**	03/05/14
Matrix:	AQ - Ground Water	**Date Received:**	03/06/14
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	88%		42-108%
321-60-8	2-Fluorobiphenyl	88%		40-106%
1718-51-0	Terphenyl-d14	108%		39-121%

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: FA13018-2
Matrix: AQ - Ground Water
Method: RSKSOP-147/175
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/05/14
Date Received: 03/06/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF22582.D	1	03/10/14	CP	n/a	n/a	GFF909
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	7.6	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
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: FA13018-2
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/05/14
Date Received: 03/06/14
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	2.3 U	6.0	2.3	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Arsenic	2.4 U	10	2.4	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Beryllium	0.50 U	4.0	0.50	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Cadmium	0.50 U	5.0	0.50	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Chromium	2.0 U	10	2.0	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Copper	1.0 U	25	1.0	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Lead	1.1 U	5.0	1.1	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Mercury	0.030 U	0.50	0.030	ug/l	1	03/13/14	03/13/14	JL	SW846 7470A [2]	SW846 7470A [4]
Nickel	0.50 U	40	0.50	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Selenium	2.3 U	10	2.3	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Silver	0.77 U	5.0	0.77	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Thallium	2.0 U	10	2.0	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Zinc	5.8 J	20	3.0	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA11448
(2) Instrument QC Batch: MA11451
(3) Prep QC Batch: MP26926
(4) Prep QC Batch: MP26941

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-3
Lab Sample ID: FA13018-2
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/05/14
Date Received: 03/06/14
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride	2.3	2.0	0.80	mg/l	1	03/06/14 19:50	VK	EPA 300/SW846 9056A
Nitrogen, Nitrate	0.56	0.10	0.050	mg/l	1	03/06/14 19:50	VK	EPA 300/SW846 9056A
Nitrogen, Nitrite	0.050 U	0.10	0.050	mg/l	1	03/06/14 19:50	VK	EPA 300/SW846 9056A
Sulfate	1.5 J	2.0	0.60	mg/l	1	03/06/14 19:50	VK	EPA 300/SW846 9056A
Total Organic Carbon	0.42 J	1.0	0.23	mg/l	1	03/12/14 15:15	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:	FA13018-3	**Date Sampled:**	03/05/14
Matrix:	AQ - Ground Water	**Date Received:**	03/06/14
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]	N0074832.D	1	03/10/14	RB	n/a	n/a	VN3268
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	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	11.7	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
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-5		
Lab Sample ID:	FA13018-3	**Date Sampled:**	03/05/14
Matrix:	AQ - Ground Water	**Date Received:**	03/06/14
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	99%		83-118%
17060-07-0	1,2-Dichloroethane-D4	99%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	100%		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-5
Lab Sample ID: FA13018-3 **Date Sampled:** 03/05/14
Matrix: AQ - Ground Water **Date Received:** 03/06/14
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	X033661.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583
Run #2							

	Initial Volume	Final Volume
Run #1	1020 ml	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	49	9.8	ug/l	
95-57-8	2-Chlorophenol	ND	4.9	0.51	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	0.57	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.9	0.49	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	5.3	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.8	2.0	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	0.59	ug/l	
100-02-7	4-Nitrophenol	ND	25	4.9	ug/l	
87-86-5	Pentachlorophenol	ND	25	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	0.61	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.9	0.63	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.9	0.64	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.9	0.70	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.9	0.79	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	0.66	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.9	0.80	ug/l	
100-51-6	Benzyl Alcohol	ND	4.9	0.98	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	0.71	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.9	0.54	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.9	0.68	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-5
Lab Sample ID: FA13018-3 **Date Sampled:** 03/05/14
Matrix: AQ - Ground Water **Date Received:** 03/06/14
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	0.57	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.9	0.53	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	0.56	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.9	0.61	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	4.9	0.88	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.9	0.80	ug/l	
132-64-9	Dibenzofuran	ND	4.9	0.52	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.9	0.98	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.9	0.98	ug/l	
84-66-2	Diethyl phthalate	ND	4.9	0.98	ug/l	
131-11-3	Dimethyl phthalate	ND	4.9	0.62	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.9	1.5	ug/l	
206-44-0	Fluoranthene	ND	4.9	0.69	ug/l	
86-73-7	Fluorene	ND	4.9	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	4.9	0.65	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.9	0.49	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	4.9	0.98	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	0.62	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	1.2	ug/l	
99-09-2	3-Nitroaniline	ND	4.9	0.60	ug/l	
100-01-6	4-Nitroaniline	ND	4.9	0.75	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	0.80	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	42%		14-67%
4165-62-2	Phenol-d5	27%		10-50%
118-79-6	2,4,6-Tribromophenol	90%		33-118%

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-5		
Lab Sample ID:	FA13018-3	**Date Sampled:**	03/05/14
Matrix:	AQ - Ground Water	**Date Received:**	03/06/14
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	80%		42-108%
321-60-8	2-Fluorobiphenyl	84%		40-106%
1718-51-0	Terphenyl-d14	100%		39-121%

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-5
Lab Sample ID: FA13018-3
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/05/14
Date Received: 03/06/14
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	2.3 U	6.0	2.3	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Arsenic	2.4 U	10	2.4	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Beryllium	0.50 U	4.0	0.50	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Cadmium	0.50 U	5.0	0.50	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Chromium	2.0 U	10	2.0	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Copper	1.0 U	25	1.0	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Lead	1.1 U	5.0	1.1	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Mercury	0.030 U	0.50	0.030	ug/l	1	03/13/14	03/13/14	JL	SW846 7470A [2]	SW846 7470A [4]
Nickel	0.50 U	40	0.50	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Selenium	2.3 U	10	2.3	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Silver	0.77 U	5.0	0.77	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Thallium	2.0 U	10	2.0	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Zinc	5.7 J	20	3.0	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA11448
(2) Instrument QC Batch: MA11451
(3) Prep QC Batch: MP26926
(4) Prep QC Batch: MP26941

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-10		
Lab Sample ID:	FA13018-4	**Date Sampled:**	03/05/14
Matrix:	AQ - Ground Water	**Date Received:**	03/06/14
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]	N0074899.D	1	03/12/14	RB	n/a	n/a	VN3272
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	0.36	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	13.9	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	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	93.2	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	15.1	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-10		
Lab Sample ID:	FA13018-4	**Date Sampled:**	03/05/14
Matrix:	AQ - Ground Water	**Date Received:**	03/06/14
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	99%		79-125%
2037-26-5	Toluene-D8	98%		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-10
Lab Sample ID: FA13018-4 **Date Sampled:** 03/05/14
Matrix: AQ - Ground Water **Date Received:** 03/06/14
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	X033662.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN TCL List

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	

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-10
Lab Sample ID: FA13018-4 **Date Sampled:** 03/05/14
Matrix: AQ - Ground Water **Date Received:** 03/06/14
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	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	
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	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	47%		14-67%
4165-62-2	Phenol-d5	32%		10-50%
118-79-6	2,4,6-Tribromophenol	93%		33-118%

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-10		
Lab Sample ID:	FA13018-4	**Date Sampled:**	03/05/14
Matrix:	AQ - Ground Water	**Date Received:**	03/06/14
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	85%		42-108%
321-60-8	2-Fluorobiphenyl	85%		40-106%
1718-51-0	Terphenyl-d14	104%		39-121%

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-10		
Lab Sample ID:	FA13018-4	**Date Sampled:**	03/05/14
Matrix:	AQ - Ground Water	**Date Received:**	03/06/14
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	FF22583.D	1	03/10/14	CP	n/a	n/a	GFF909
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	14.9	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
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-10
Lab Sample ID: FA13018-4
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/05/14
Date Received: 03/06/14
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	2.3 U	6.0	2.3	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Arsenic	2.4 U	10	2.4	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Beryllium	0.50 U	4.0	0.50	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Cadmium	0.50 U	5.0	0.50	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Chromium	2.0 U	10	2.0	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Copper	1.0 U	25	1.0	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Lead	1.1 U	5.0	1.1	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Mercury	0.030 U	0.50	0.030	ug/l	1	03/13/14	03/13/14	JL	SW846 7470A [2]	SW846 7470A [4]
Nickel	0.50 U	40	0.50	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Selenium	2.3 U	10	2.3	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Silver	0.77 U	5.0	0.77	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Thallium	2.0 U	10	2.0	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]
Zinc	5.4 J	20	3.0	ug/l	1	03/11/14	03/11/14	LM	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA11448
(2) Instrument QC Batch: MA11451
(3) Prep QC Batch: MP26926
(4) Prep QC Batch: MP26941

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-10
Lab Sample ID: FA13018-4
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/05/14
Date Received: 03/06/14
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride	2.4	2.0	0.80	mg/l	1	03/06/14 20:07	VK	EPA 300/SW846 9056A
Nitrogen, Nitrate	0.050 U	0.10	0.050	mg/l	1	03/06/14 20:07	VK	EPA 300/SW846 9056A
Nitrogen, Nitrite	0.050 U	0.10	0.050	mg/l	1	03/06/14 20:07	VK	EPA 300/SW846 9056A
Sulfate	5.4	2.0	0.60	mg/l	1	03/06/14 20:07	VK	EPA 300/SW846 9056A
Total Organic Carbon	0.76 J	1.0	0.23	mg/l	1	03/12/14 15:39	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-3D
Lab Sample ID: FA13018-5
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/05/14
Date Received: 03/06/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	N0074834.D	1	03/10/14	RB	n/a	n/a	VN3268
Run #2 [a]	N0074900.D	5	03/12/14	RB	n/a	n/a	VN3272

	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 [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	10.4	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	7.0	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	204 [c]	5.0	1.3	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	6.0	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-3D		
Lab Sample ID:	FA13018-5	**Date Sampled:**	03/05/14
Matrix:	AQ - Ground Water	**Date Received:**	03/06/14
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%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	99%	79-125%
2037-26-5	Toluene-D8	98%	96%	85-112%
460-00-4	4-Bromofluorobenzene	98%	98%	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
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: FA13018-5
Matrix: AQ - Ground Water
Method: RSKSOP-147/175
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/05/14
Date Received: 03/06/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF22593.D	1	03/12/14	CP	n/a	n/a	GFF910
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	7.6	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
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: FA13018-5
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/05/14
Date Received: 03/06/14
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride	6.8	2.0	0.80	mg/l	1	03/06/14 20:24	VK	EPA 300/SW846 9056A
Nitrogen, Nitrate	1.1	0.10	0.050	mg/l	1	03/06/14 20:24	VK	EPA 300/SW846 9056A
Nitrogen, Nitrite	0.050 U	0.10	0.050	mg/l	1	03/06/14 20:24	VK	EPA 300/SW846 9056A
Sulfate	2.1	2.0	0.60	mg/l	1	03/06/14 20:24	VK	EPA 300/SW846 9056A
Total Organic Carbon	0.26 J	1.0	0.23	mg/l	1	03/12/14 15:56	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-3D1
Lab Sample ID: FA13018-6
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/05/14
Date Received: 03/06/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	N0074835.D	1	03/10/14	RB	n/a	n/a	VN3268
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	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:	FA13018-6	**Date Sampled:**	03/05/14
Matrix:	AQ - Ground Water	**Date Received:**	03/06/14
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	99%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	100%		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-10D		
Lab Sample ID:	FA13018-7	**Date Sampled:**	03/05/14
Matrix:	AQ - Ground Water	**Date Received:**	03/06/14
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]	N0074836.D	1	03/10/14	RB	n/a	n/a	VN3268
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	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-10D		
Lab Sample ID:	FA13018-7	**Date Sampled:**	03/05/14
Matrix:	AQ - Ground Water	**Date Received:**	03/06/14
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	100%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	100%		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-7		
Lab Sample ID:	FA13018-8	**Date Sampled:**	03/05/14
Matrix:	AQ - Ground Water	**Date Received:**	03/06/14
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]	N0074837.D	1	03/10/14	RB	n/a	n/a	VN3268
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	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-7		
Lab Sample ID:	FA13018-8	**Date Sampled:**	03/05/14
Matrix:	AQ - Ground Water	**Date Received:**	03/06/14
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	101%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	99%		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

FA13018

AECOM

Chain of Custody and Analytical Request

Page 1 of 1
Project Number: 60269713.02149
Chain of Custody Number (1): 030514-01
LIMS Number:

Project Name / Location: UTC Delavan Spray Technologies Site RI
Client Name: UTC
Collected by: RMorgan, LAlexander
Project Manager: Walter Gerald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.)	VOCs (8260C)	SVOCs (8270D)	Acetone, Isopropanol, Methanol (8260B Modified)	TDL (SM3500)	Nitrate (300.0)	Nitrite (300.0)	Sulfate (300.0)	Chloride (300.0)	Dissolved Gases (RSK-175)	COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
MW-3-C	05-MAR-2014	1010		X			X									A	1
MW-3		1010		X			X	X	X	X	X	X	X	X		A	2
MW-3-MS/MSD		1010		X			X	X	X	X	X	X	X	X		A	3
MW-5		1025		X			X	X	X							A	4
MW-10		1510		X			X	X	X	X	X	X	X	X		A	5
MW-30		1423		X			X			X	X	X	X	X		A	6
MW-30I		1537		X			X									A	7
MW-100		1635		X			X									A	8
MW-7		1703		X			X									A	9
temp blank																	

Sample Analysis Requested

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.		3/5/14	1730	1.		
2.	FF	03-06-14	930	2.		3/06/14 930
3.				3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:
Method of Shipment: FedEx
Analytical Lab: Accutest
Lab Recipient:

Shipped: X
Airbill #: 8047 3475 6349
Location: Orlando FL
Date: Time:

8 8047 3475 6338

2 4 28

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

Unpreserved VOCs – 7 day hold
Nitrate/Nitrite – 48 hr hold

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

5.1 5

FA13018: Chain of Custody
Page 1 of 3

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA13018 CLIENT: AE Com PROJECT: UTC Delaware Spray

DATE/TIME RECEIVED: 03-06-14 930 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 2

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

AIRBILL NUMBERS: 8047 3475 6349 / 6338

COOLER INFORMATION

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

TRIP BLANK INFORMATION

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

MISC. INFORMATION

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

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.4
- [ ] OBSERVED TEMPS: 2.8 3.2
- [ ] CORRECTED TEMPS: 2.4 2.8

SAMPLE INFORMATION

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

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS: _____

TECHNICIAN SIGNATURE/DATE RW 03-06-14 REVIEWER SIGNATURE/DATE JC 3-6-14

NF 12/10

receipt confirmation 122910.xls

FA13018: Chain of Custody
Page 2 of 3

FA13018: Chain of Custody

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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: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3268-MB	N0074829.D	1	03/10/14	RB	n/a	n/a	VN3268

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

FA13018-1, FA13018-2, FA13018-3, FA13018-5, FA13018-6, FA13018-7, FA13018-8

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: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3268-MB	N0074829.D	1	03/10/14	RB	n/a	n/a	VN3268

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

FA13018-1, FA13018-2, FA13018-3, FA13018-5, FA13018-6, FA13018-7, FA13018-8

CAS No.	Surrogate Recoveries		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	97%	83-118%

Method Blank Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3272-MB	N0074883.D	1	03/12/14	RB	n/a	n/a	VN3272

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

FA13018-4, FA13018-5

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: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3272-MB	N0074883.D	1	03/12/14	RB	n/a	n/a	VN3272

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

FA13018-4, FA13018-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

Blank Spike Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3268-BS	N0074827.D	1	03/10/14	RB	n/a	n/a	VN3268

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

FA13018-1, FA13018-2, FA13018-3, FA13018-5, FA13018-6, FA13018-7, FA13018-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	242	194*	50-147
71-43-2	Benzene	25	25.2	101	81-122
75-27-4	Bromodichloromethane	25	23.9	96	79-123
75-25-2	Bromoform	25	22.1	88	66-123
108-90-7	Chlorobenzene	25	26.9	108	82-124
75-00-3	Chloroethane	25	24.8	99	62-144
67-66-3	Chloroform	25	25.0	100	80-124
75-15-0	Carbon disulfide	25	21.5	86	66-148
56-23-5	Carbon tetrachloride	25	25.2	101	76-136
75-34-3	1,1-Dichloroethane	25	25.0	100	81-122
75-35-4	1,1-Dichloroethylene	25	26.1	104	78-137
107-06-2	1,2-Dichloroethane	25	24.2	97	75-125
78-87-5	1,2-Dichloropropane	25	25.3	101	76-124
124-48-1	Dibromochloromethane	25	21.7	87	78-122
156-59-2	cis-1,2-Dichloroethylene	25	25.1	100	78-120
10061-01-5	cis-1,3-Dichloropropene	25	23.3	93	75-118
156-60-5	trans-1,2-Dichloroethylene	25	25.2	101	76-127
10061-02-6	trans-1,3-Dichloropropene	25	23.6	94	80-120
100-41-4	Ethylbenzene	25	24.7	99	81-121
591-78-6	2-Hexanone	125	135	108	61-129
108-10-1	4-Methyl-2-pentanone	125	112	90	66-122
74-83-9	Methyl bromide	25	23.9	96	59-143
74-87-3	Methyl chloride	25	27.9	112	50-159
75-09-2	Methylene chloride	25	25.4	102	69-135
78-93-3	Methyl ethyl ketone	125	143	114	56-143
100-42-5	Styrene	25	23.2	93	78-119
71-55-6	1,1,1-Trichloroethane	25	26.1	104	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	24.5	98	72-120
79-00-5	1,1,2-Trichloroethane	25	24.3	97	76-119
127-18-4	Tetrachloroethylene	25	25.8	103	76-135
108-88-3	Toluene	25	24.0	96	80-120
79-01-6	Trichloroethylene	25	24.9	100	81-126
75-01-4	Vinyl chloride	25	25.1	100	69-159
1330-20-7	Xylene (total)	75	77.1	103	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3268-BS	N0074827.D	1	03/10/14	RB	n/a	n/a	VN3268

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

FA13018-1, FA13018-2, FA13018-3, FA13018-5, FA13018-6, FA13018-7, FA13018-8

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3272-BS	N0074881.D	1	03/12/14	RB	n/a	n/a	VN3272

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

FA13018-4, FA13018-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	287	230*	50-147
71-43-2	Benzene	25	25.7	103	81-122
75-27-4	Bromodichloromethane	25	23.5	94	79-123
75-25-2	Bromoform	25	23.7	95	66-123
108-90-7	Chlorobenzene	25	27.0	108	82-124
75-00-3	Chloroethane	25	30.4	122	62-144
67-66-3	Chloroform	25	26.0	104	80-124
75-15-0	Carbon disulfide	25	24.3	97	66-148
56-23-5	Carbon tetrachloride	25	27.0	108	76-136
75-34-3	1,1-Dichloroethane	25	26.3	105	81-122
75-35-4	1,1-Dichloroethylene	25	27.1	108	78-137
107-06-2	1,2-Dichloroethane	25	25.2	101	75-125
78-87-5	1,2-Dichloropropane	25	25.5	102	76-124
124-48-1	Dibromochloromethane	25	22.1	88	78-122
156-59-2	cis-1,2-Dichloroethylene	25	26.2	105	78-120
10061-01-5	cis-1,3-Dichloropropene	25	23.2	93	75-118
156-60-5	trans-1,2-Dichloroethylene	25	26.8	107	76-127
10061-02-6	trans-1,3-Dichloropropene	25	23.2	93	80-120
100-41-4	Ethylbenzene	25	24.7	99	81-121
591-78-6	2-Hexanone	125	147	118	61-129
108-10-1	4-Methyl-2-pentanone	125	116	93	66-122
74-83-9	Methyl bromide	25	27.8	111	59-143
74-87-3	Methyl chloride	25	32.4	130	50-159
75-09-2	Methylene chloride	25	26.9	108	69-135
78-93-3	Methyl ethyl ketone	125	162	130	56-143
100-42-5	Styrene	25	23.3	93	78-119
71-55-6	1,1,1-Trichloroethane	25	26.6	106	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	24.7	99	72-120
79-00-5	1,1,2-Trichloroethane	25	23.9	96	76-119
127-18-4	Tetrachloroethylene	25	26.0	104	76-135
108-88-3	Toluene	25	24.0	96	80-120
79-01-6	Trichloroethylene	25	25.2	101	81-126
75-01-4	Vinyl chloride	25	27.7	111	69-159
1330-20-7	Xylene (total)	75	77.9	104	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3272-BS	N0074881.D	1	03/12/14	RB	n/a	n/a	VN3272

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

FA13018-4, FA13018-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	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	96%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13018-2MS	N0074838.D	1	03/10/14	RB	n/a	n/a	VN3268
FA13018-2MSD	N0074839.D	1	03/10/14	RB	n/a	n/a	VN3268
FA13018-2 [a]	N0074831.D	1	03/10/14	RB	n/a	n/a	VN3268

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

FA13018-1, FA13018-2, FA13018-3, FA13018-5, FA13018-6, FA13018-7, FA13018-8

CAS No.	Compound	FA13018-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	134	107	127	102	5	50-147/21
71-43-2	Benzene	ND		25	26.1	104	24.2	97	8	81-122/14
75-27-4	Bromodichloromethane	ND		25	24.3	97	23.5	94	3	79-123/19
75-25-2	Bromoform	ND		25	22.9	92	21.8	87	5	66-123/21
108-90-7	Chlorobenzene	ND		25	28.2	113	26.2	105	7	82-124/14
75-00-3	Chloroethane	ND		25	26.1	104	23.3	93	11	62-144/20
67-66-3	Chloroform	ND		25	26.6	106	24.4	98	9	80-124/15
75-15-0	Carbon disulfide	ND		25	22.9	92	22.6	90	1	66-148/23
56-23-5	Carbon tetrachloride	ND		25	26.7	107	24.9	100	7	76-136/23
75-34-3	1,1-Dichloroethane	ND		25	26.0	104	23.7	95	9	81-122/15
75-35-4	1,1-Dichloroethylene	ND		25	25.5	102	28.7	115	12	78-137/18
107-06-2	1,2-Dichloroethane	ND		25	26.0	104	24.5	98	6	75-125/14
78-87-5	1,2-Dichloropropane	ND		25	26.0	104	24.8	99	5	76-124/14
124-48-1	Dibromochloromethane	ND		25	22.3	89	21.8	87	2	78-122/19
156-59-2	cis-1,2-Dichloroethylene	ND		25	26.1	104	24.9	100	5	78-120/15
10061-01-5	cis-1,3-Dichloropropene	ND		25	23.6	94	22.9	92	3	75-118/23
156-60-5	trans-1,2-Dichloroethylene	ND		25	26.0	104	23.7	95	9	76-127/17
10061-02-6	trans-1,3-Dichloropropene	ND		25	23.7	95	22.8	91	4	80-120/22
100-41-4	Ethylbenzene	ND		25	25.7	103	23.7	95	8	81-121/14
591-78-6	2-Hexanone	ND		125	108	86	105	84	3	61-129/18
108-10-1	4-Methyl-2-pentanone	ND		125	110	88	108	86	2	66-122/16
74-83-9	Methyl bromide	ND		25	26.3	105	24.1	96	9	59-143/19
74-87-3	Methyl chloride	ND		25	30.8	123	28.2	113	9	50-159/19
75-09-2	Methylene chloride	ND		25	26.4	106	24.9	100	6	69-135/16
78-93-3	Methyl ethyl ketone	ND		125	110	88	108	86	2	56-143/18
100-42-5	Styrene	ND		25	23.9	96	22.4	90	6	78-119/23
71-55-6	1,1,1-Trichloroethane	ND		25	27.0	108	25.1	100	7	75-130/16
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	25.7	103	24.9	100	3	72-120/14
79-00-5	1,1,2-Trichloroethane	ND		25	25.3	101	24.2	97	4	76-119/14
127-18-4	Tetrachloroethylene	45.1		25	65.8	83	61.3	65*	7	76-135/16
108-88-3	Toluene	ND		25	24.8	99	23.4	94	6	80-120/14
79-01-6	Trichloroethylene	1.1		25	27.1	104	25.0	96	8	81-126/15
75-01-4	Vinyl chloride	ND		25	26.0	104	24.0	96	8	69-159/18
1330-20-7	Xylene (total)	ND		75	80.1	107	75.3	100	6	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13018-2MS	N0074838.D	1	03/10/14	RB	n/a	n/a	VN3268
FA13018-2MSD	N0074839.D	1	03/10/14	RB	n/a	n/a	VN3268
FA13018-2 [a]	N0074831.D	1	03/10/14	RB	n/a	n/a	VN3268

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

FA13018-1, FA13018-2, FA13018-3, FA13018-5, FA13018-6, FA13018-7, FA13018-8

CAS No.	Surrogate Recoveries	MS	MSD	FA13018-2	Limits
1868-53-7	Dibromofluoromethane	103%	102%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	100%	98%	79-125%
2037-26-5	Toluene-D8	98%	98%	98%	85-112%
460-00-4	4-Bromofluorobenzene	97%	97%	99%	83-118%

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

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13008-12MS	N0074901.D	1	03/12/14	RB	n/a	n/a	VN3272
FA13008-12MSD	N0074902.D	1	03/12/14	RB	n/a	n/a	VN3272
FA13008-12	N0074892.D	1	03/12/14	RB	n/a	n/a	VN3272

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

FA13018-4, FA13018-5

CAS No.	Compound	FA13008-12 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25 U		125	214	171*	189	151*	12	50-147/21
71-43-2	Benzene	1.0 U		25	27.7	111	26.8	107	3	81-122/14
75-27-4	Bromodichloromethane	1.0 U		25	26.2	105	25.1	100	4	79-123/19
75-25-2	Bromoform	1.0 U		25	25.0	100	25.0	100	0	66-123/21
108-90-7	Chlorobenzene	1.0 U		25	29.5	118	28.1	112	5	82-124/14
75-00-3	Chloroethane	2.0 U		25	28.0	112	26.6	106	5	62-144/20
67-66-3	Chloroform	1.0 U		25	27.8	111	27.5	110	1	80-124/15
75-15-0	Carbon disulfide	2.0 U		25	27.7	111	27.1	108	2	66-148/23
56-23-5	Carbon tetrachloride	1.0 U		25	28.2	113	27.4	110	3	76-136/23
75-34-3	1,1-Dichloroethane	1.0 U		25	27.7	111	27.2	109	2	81-122/15
75-35-4	1,1-Dichloroethylene	1.0 U		25	34.1	136	32.9	132	4	78-137/18
107-06-2	1,2-Dichloroethane	1.0 U		25	27.1	108	26.8	107	1	75-125/14
78-87-5	1,2-Dichloropropane	1.0 U		25	27.4	110	27.0	108	1	76-124/14
124-48-1	Dibromochloromethane	1.0 U		25	23.7	95	22.9	92	3	78-122/19
156-59-2	cis-1,2-Dichloroethylene	1.0 U		25	27.4	110	27.3	109	0	78-120/15
10061-01-5	cis-1,3-Dichloropropene	1.0 U		25	25.1	100	24.1	96	4	75-118/23
156-60-5	trans-1,2-Dichloroethylene	1.0 U		25	28.1	112	27.2	109	3	76-127/17
10061-02-6	trans-1,3-Dichloropropene	1.0 U		25	24.5	98	23.6	94	4	80-120/22
100-41-4	Ethylbenzene	1.0 U		25	26.6	106	25.4	102	5	81-121/14
591-78-6	2-Hexanone	10 U		125	130	104	126	101	3	61-129/18
108-10-1	4-Methyl-2-pentanone	5.0 U		125	124	99	126	101	2	66-122/16
74-83-9	Methyl bromide	2.0 U		25	26.2	105	24.2	97	8	59-143/19
74-87-3	Methyl chloride	2.0 U		25	30.7	123	27.1	108	12	50-159/19
75-09-2	Methylene chloride	5.0 U		25	27.9	112	27.5	110	1	69-135/16
78-93-3	Methyl ethyl ketone	5.0 U		125	141	113	136	109	4	56-143/18
100-42-5	Styrene	1.0 U		25	24.9	100	24.1	96	3	78-119/23
71-55-6	1,1,1-Trichloroethane	1.0 U		25	28.8	115	28.4	114	1	75-130/16
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		25	27.2	109	26.7	107	2	72-120/14
79-00-5	1,1,2-Trichloroethane	1.0 U		25	26.7	107	25.7	103	4	76-119/14
127-18-4	Tetrachloroethylene	1.0 U		25	27.9	112	26.4	106	6	76-135/16
108-88-3	Toluene	1.0 U		25	25.6	102	24.3	97	5	80-120/14
79-01-6	Trichloroethylene	1.0 U		25	27.9	112	26.4	106	6	81-126/15
75-01-4	Vinyl chloride	1.0 U		25	25.6	102	25.1	100	2	69-159/18
1330-20-7	Xylene (total)	3.0 U		75	83.1	111	80.3	107	3	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13008-12MS	N0074901.D	1	03/12/14	RB	n/a	n/a	VN3272
FA13008-12MSD	N0074902.D	1	03/12/14	RB	n/a	n/a	VN3272
FA13008-12	N0074892.D	1	03/12/14	RB	n/a	n/a	VN3272

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

FA13018-4, FA13018-5

CAS No.	Surrogate Recoveries	MS	MSD	FA13008-12	Limits
1868-53-7	Dibromofluoromethane	103%	105%	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	103%	101%	79-125%
2037-26-5	Toluene-D8	97%	97%	94%	85-112%
460-00-4	4-Bromofluorobenzene	96%	96%	98%	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: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50772-MB	X033657.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13018-2, FA13018-3, FA13018-4

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: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50772-MB	X033657.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13018-2, FA13018-3, FA13018-4

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	46%	14-67%
4165-62-2	Phenol-d5	31%	10-50%

Method Blank Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50772-MB	X033657.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13018-2, FA13018-3, FA13018-4

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	84%	33-118%
4165-60-0	Nitrobenzene-d5	77%	42-108%
321-60-8	2-Fluorobiphenyl	75%	40-106%
1718-51-0	Terphenyl-d14	100%	39-121%

Blank Spike Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50772-BS	X033656.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13018-2, FA13018-3, FA13018-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	100	13.5	14	10-69
95-57-8	2-Chlorophenol	50	34.9	70	52-98
59-50-7	4-Chloro-3-methyl phenol	50	39.5	79	54-103
120-83-2	2,4-Dichlorophenol	50	36.7	73	53-103
105-67-9	2,4-Dimethylphenol	50	38.4	77	43-90
51-28-5	2,4-Dinitrophenol	100	71.3	71	44-112
534-52-1	4,6-Dinitro-o-cresol	100	79.9	80	66-121
95-48-7	2-Methylphenol	50	31.9	64	43-90
	3&4-Methylphenol	100	59.4	59	36-88
88-75-5	2-Nitrophenol	50	38.8	78	53-102
100-02-7	4-Nitrophenol	100	21.8	22	18-62
87-86-5	Pentachlorophenol	100	75.9	76	61-115
108-95-2	Phenol	50	15.4	31	19-56
95-95-4	2,4,5-Trichlorophenol	50	40.0	80	62-109
88-06-2	2,4,6-Trichlorophenol	50	39.7	79	59-107
83-32-9	Acenaphthene	50	41.4	83	61-107
208-96-8	Acenaphthylene	50	41.1	82	60-104
120-12-7	Anthracene	50	41.6	83	65-108
56-55-3	Benzo(a)anthracene	50	42.2	84	66-111
50-32-8	Benzo(a)pyrene	50	42.0	84	62-107
205-99-2	Benzo(b)fluoranthene	50	40.9	82	65-114
191-24-2	Benzo(g,h,i)perylene	50	47.2	94	66-116
207-08-9	Benzo(k)fluoranthene	50	44.2	88	65-114
101-55-3	4-Bromophenyl phenyl ether	50	35.1	70	65-109
85-68-7	Butyl benzyl phthalate	50	40.8	82	65-112
100-51-6	Benzyl Alcohol	50	33.0	66	46-94
91-58-7	2-Chloronaphthalene	50	37.6	75	57-103
106-47-8	4-Chloroaniline	50	37.8	76	49-105
86-74-8	Carbazole	50	43.0	86	59-113
218-01-9	Chrysene	50	44.0	88	66-111
111-91-1	bis(2-Chloroethoxy)methane	50	38.5	77	51-102
111-44-4	bis(2-Chloroethyl)ether	50	36.5	73	53-100
108-60-1	bis(2-Chloroisopropyl)ether	50	37.5	75	45-106
7005-72-3	4-Chlorophenyl phenyl ether	50	37.8	76	62-105
95-50-1	1,2-Dichlorobenzene	50	29.1	58	48-97
541-73-1	1,3-Dichlorobenzene	50	29.3	59	45-95

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50772-BS	X033656.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13018-2, FA13018-3, FA13018-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
106-46-7	1,4-Dichlorobenzene	50	30.9	62	45-98
121-14-2	2,4-Dinitrotoluene	50	39.2	78	61-110
606-20-2	2,6-Dinitrotoluene	50	39.1	78	63-108
91-94-1	3,3'-Dichlorobenzidine	50	47.1	94	46-117
53-70-3	Dibenzo(a,h)anthracene	50	45.1	90	66-119
132-64-9	Dibenzofuran	50	40.9	82	61-106
84-74-2	Di-n-butyl phthalate	50	36.7	73	65-107
117-84-0	Di-n-octyl phthalate	50	39.5	79	62-118
84-66-2	Diethyl phthalate	50	35.2	70	64-108
131-11-3	Dimethyl phthalate	50	35.6	71	63-106
117-81-7	bis(2-Ethylhexyl)phthalate	50	42.5	85	61-117
206-44-0	Fluoranthene	50	38.7	77	63-106
86-73-7	Fluorene	50	40.1	80	62-108
118-74-1	Hexachlorobenzene	50	41.6	83	63-108
87-68-3	Hexachlorobutadiene	50	32.0	64	42-102
77-47-4	Hexachlorocyclopentadiene	50	27.1	54	39-102
67-72-1	Hexachloroethane	50	29.4	59	42-100
193-39-5	Indeno(1,2,3-cd)pyrene	50	41.8	84	64-119
78-59-1	Isophorone	50	38.4	77	43-87
91-57-6	2-Methylnaphthalene	50	37.8	76	51-102
88-74-4	2-Nitroaniline	50	45.0	90	54-128
99-09-2	3-Nitroaniline	50	43.7	87	56-106
100-01-6	4-Nitroaniline	50	42.6	85	55-120
91-20-3	Naphthalene	50	37.8	76	47-100
98-95-3	Nitrobenzene	50	36.3	73	50-104
621-64-7	N-Nitroso-di-n-propylamine	50	41.4	83	52-104
86-30-6	N-Nitrosodiphenylamine	50	45.0	90	64-108
85-01-8	Phenanthrene	50	42.5	85	66-110
129-00-0	Pyrene	50	42.4	85	64-113
120-82-1	1,2,4-Trichlorobenzene	50	31.1	62	45-97

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	43%	14-67%
4165-62-2	Phenol-d5	28%	10-50%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50772-BS	X033656.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13018-2, FA13018-3, FA13018-4

CAS No.	Surrogate Recoveries	BSP	Limits
118-79-6	2,4,6-Tribromophenol	86%	33-118%
4165-60-0	Nitrobenzene-d5	74%	42-108%
321-60-8	2-Fluorobiphenyl	79%	40-106%
1718-51-0	Terphenyl-d14	98%	39-121%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50772-MS	X033659.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583
OP50772-MSD	X033660.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583
FA13018-2	X033658.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13018-2, FA13018-3, FA13018-4

CAS No.	Compound	FA13018-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		196	76.8	39	78.4	40	2	10-69/39
95-57-8	2-Chlorophenol	ND		98	70.8	72	66.0	67	7	52-98/25
59-50-7	4-Chloro-3-methyl phenol	ND		98	75.5	77	71.4	73	6	54-103/23
120-83-2	2,4-Dichlorophenol	ND		98	68.5	70	63.9	65	7	53-103/26
105-67-9	2,4-Dimethylphenol	ND		98	75.7	77	66.4	68	13	43-90/27
51-28-5	2,4-Dinitrophenol	ND		196	141	72	160	82	13	44-112/25
534-52-1	4,6-Dinitro-o-cresol	ND		196	147	75	160	82	8	66-121/23
95-48-7	2-Methylphenol	ND		98	73.5	75	63.6	65	14	43-90/28
	3&4-Methylphenol	ND		196	146	74	122	62	18	36-88/28
88-75-5	2-Nitrophenol	ND		98	71.9	73	67.9	69	6	53-102/29
100-02-7	4-Nitrophenol	ND		196	76.7	39	75.7	39	1	18-62/33
87-86-5	Pentachlorophenol	ND		196	143	73	157	80	9	61-115/26
108-95-2	Phenol	ND		98	50.4	51	40.4	41	22	19-56/35
95-95-4	2,4,5-Trichlorophenol	ND		98	72.0	73	72.8	74	1	62-109/22
88-06-2	2,4,6-Trichlorophenol	ND		98	71.8	73	74.2	76	3	59-107/23
83-32-9	Acenaphthene	ND		98	80.8	82	76.3	78	6	61-107/22
208-96-8	Acenaphthylene	ND		98	80.5	82	75.8	77	6	60-104/22
120-12-7	Anthracene	ND		98	79.4	81	78.9	80	1	65-108/20
56-55-3	Benzo(a)anthracene	ND		98	80.0	82	80.2	82	0	66-111/22
50-32-8	Benzo(a)pyrene	ND		98	79.3	81	80.0	82	1	62-107/23
205-99-2	Benzo(b)fluoranthene	ND		98	79.8	81	78.0	80	2	65-114/23
191-24-2	Benzo(g,h,i)perylene	ND		98	88.4	90	88.6	90	0	66-116/23
207-08-9	Benzo(k)fluoranthene	ND		98	82.8	84	83.3	85	1	65-114/24
101-55-3	4-Bromophenyl phenyl ether	ND		98	67.8	69	67.6	69	0	65-109/23
85-68-7	Butyl benzyl phthalate	ND		98	77.9	79	77.5	79	1	65-112/24
100-51-6	Benzyl Alcohol	ND		98	79.9	81	66.3	68	19	46-94/27
91-58-7	2-Chloronaphthalene	ND		98	74.2	76	67.4	69	10	57-103/23
106-47-8	4-Chloroaniline	ND		98	77.2	79	67.5	69	13	49-105/27
86-74-8	Carbazole	ND		98	82.2	84	82.6	84	0	59-113/21
218-01-9	Chrysene	ND		98	82.9	85	83.7	85	1	66-111/22
111-91-1	bis(2-Chloroethoxy)methane	ND		98	76.7	78	67.4	69	13	51-102/28
111-44-4	bis(2-Chloroethyl)ether	ND		98	75.1	77	65.3	67	14	53-100/27
108-60-1	bis(2-Chloroisopropyl)ether	ND		98	75.9	77	65.8	67	14	45-106/26
7005-72-3	4-Chlorophenyl phenyl ether	ND		98	74.0	75	71.2	73	4	62-105/20
95-50-1	1,2-Dichlorobenzene	ND		98	66.7	68	58.2	59	14	48-97/24
541-73-1	1,3-Dichlorobenzene	ND		98	67.5	69	59.1	60	13	45-95/25

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50772-MS	X033659.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583
OP50772-MSD	X033660.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583
FA13018-2	X033658.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13018-2, FA13018-3, FA13018-4

CAS No.	Compound	FA13018-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
106-46-7	1,4-Dichlorobenzene	ND		98	71.0	72	62.5	64	13	45-98/25
121-14-2	2,4-Dinitrotoluene	ND		98	77.0	79	76.8	78	0	61-110/21
606-20-2	2,6-Dinitrotoluene	ND		98	76.0	78	76.3	78	0	63-108/21
91-94-1	3,3'-Dichlorobenzidine	ND		98	87.7	89	85.9	88	2	46-117/29
53-70-3	Dibenzo(a,h)anthracene	ND		98	85.2	87	86.8	89	2	66-119/24
132-64-9	Dibenzofuran	ND		98	80.3	82	77.4	79	4	61-106/21
84-74-2	Di-n-butyl phthalate	ND		98	70.7	72	70.4	72	0	65-107/21
117-84-0	Di-n-octyl phthalate	ND		98	76.6	78	75.0	77	2	62-118/24
84-66-2	Diethyl phthalate	ND		98	67.5	69	69.1	70	2	64-108/21
131-11-3	Dimethyl phthalate	ND		98	67.9	69	69.0	70	2	63-106/22
117-81-7	bis(2-Ethylhexyl)phthalate	ND		98	80.6	82	81.5	83	1	61-117/23
206-44-0	Fluoranthene	ND		98	75.1	77	74.9	76	0	63-106/21
86-73-7	Fluorene	ND		98	79.5	81	78.6	80	1	62-108/20
118-74-1	Hexachlorobenzene	ND		98	78.2	80	79.1	81	1	63-108/22
87-68-3	Hexachlorobutadiene	ND		98	71.5	73	63.8	65	11	42-102/28
77-47-4	Hexachlorocyclopentadiene	ND		98	56.8	58	49.1	50	15	39-102/29
67-72-1	Hexachloroethane	ND		98	69.9	71	60.9	62	14	42-100/29
193-39-5	Indeno(1,2,3-cd)pyrene	ND		98	78.9	80	79.2	81	0	64-119/24
78-59-1	Isophorone	ND		98	75.2	77	65.6	67	14	43-87/25
91-57-6	2-Methylnaphthalene	ND		98	77.3	79	67.1	68	14	51-102/26
88-74-4	2-Nitroaniline	ND		98	85.6	87	84.6	86	1	54-128/24
99-09-2	3-Nitroaniline	ND		98	86.3	88	85.5	87	1	56-106/27
100-01-6	4-Nitroaniline	ND		98	84.5	86	86.8	89	3	55-120/24
91-20-3	Naphthalene	ND		98	79.0	81	69.5	71	13	47-100/29
98-95-3	Nitrobenzene	ND		98	72.3	74	64.3	66	12	50-104/28
621-64-7	N-Nitroso-di-n-propylamine	ND		98	82.8	84	70.8	72	16	52-104/25
86-30-6	N-Nitrosodiphenylamine	ND		98	85.4	87	84.6	86	1	64-108/23
85-01-8	Phenanthrene	ND		98	81.5	83	81.5	83	0	66-110/21
129-00-0	Pyrene	ND		98	80.3	82	80.5	82	0	64-113/23
120-82-1	1,2,4-Trichlorobenzene	ND		98	67.4	69	60.3	62	11	45-97/28

CAS No.	Surrogate Recoveries	MS	MSD	FA13018-2	Limits
367-12-4	2-Fluorophenol	58%	51%	46%	14-67%
4165-62-2	Phenol-d5	48%	38%	30%	10-50%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50772-MS	X033659.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583
OP50772-MSD	X033660.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583
FA13018-2	X033658.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13018-2, FA13018-3, FA13018-4

CAS No.	Surrogate Recoveries	MS	MSD	FA13018-2	Limits
118-79-6	2,4,6-Tribromophenol	76%	81%	99%	33-118%
4165-60-0	Nitrobenzene-d5	73%	66%	88%	42-108%
321-60-8	2-Fluorobiphenyl	77%	70%	88%	40-106%
1718-51-0	Terphenyl-d14	92%	93%	108%	39-121%

* = Outside of Control Limits.

Southeast ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF909-MB	FF22564.D	1	03/10/14	CP	n/a	n/a	GFF909

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

FA13018-2, FA13018-4

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	

Method Blank Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF910-MB	FF22591.D	1	03/12/14	CP	n/a	n/a	GFF910

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

FA13018-5

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: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF909-BS	FF22565.D	1	03/10/14	CP	n/a	n/a	GFF909

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

FA13018-2, FA13018-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	108	98.9	92	61-144
74-84-0	Ethane	219	189	86	64-143
74-85-1	Ethene	290	254	88	64-141

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF910-BS	FF22592.D	1	03/12/14	CP	n/a	n/a	GFF910

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

FA13018-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	108	116	107	61-144
74-84-0	Ethane	219	228	104	64-143
74-85-1	Ethene	290	307	106	64-141

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13018-2MS	FF22586.D	1	03/10/14	CP	n/a	n/a	GFF909
FA13018-2	FF22582.D	1	03/10/14	CP	n/a	n/a	GFF909

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

FA13018-2, FA13018-4

CAS No.	Compound	FA13018-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	7.6		108	128	111	61-144
74-84-0	Ethane	ND		219	250	114	64-143
74-85-1	Ethene	ND		290	337	116	64-141

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13112-3MS	FF22602.D	1	03/12/14	CP	n/a	n/a	GFF910
FA13112-3	FF22599.D	1	03/12/14	CP	n/a	n/a	GFF910

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

FA13018-5

CAS No.	Compound	FA13112-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	7.6		108	128	111	61-144
74-84-0	Ethane	ND		219	252	115	64-143
74-85-1	Ethene	ND		290	339	117	64-141

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13018-2DUP	FF22587.D	1	03/10/14	CP	n/a	n/a	GFF909
FA13018-2	FF22582.D	1	03/10/14	CP	n/a	n/a	GFF909

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

FA13018-2, FA13018-4

CAS No.	Compound	FA13018-2 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	7.6		7.6		0	33
74-84-0	Ethane	ND		ND		nc	20
74-85-1	Ethene	ND		ND		nc	19

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA13018
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13018-5DUP	FF22603.D	1	03/12/14	CP	n/a	n/a	GFF910
FA13018-5	FF22593.D	1	03/12/14	CP	n/a	n/a	GFF910

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

FA13018-5

CAS No.	Compound	FA13018-5 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	7.6		7.6		0	33
74-84-0	Ethane	ND		ND		nc	20
74-85-1	Ethene	ND		ND		nc	19

* = 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: FA13018
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26926
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/11/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	15	15		
Antimony	6.0	2	2.3	0.60	<6.0
Arsenic	10	2	2.4	0.30	<10
Barium	200	1	1		
Beryllium	4.0	.5	.5	0.0	<4.0
Cadmium	5.0	.5	.5	0.0	<5.0
Calcium	1000	50	50		
Chromium	10	1	2	0.20	<10
Cobalt	50	.5	.5		
Copper	25	1	1	-0.30	<25
Iron	300	17	17		
Lead	5.0	1.1	1.1	-0.60	<5.0
Magnesium	5000	50	56		
Manganese	15	.5	1		
Molybdenum	50	.5	.5		
Nickel	40	.5	.5	-0.20	<40
Potassium	10000	200	200		
Selenium	10	2.3	2.3	0.0	<10
Silver	10	.65	.77	0.0	<10
Sodium	10000	500	500		
Strontium	10	.4	.4		
Thallium	10	1.5	2	-1.2	<10
Tin	50	.7	1		
Titanium	10	.9	1		
Vanadium	50	.5	.5		
Zinc	20	3	3	1.4	<20

Associated samples MP26926: FA13018-2, FA13018-3, FA13018-4

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: FA13018
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26926
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:			03/11/14					03/11/14	
Metal	FA13018-2 Original	DUP	RPD	QC Limits	FA13018-2 Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum									
Antimony	0.0	0.0	NC	0-20	0.0	498	500	99.6	80-120
Arsenic	0.0	0.0	NC	0-20	0.0	1960	2000	98.0	80-120
Barium									
Beryllium	0.0	0.0	NC	0-20	0.0	50.8	50	101.6	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	49.6	50	99.2	80-120
Calcium									
Chromium	0.0	0.0	NC	0-20	0.0	204	200	102.0	80-120
Cobalt									
Copper	0.0	0.0	NC	0-20	0.0	256	250	102.4	80-120
Iron	anr								
Lead	0.0	0.0	NC	0-20	0.0	485	500	97.0	80-120
Magnesium									
Manganese	anr								
Molybdenum									
Nickel	0.0	0.0	NC	0-20	0.0	513	500	102.6	80-120
Potassium									
Selenium	0.0	0.0	NC	0-20	0.0	1980	2000	99.0	80-120
Silver	0.0	0.0	NC	0-20	0.0	49.7	50	99.4	80-120
Sodium									
Strontium									
Thallium	0.0	0.0	NC	0-20	0.0	1890	2000	94.5	80-120
Tin									
Titanium									
Vanadium									
Zinc	5.8	5.1	12.8	0-20	5.8	503	500	99.4	80-120

Associated samples MP26926: FA13018-2, FA13018-3, FA13018-4

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: FA13018
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26926
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/11/14

Metal	FA13018-2 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.0	508	500	101.6	2.0	20
Arsenic	0.0	1980	2000	99.0	1.0	20
Barium						
Beryllium	0.0	50.9	50	101.8	0.2	20
Cadmium	0.0	50.3	50	100.6	1.4	20
Calcium						
Chromium	0.0	206	200	103.0	1.0	20
Cobalt						
Copper	0.0	257	250	102.8	0.4	20
Iron	anr					
Lead	0.0	490	500	98.0	1.0	20
Magnesium						
Manganese	anr					
Molybdenum						
Nickel	0.0	516	500	103.2	0.6	20
Potassium						
Selenium	0.0	2020	2000	101.0	2.0	20
Silver	0.0	50.0	50	100.0	0.6	20
Sodium						
Strontium						
Thallium	0.0	1890	2000	94.5	0.0	20
Tin						
Titanium						
Vanadium						
Zinc	5.8	508	500	100.4	1.0	20

Associated samples MP26926: FA13018-2, FA13018-3, FA13018-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA13018
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26926
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/11/14

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum				
Antimony	513	500	102.6	80-120
Arsenic	2010	2000	100.5	80-120
Barium				
Beryllium	51.8	50	103.6	80-120
Cadmium	50.6	50	101.2	80-120
Calcium				
Chromium	207	200	103.5	80-120
Cobalt				
Copper	262	250	104.8	80-120
Iron	anr			
Lead	493	500	98.6	80-120
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	522	500	104.4	80-120
Potassium				
Selenium	2010	2000	100.5	80-120
Silver	51.1	50	102.2	80-120
Sodium				
Strontium				
Thallium	1940	2000	97.0	80-120
Tin				
Titanium				
Vanadium				
Zinc	510	500	102.0	80-120

Associated samples MP26926: FA13018-2, FA13018-3, FA13018-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA13018
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26926
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/11/14

Metal	FA13018-2 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	0.00	0.00	NC	0-10
Arsenic	0.00	0.00	NC	0-10
Barium				
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	0.00	0.00	NC	0-10
Cobalt				
Copper	0.00	0.00	NC	0-10
Iron	anr			
Lead	0.00	0.00	NC	0-10
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	0.00	0.00	NC	0-10
Potassium				
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium				
Zinc	5.80	0.00	100.0(a)	0-10

Associated samples MP26926: FA13018-2, FA13018-3, FA13018-4

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: FA13018
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26926
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/11/14

Metal	Sample ml	Final ml	FA13018-2 Raw	FA13018-2 Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10			102.1	0.2	5	100	102.1	80-120
Arsenic	9.8	10			100.8	0.2	5	100	100.8	80-120
Barium										
Beryllium	9.8	10			51.3	0.2	2.5	50	102.6	80-120
Cadmium	9.8	10			51.4	0.2	2.5	50	102.8	80-120
Calcium										
Chromium	9.8	10			51.6	0.2	2.5	50	103.2	80-120
Cobalt										
Copper	9.8	10			104.4	0.2	5	100	104.4	80-120
Iron										
Lead	9.8	10			47.8	0.2	2.5	50	95.6	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel	9.8	10			106.1	0.2	5	100	106.1	80-120
Potassium										
Selenium	9.8	10			96.7	0.2	5	100	96.7	80-120
Silver	9.8	10			51.9	0.2	2.5	50	103.8	80-120
Sodium										
Strontium										
Thallium	9.8	10			94.4	0.2	5	100	94.4	80-120
Tin										
Titanium										
Vanadium										
Zinc	9.8	10	5.8	5.684	260.5	0.2	12.5	250	101.9	80-120

Associated samples MP26926: FA13018-2, FA13018-3, FA13018-4

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA13018
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26941 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/13/14

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	-0.0094	<0.50

Associated samples MP26941: FA13018-2, FA13018-3, FA13018-4

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: FA13018
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26941
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/13/14 03/13/14

Metal	FA13018-2 Original	DUP	RPD	QC Limits	FA13018-2 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	3.0	3	100.0	80-120

Associated samples MP26941: FA13018-2, FA13018-3, FA13018-4

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: FA13018
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26941 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/13/14

Metal	FA13018-2 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.0	3	100.0	0.0	20

Associated samples MP26941: FA13018-2, FA13018-3, FA13018-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA13018
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26941
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/13/14

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	80-120

Associated samples MP26941: FA13018-2, FA13018-3, FA13018-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA13018
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26941
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/13/14

Metal	FA13018-2 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP26941: FA13018-2, FA13018-3, FA13018-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

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: FA13018
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	GP23574/GN60465	2.0	0.0	mg/l	50	47.2	94.4	90-110%
Nitrogen, Nitrate	GP23574/GN60465	0.10	0.0	mg/l	2.5	2.62	104.8	90-110%
Nitrogen, Nitrite	GP23574/GN60465	0.10	0.0	mg/l	2.5	2.38	95.2	90-110%
Sulfate	GP23574/GN60465	2.0	0.0	mg/l	50	49.1	98.2	90-110%
Total Organic Carbon	GP23601/GN60536	1.0	0.0	mg/l	15	15.0	100.0	90-110%

Associated Samples:
Batch GP23574: FA13018-2, FA13018-4, FA13018-5
Batch GP23601: FA13018-2, FA13018-4, FA13018-5
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA13018
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	GP23601/GN60536	FA13018-2	mg/l	0.42	0.47	11.2	0-20%

Associated Samples:
Batch GP23601: FA13018-2, FA13018-4, FA13018-5
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA13018
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	GP23574/GN60465	FA13018-2	mg/l	2.3	50	49.5	94.4	90-110%
Nitrogen, Nitrate	GP23574/GN60465	FA13018-2	mg/l	0.56	2.5	3.2	105.6	90-110%
Nitrogen, Nitrite	GP23574/GN60465	FA13018-2	mg/l	0.050 U	2.5	2.4	96.0	90-110%
Sulfate	GP23574/GN60465	FA13018-2	mg/l	1.5	50	49.6	96.2	90-110%
Total Organic Carbon	GP23601/GN60536	FA13018-2	mg/l	0.42	15	16.4	106.5	90-110%

Associated Samples:
Batch GP23574: FA13018-2, FA13018-4, FA13018-5
Batch GP23601: FA13018-2, FA13018-4, FA13018-5
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA13018
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	GP23574/GN60465	FA13018-2	mg/l	2.3	50	49.4	0.2	20%
Nitrogen, Nitrate	GP23574/GN60465	FA13018-2	mg/l	0.56	2.5	3.1	3.2	20%
Nitrogen, Nitrite	GP23574/GN60465	FA13018-2	mg/l	0.050 U	2.5	2.4	0.0	20%
Sulfate	GP23574/GN60465	FA13018-2	mg/l	1.5	50	50.3	1.4	20%

Associated Samples:
Batch GP23574: FA13018-2, FA13018-4, FA13018-5
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Southeast
ACCUTEST LABORATORIES

03/18/14

Technical Report for

United Technologies Corporation

AECOMSCG: Delavan Spray Technologies; Bamberg, SC

60314964

Accutest Job Number: FA13051

Sampling Date: 03/06/14

Report to:

AECOM Environment
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Greenville, SC 29615
doria.cullom@aecom.com

ATTN: Doria Cullom

Total number of pages in report: **90**

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

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: 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 (04226CA), TX (T104704404), PA (68-03573), VA (460177), AK, AR, GA, KY, MA, NV, OK, UT, WA

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Sample Summary

United Technologies Corporation

Job No: FA13051

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA13051-1	03/06/14	09:20	LARM	03/07/14	AQ	Ground Water	MW-16-C
FA13051-2	03/06/14	09:20	LARM	03/07/14	AQ	Ground Water	MW-16
FA13051-3	03/06/14	10:20	LARM	03/07/14	AQ	Ground Water	MW-16D
FA13051-4	03/06/14	09:50	LARM	03/07/14	AQ	Ground Water	MW-9
FA13051-5	03/06/14	11:38	LARM	03/07/14	AQ	Ground Water	MW-9D
FA13051-6	03/06/14	15:20	LARM	03/07/14	AQ	Ground Water	MW-19
FA13051-7	03/06/14	15:10	LARM	03/07/14	AQ	Ground Water	MW-20

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: United Technologies Corporation **Job No:** FA13051

Site: AECOMSCG: Delavan Spray Technologies; Bamberg, SC **Report Date** 3/18/2014 12:49:19 PM

7 Samples were collected on 03/06/2014 and were received at Accutest SE on 03/07/2014 properly preserved, at 3.2 Deg. C and intact. These Samples received an Accutest job number of FA13051. 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:** VO882

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA13040-13MS, FA13040-13MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Acetone are outside control limits. Blank Spike recovery is biased high. Analyte is non-detect in associated samples; therefore data integrity is not compromised.

Matrix Spike Recovery(s) for Bromodichloromethane, Bromoform, Dibromochloromethane are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Bromodichloromethane, Bromoform, Carbon disulfide, Dibromochloromethane are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for Bromoform, Carbon disulfide, cis-1,3-Dichloropropene, Dibromochloromethane are outside control limits for sample FA13040-13MSD. Probable cause is due to sample non-homogeneity.

FA13051-1: Sample was not preserved to a pH < 2.

FA13051-2: Sample was not preserved to a pH < 2.

FA13051-3: Sample was not preserved to a pH < 2.

FA13051-5: Sample was not preserved to a pH < 2.

FA13051-6: Sample was not preserved to a pH < 2.

FA13051-1 for Acetone: Associated BS recovery outside control limits.

FA13051-2 for Acetone: Associated BS recovery outside control limits.

FA13051-3 for Acetone: Associated BS recovery outside control limits.

FA13051-5 for Acetone: Associated BS recovery outside control limits.

FA13051-6 for Acetone: Associated BS recovery outside control limits.

FA13051-6 for Methylene chloride: Suspected laboratory contaminant.

Matrix: AQ **Batch ID:** VO883

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA13139-4MS, FA13139-4MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Acetone are outside control limits. Blank Spike recovery is biased high. Analyte is non-detect in associated samples; therefore data integrity is not compromised.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for cis-1,3-Dichloropropene, trans-1,3-Dichloropropene are outside control limits. Probable cause is due to matrix interference.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for cis-1,2-Dichloroethylene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

FA13051-4: Sample was not preserved to a pH < 2.

FA13051-7: Sample was not preserved to a pH < 2.

FA13051-4 for Acetone: Associated BS recovery outside control limits.

FA13051-7 for Acetone: Associated BS recovery outside control limits.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ **Batch ID:** OP50772

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) FA13018-2MS, FA13018-2MSD were used as the QC samples indicated.

Volatiles by GC By Method RSKSOP-147/175

Matrix: AQ **Batch ID:** GFF910

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA13018-5DUP, FA13112-3MS were used as the QC samples indicated.

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** MP26933

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) FA13103-1DUP, FA13103-1MS, FA13103-1MSD, FA13103-1PS, FA13103-1SDL were used as the QC samples for metals.

RPD(s) for Duplicate for Copper are outside control limits for sample MP26933-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Chromium, Copper, Zinc are outside control limits for sample MP26933-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 7470A

Matrix: AQ **Batch ID:** MP26941

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) FA13018-2DUP, FA13018-2MS, FA13018-2MSD, FA13018-2SDL were used as the QC samples for metals.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP23588

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) FA13051-2MS, FA13051-2MSD, FA13051-4MS, FA13051-4MSD were used as the QC samples for Chloride, Nitrogen, Nitrate, Nitrogen, Nitrite, Sulfate.

Wet Chemistry By Method SM5310 B-11/SW9060A

Matrix: AQ **Batch ID:** GP23583

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) FA12970-14FDUP, FA12970-14FMS 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: March 18, 2014

Lovelie Metzgar, QA Officer (signature on file)

Summary of Hits

Job Number: FA13051
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 03/06/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA13051-1	**MW-16-C**					
No hits reported in this sample.						
FA13051-2	**MW-16**					
Methane		7.9	0.50	0.16	ug/l	RSKSOP-147/175
Chloride		4.9	2.0	0.80	mg/l	EPA 300/SW846 9056A
Sulfate		2.9	2.0	0.60	mg/l	EPA 300/SW846 9056A
Total Organic Carbon		2.3	1.0	0.23	mg/l	SM5310 B-11/SW9060A
FA13051-3	**MW-16D**					
Chloride		14.0	2.0	0.80	mg/l	EPA 300/SW846 9056A
Nitrogen, Nitrate		2.2	0.10	0.050	mg/l	EPA 300/SW846 9056A
Sulfate		1.7 J	2.0	0.60	mg/l	EPA 300/SW846 9056A
Total Organic Carbon		0.30 JB	1.0	0.23	mg/l	SM5310 B-11/SW9060A
FA13051-4	**MW-9**					
cis-1,2-Dichloroethylene [a]		31.5	5.0	1.6	ug/l	SW846 8260B
Tetrachloroethylene [a]		498	5.0	1.3	ug/l	SW846 8260B
Trichloroethylene [a]		55.3	5.0	1.5	ug/l	SW846 8260B
Methane		8.6	0.50	0.16	ug/l	RSKSOP-147/175
Copper		1.0 J	25	1.0	ug/l	SW846 6010C
Zinc		6.4 J	20	3.0	ug/l	SW846 6010C
Chloride		2.6	2.0	0.80	mg/l	EPA 300/SW846 9056A
Nitrogen, Nitrate		0.050 J	0.10	0.050	mg/l	EPA 300/SW846 9056A
Sulfate		4.8	2.0	0.60	mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.2	1.0	0.23	mg/l	SM5310 B-11/SW9060A
FA13051-5	**MW-9D**					
No hits reported in this sample.						
FA13051-6	**MW-19**					
Methylene chloride [b]		639 J	1000	400	ug/l	SW846 8260B
Tetrachloroethylene [a]		14000	200	51	ug/l	SW846 8260B
1,2-Dichlorobenzene		2.1 J	5.0	0.50	ug/l	SW846 8270D
Chromium		6.6 J	10	2.0	ug/l	SW846 6010C
Copper		1.6 J	25	1.0	ug/l	SW846 6010C
Mercury		0.049 J	0.50	0.030	ug/l	SW846 7470A
Nickel		4.8 J	40	0.50	ug/l	SW846 6010C
Zinc		9.3 J	20	3.0	ug/l	SW846 6010C

Summary of Hits

Job Number: FA13051
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 03/06/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA13051-7	**MW-20**					
cis-1,2-Dichloroethylene [a]		4.0 J	10	3.3	ug/l	SW846 8260B
Tetrachloroethylene [a]		648	10	2.6	ug/l	SW846 8260B
Trichloroethylene [a]		5.0 J	10	3.0	ug/l	SW846 8260B
Copper		1.1 J	25	1.0	ug/l	SW846 6010C
Nickel		0.60 J	40	0.50	ug/l	SW846 6010C
Zinc		5.7 J	20	3.0	ug/l	SW846 6010C

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Suspected laboratory contaminant.

Southeast ACCUTEST LABORATORIES

4

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MW-16-C
Lab Sample ID: FA13051-1
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/06/14
Date Received: 03/07/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O22556.D	1	03/12/14	MM	n/a	n/a	VO882
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	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-C		
Lab Sample ID:	FA13051-1	**Date Sampled:**	03/06/14
Matrix:	AQ - Ground Water	**Date Received:**	03/07/14
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	97%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	102%		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		
Lab Sample ID:	FA13051-2	**Date Sampled:**	03/06/14
Matrix:	AQ - Ground Water	**Date Received:**	03/07/14
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]	O22558.D	1	03/12/14	MM	n/a	n/a	VO882
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	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:	FA13051-2	**Date Sampled:**	03/06/14
Matrix:	AQ - Ground Water	**Date Received:**	03/07/14
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	99%		83-118%
17060-07-0	1,2-Dichloroethane-D4	98%		79-125%
2037-26-5	Toluene-D8	101%		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

Report of Analysis

Client Sample ID:	MW-16		
Lab Sample ID:	FA13051-2	**Date Sampled:**	03/06/14
Matrix:	AQ - Ground Water	**Date Received:**	03/07/14
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	FF22594.D	1	03/12/14	CP	n/a	n/a	GFF910
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	7.9	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
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: FA13051-2
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/06/14
Date Received: 03/07/14
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride	4.9	2.0	0.80	mg/l	1	03/07/14 20:59	VK	EPA 300/SW846 9056A
Nitrogen, Nitrate	0.050 U	0.10	0.050	mg/l	1	03/07/14 20:59	VK	EPA 300/SW846 9056A
Nitrogen, Nitrite	0.050 U	0.10	0.050	mg/l	1	03/07/14 20:59	VK	EPA 300/SW846 9056A
Sulfate	2.9	2.0	0.60	mg/l	1	03/07/14 20:59	VK	EPA 300/SW846 9056A
Total Organic Carbon	2.3	1.0	0.23	mg/l	1	03/09/14 16:00	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-16D		
Lab Sample ID:	FA13051-3	**Date Sampled:**	03/06/14
Matrix:	AQ - Ground Water	**Date Received:**	03/07/14
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]	O22559.D	1	03/12/14	MM	n/a	n/a	VO882
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	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-16D		
Lab Sample ID:	FA13051-3	**Date Sampled:**	03/06/14
Matrix:	AQ - Ground Water	**Date Received:**	03/07/14
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	98%		79-125%
2037-26-5	Toluene-D8	101%		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

Report of Analysis

Client Sample ID: MW-16D
Lab Sample ID: FA13051-3
Matrix: AQ - Ground Water
Method: RSKSOP-147/175
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/06/14
Date Received: 03/07/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF22595.D	1	03/12/14	CP	n/a	n/a	GFF910
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
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: FA13051-3
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/06/14
Date Received: 03/07/14
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride	14.0	2.0	0.80	mg/l	1	03/07/14 21:16	VK	EPA 300/SW846 9056A
Nitrogen, Nitrate	2.2	0.10	0.050	mg/l	1	03/07/14 21:16	VK	EPA 300/SW846 9056A
Nitrogen, Nitrite	0.050 U	0.10	0.050	mg/l	1	03/07/14 21:16	VK	EPA 300/SW846 9056A
Sulfate	1.7 J	2.0	0.60	mg/l	1	03/07/14 21:16	VK	EPA 300/SW846 9056A
Total Organic Carbon	0.30 JB	1.0	0.23	mg/l	1	03/09/14 16:16	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-9		
Lab Sample ID:	FA13051-4	**Date Sampled:**	03/06/14
Matrix:	AQ - Ground Water	**Date Received:**	03/07/14
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]	O22596.D	5	03/13/14	MM	n/a	n/a	VO883
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	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	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	31.5	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	498	5.0	1.3	ug/l	
108-88-3	Toluene	ND	5.0	1.0	ug/l	
79-01-6	Trichloroethylene	55.3	5.0	1.5	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-9		
Lab Sample ID:	FA13051-4	**Date Sampled:**	03/06/14
Matrix:	AQ - Ground Water	**Date Received:**	03/07/14
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	102%		83-118%
17060-07-0	1,2-Dichloroethane-D4	98%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	102%		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:	FA13051-4	**Date Sampled:**	03/06/14
Matrix:	AQ - Ground Water	**Date Received:**	03/07/14
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	X033668.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN TCL List

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	

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: FA13051-4 **Date Sampled:** 03/06/14
Matrix: AQ - Ground Water **Date Received:** 03/07/14
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	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	
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	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	34%		14-67%
4165-62-2	Phenol-d5	23%		10-50%
118-79-6	2,4,6-Tribromophenol	77%		33-118%

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-9		
Lab Sample ID:	FA13051-4	**Date Sampled:**	03/06/14
Matrix:	AQ - Ground Water	**Date Received:**	03/07/14
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	79%		40-106%
1718-51-0	Terphenyl-d14	100%		39-121%

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: FA13051-4
Matrix: AQ - Ground Water
Method: RSKSOP-147/175
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/06/14
Date Received: 03/07/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF22596.D	1	03/12/14	CP	n/a	n/a	GFF910
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	8.6	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
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: FA13051-4
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/06/14
Date Received: 03/07/14
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	2.3 U	6.0	2.3	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Arsenic	2.4 U	10	2.4	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Beryllium	0.50 U	4.0	0.50	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Cadmium	0.50 U	5.0	0.50	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Chromium	2.0 U	10	2.0	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Copper	1.0 J	25	1.0	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Lead	1.1 U	5.0	1.1	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Mercury	0.030 U	0.50	0.030	ug/l	1	03/13/14	03/13/14	JL	SW846 7470A [2]	SW846 7470A [4]
Nickel	0.50 U	40	0.50	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Selenium	2.3 U	10	2.3	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Silver	0.77 U	5.0	0.77	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Thallium	2.0 U	10	2.0	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Zinc	6.4 J	20	3.0	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA11450
(2) Instrument QC Batch: MA11451
(3) Prep QC Batch: MP26933
(4) Prep QC Batch: MP26941

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-9
Lab Sample ID: FA13051-4
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/06/14
Date Received: 03/07/14
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride	2.6	2.0	0.80	mg/l	1	03/07/14 21:33	VK	EPA 300/SW846 9056A
Nitrogen, Nitrate	0.050 J	0.10	0.050	mg/l	1	03/07/14 21:33	VK	EPA 300/SW846 9056A
Nitrogen, Nitrite	0.050 U	0.10	0.050	mg/l	1	03/07/14 21:33	VK	EPA 300/SW846 9056A
Sulfate	4.8	2.0	0.60	mg/l	1	03/07/14 21:33	VK	EPA 300/SW846 9056A
Total Organic Carbon	1.2	1.0	0.23	mg/l	1	03/09/14 16:30	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-9D		
Lab Sample ID:	FA13051-5	**Date Sampled:**	03/06/14
Matrix:	AQ - Ground Water	**Date Received:**	03/07/14
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]	O22564.D	1	03/12/14	MM	n/a	n/a	VO882
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	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-9D		
Lab Sample ID:	FA13051-5	**Date Sampled:**	03/06/14
Matrix:	AQ - Ground Water	**Date Received:**	03/07/14
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	99%		79-125%
2037-26-5	Toluene-D8	100%		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

Report of Analysis

Client Sample ID: MW-19
Lab Sample ID: FA13051-6
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/06/14
Date Received: 03/07/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O22565.D	200	03/12/14	MM	n/a	n/a	VO882
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	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	ND	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 [c]	639	1000	400	ug/l	J
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	14000	200	51	ug/l	
108-88-3	Toluene	ND	200	40	ug/l	
79-01-6	Trichloroethylene	ND	200	60	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-19		
Lab Sample ID:	FA13051-6	**Date Sampled:**	03/06/14
Matrix:	AQ - Ground Water	**Date Received:**	03/07/14
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	101%		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	102%		83-118%

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

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: FA13051-6 **Date Sampled:** 03/06/14
Matrix: AQ - Ground Water **Date Received:** 03/07/14
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	X033669.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN TCL List

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	

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: FA13051-6 **Date Sampled:** 03/06/14
Matrix: AQ - Ground Water **Date Received:** 03/07/14
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	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	2.1	5.0	0.50	ug/l	J
541-73-1	1,3-Dichlorobenzene	ND	5.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	0.50	ug/l	
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	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	35%		14-67%
4165-62-2	Phenol-d5	24%		10-50%
118-79-6	2,4,6-Tribromophenol	74%		33-118%

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-19		
Lab Sample ID:	FA13051-6	**Date Sampled:**	03/06/14
Matrix:	AQ - Ground Water	**Date Received:**	03/07/14
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	73%		42-108%
321-60-8	2-Fluorobiphenyl	76%		40-106%
1718-51-0	Terphenyl-d14	92%		39-121%

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: FA13051-6
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/06/14
Date Received: 03/07/14
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	2.3 U	6.0	2.3	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Arsenic	2.4 U	10	2.4	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Beryllium	0.50 U	4.0	0.50	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Cadmium	0.50 U	5.0	0.50	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Chromium	6.6 J	10	2.0	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Copper	1.6 J	25	1.0	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Lead	1.1 U	5.0	1.1	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Mercury	0.049 J	0.50	0.030	ug/l	1	03/13/14	03/13/14	JL	SW846 7470A [2]	SW846 7470A [4]
Nickel	4.8 J	40	0.50	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Selenium	2.3 U	10	2.3	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Silver	0.77 U	5.0	0.77	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Thallium	2.0 U	10	2.0	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Zinc	9.3 J	20	3.0	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA11450
(2) Instrument QC Batch: MA11451
(3) Prep QC Batch: MP26933
(4) Prep QC Batch: MP26941

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:	FA13051-7	**Date Sampled:**	03/06/14
Matrix:	AQ - Ground Water	**Date Received:**	03/07/14
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]	O22597.D	10	03/13/14	MM	n/a	n/a	VO883
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	250	110	ug/l	
71-43-2	Benzene	ND	10	2.4	ug/l	
75-27-4	Bromodichloromethane	ND	10	2.6	ug/l	
75-25-2	Bromoform	ND	10	3.8	ug/l	
108-90-7	Chlorobenzene	ND	10	2.4	ug/l	
75-00-3	Chloroethane	ND	20	5.0	ug/l	
67-66-3	Chloroform	ND	10	3.1	ug/l	
75-15-0	Carbon disulfide	ND	20	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	10	4.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	10	2.6	ug/l	
75-35-4	1,1-Dichloroethylene	ND	10	2.5	ug/l	
107-06-2	1,2-Dichloroethane	ND	10	2.4	ug/l	
78-87-5	1,2-Dichloropropane	ND	10	3.6	ug/l	
124-48-1	Dibromochloromethane	ND	10	3.6	ug/l	
156-59-2	cis-1,2-Dichloroethylene	4.0	10	3.3	ug/l	J
10061-01-5	cis-1,3-Dichloropropene	ND	10	2.1	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	10	3.4	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	10	2.1	ug/l	
100-41-4	Ethylbenzene	ND	10	2.8	ug/l	
591-78-6	2-Hexanone	ND	100	20	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	50	10	ug/l	
74-83-9	Methyl bromide	ND	20	5.4	ug/l	
74-87-3	Methyl chloride	ND	20	5.3	ug/l	
75-09-2	Methylene chloride	ND	50	20	ug/l	
78-93-3	Methyl ethyl ketone	ND	50	15	ug/l	
100-42-5	Styrene	ND	10	2.3	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	10	3.4	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	10	2.7	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	10	3.2	ug/l	
127-18-4	Tetrachloroethylene	648	10	2.6	ug/l	
108-88-3	Toluene	ND	10	2.0	ug/l	
79-01-6	Trichloroethylene	5.0	10	3.0	ug/l	J

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-20		
Lab Sample ID:	FA13051-7	**Date Sampled:**	03/06/14
Matrix:	AQ - Ground Water	**Date Received:**	03/07/14
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	10	3.3	ug/l	
1330-20-7	Xylene (total)	ND	30	6.6	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	99%		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

Report of Analysis

Client Sample ID: MW-20
Lab Sample ID: FA13051-7 **Date Sampled:** 03/06/14
Matrix: AQ - Ground Water **Date Received:** 03/07/14
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	X033670.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583
Run #2							

	Initial Volume	Final Volume
Run #1	1020 ml	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	49	9.8	ug/l	
95-57-8	2-Chlorophenol	ND	4.9	0.51	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	0.57	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.9	0.49	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	5.3	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.8	2.0	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	0.59	ug/l	
100-02-7	4-Nitrophenol	ND	25	4.9	ug/l	
87-86-5	Pentachlorophenol	ND	25	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	0.61	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.9	0.63	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.9	0.64	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.9	0.70	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.9	0.79	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	0.66	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.9	0.80	ug/l	
100-51-6	Benzyl Alcohol	ND	4.9	0.98	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	0.71	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.9	0.54	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.9	0.68	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-20
Lab Sample ID: FA13051-7 **Date Sampled:** 03/06/14
Matrix: AQ - Ground Water **Date Received:** 03/07/14
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	0.57	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.9	0.53	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	0.56	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.9	0.61	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	4.9	0.88	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.9	0.80	ug/l	
132-64-9	Dibenzofuran	ND	4.9	0.52	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.9	0.98	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.9	0.98	ug/l	
84-66-2	Diethyl phthalate	ND	4.9	0.98	ug/l	
131-11-3	Dimethyl phthalate	ND	4.9	0.62	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.9	1.5	ug/l	
206-44-0	Fluoranthene	ND	4.9	0.69	ug/l	
86-73-7	Fluorene	ND	4.9	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	4.9	0.65	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.9	0.49	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	4.9	0.98	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	0.62	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	1.2	ug/l	
99-09-2	3-Nitroaniline	ND	4.9	0.60	ug/l	
100-01-6	4-Nitroaniline	ND	4.9	0.75	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	0.80	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	40%		14-67%
4165-62-2	Phenol-d5	25%		10-50%
118-79-6	2,4,6-Tribromophenol	87%		33-118%

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-20		
Lab Sample ID:	FA13051-7	**Date Sampled:**	03/06/14
Matrix:	AQ - Ground Water	**Date Received:**	03/07/14
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	79%		40-106%
1718-51-0	Terphenyl-d14	98%		39-121%

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-20
Lab Sample ID: FA13051-7
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/06/14
Date Received: 03/07/14
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	2.3 U	6.0	2.3	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Arsenic	2.4 U	10	2.4	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Beryllium	0.50 U	4.0	0.50	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Cadmium	0.50 U	5.0	0.50	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Chromium	2.0 U	10	2.0	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Copper	1.1 J	25	1.0	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Lead	1.1 U	5.0	1.1	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Mercury	0.030 U	0.50	0.030	ug/l	1	03/13/14	03/13/14	JL	SW846 7470A [2]	SW846 7470A [4]
Nickel	0.60 J	40	0.50	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Selenium	2.3 U	10	2.3	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Silver	0.77 U	5.0	0.77	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Thallium	2.0 U	10	2.0	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]
Zinc	5.7 J	20	3.0	ug/l	1	03/11/14	03/12/14	LM	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA11450
(2) Instrument QC Batch: MA11451
(3) Prep QC Batch: MP26933
(4) Prep QC Batch: MP26941

RL = Reporting Limit
MDL = Method Detection Limit

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

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA13051

AECOM

Chain of Custody and Analytical Request

Page: 1 of 1
Project Number: ~~60269713~~ 603/4/47
Chain of Custody Number [1]: 030614-01
LIMS Number:

Project Name / Location: UTC Delavan Spray Technologies Site RI
Client Name: UTC
Collected by: LAlexander & RMorgan
Project Manager: Walter Gerald

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.)	TCL VOCs (8260B)	TCL SVOCs (8270D)	Priority Pollutant metals (6010B/7470A)	TOC (SM 5310B)	Nitrate (300.0)	Nitrite (300.0)	Sulfate (300.0)	Chloride (300.0)	Dissolved Gases - Methane, Ethane, Ethene (RSK-175)	COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
MW-16-C	06-MAR-2014	0920	X	X	X		X									A	1
MW-16		0920	X	X	X		X			X	X	X	X	X	X	A	2
MW-16D		1020	X	X	X		X			X	X	X	X	X	X	A	3
MW-9		0950	X	X	X		X	X	X	X	X	X	X	X	X	A	4
MW-9D		1130	X	X	X		X									A	5
MW-19		1520	X	X	X		X	X	X							A	6
MW-20		1510	X	X	X		X	X	X							A	7
Temp blank																	

L Alexander 3/6/14

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	Laden Alexander	3/6/14	1630	FX		09:30
2.	FX			J-Corne (AISR)	3-7-14	
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:
Method of Shipment: FedEx
Analytical Lab: Accutest
Lab Recipient:

Shipped: X
Airbill #: 8047 3476 1635
Location: Orlando, FL
Date: Time:

& 8047 3476 1624

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

Unpreserved VOCs - 7 day hold
* Nitrate/Nitrite - 48hr hold

3.2 3.4

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA13051 CLIENT: AECOM PROJECT: WTC OLAVAN

DATE/TIME RECEIVED: 3-7-14 09:30 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 2

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

AIRBILL NUMBERS: 8047 3476 1624

COOLER INFORMATION

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

TRIP BLANK INFORMATION

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

MISC. INFORMATION

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

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.4
- [ ] OBSERVED TEMPS: 3.6 3.8
- [ ] CORRECTED TEMPS: 3.2 3.4

SAMPLE INFORMATION

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

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS: NO TOC VIALS RECEIVED FOR SAMPLE #2

TECHNICIAN SIGNATURE/DATE [signature] 3-7-14 REVIEWER SIGNATURE/DATE [signature] 03/07/14

10

FedEx Express Package US Airbill

FedEx Tracking Number 8047 3476 1624

Recipient's Copy

1 From

Date 3/6/14

Sender's Name Leslee Alexander Phone 864 234-3000

Company AECOM

Address 10 Patewood Dr Bldg VI #500

City Greenville Dept./Floor/Suite/Room

State SC ZIP 29615

2 Your Internal Billing Reference 603M964.2

3 To

Recipient's Name SUPPLY RECV Phone 407 425-6700

Company ACCUTEST LABORATORIES SE, INC

Address 4405 VINELAND RD STE C15

We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

City ORLANDO State FL ZIP 32811-5803

0112015626

8047 3476 1624

4 Express Package Service * To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. For packages over 150 lbs., use the FedEx Express Freight US Airbill.

Next Business Day

- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

- [ ] FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak*
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

6 Special Handling and Delivery Signature Options

- [ ] SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.
- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [X] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Obtain recip. Acct. No. [ ]

Total Packages 1 Total Weight 54 lbs.

Credit Card Auth.

†Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

611

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fedex.com 1.800.GoFedEx 1.800.463.3339

FedEx Express Package US Airbill

FedEx Tracking Number 8047 3476 1635

Recipient's Copy

From

Date 3/6/14

Sender's Name Leslee Alexander Phone 864 234-3000

Company AECOM

Address 10 Patewood Dr Bldg VI #500

City Greenville Dept./Floor/Suite/Room

State SC ZIP 29615

Your Internal Billing Reference 603M964.2

Recipient's Name SUPPLY RECV Phone 407 425-6700

Company ACCUTEST LABORATORIES SE, INC

Address 4405 VINELAND RD STE C15

Cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

Address

This line for the HOLD location address or for continuation of your shipping address.

HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

ORLANDO State FL ZIP 32811-5803

0112015626

8047 3476 1635

4 Express Package Service * To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. For packages over 150 lbs., use the FedEx Express Freight US Airbill.

Next Business Day

- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

- [ ] FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak*
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

6 Special Handling and Delivery Signature Options

- [ ] SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.
- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Obtain recip. Acct. No. [ ]

Total Packages 1 Total Weight 55 lbs.

Credit Card Auth.

†Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

611

fedex.com 1.800.GoFedEx 1.800.463.3339

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA13051 CLIENT: AECOM PROJECT: WTC DELAVAN

DATE/TIME RECEIVED: 3-7-14 09:30 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 2

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

AIRBILL NUMBERS: 8047 3476 1694

COOLER INFORMATION

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

TRIP BLANK INFORMATION

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

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.4
- [ ] OBSERVED TEMPS: 3.6 3.8
- [ ] CORRECTED TEMPS: 3.2 3.4

SAMPLE INFORMATION

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

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS: NO TOC VIALS RECEIVED FOR SAMPLE #2

TECHNICIAN SIGNATURE/DATE [signature] 3-7-14 REVIEWER SIGNATURE/DATE [signature] 03/07/14

NF 12/10

receipt confirmation 122910.xls

5.1 5

FA13051: Chain of Custody
Page 2 of 3

FA13051: 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: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VO882-MB	O22555.D	1	03/12/14	MM	n/a	n/a	VO882

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

FA13051-1, FA13051-2, FA13051-3, FA13051-5, FA13051-6

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: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VO882-MB	O22555.D	1	03/12/14	MM	n/a	n/a	VO882

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

FA13051-1, FA13051-2, FA13051-3, FA13051-5, FA13051-6

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	101%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

Method Blank Summary

Job Number: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VO883-MB	O22586.D	1	03/13/14	MM	n/a	n/a	VO883

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

FA13051-4, FA13051-7

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: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VO883-MB	O22586.D	1	03/13/14	MM	n/a	n/a	VO883

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

FA13051-4, FA13051-7

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

Blank Spike Summary

Job Number: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VO882-BS	O22553.D	1	03/12/14	MM	n/a	n/a	VO882

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

FA13051-1, FA13051-2, FA13051-3, FA13051-5, FA13051-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	207	166*	50-147
71-43-2	Benzene	25	25.0	100	81-122
75-27-4	Bromodichloromethane	25	24.8	99	79-123
75-25-2	Bromoform	25	24.6	98	66-123
108-90-7	Chlorobenzene	25	26.4	106	82-124
75-00-3	Chloroethane	25	21.4	86	62-144
67-66-3	Chloroform	25	24.4	98	80-124
75-15-0	Carbon disulfide	25	22.8	91	66-148
56-23-5	Carbon tetrachloride	25	27.3	109	76-136
75-34-3	1,1-Dichloroethane	25	24.2	97	81-122
75-35-4	1,1-Dichloroethylene	25	26.5	106	78-137
107-06-2	1,2-Dichloroethane	25	24.2	97	75-125
78-87-5	1,2-Dichloropropane	25	24.5	98	76-124
124-48-1	Dibromochloromethane	25	25.7	103	78-122
156-59-2	cis-1,2-Dichloroethylene	25	24.6	98	78-120
10061-01-5	cis-1,3-Dichloropropene	25	24.3	97	75-118
156-60-5	trans-1,2-Dichloroethylene	25	24.5	98	76-127
10061-02-6	trans-1,3-Dichloropropene	25	27.0	108	80-120
100-41-4	Ethylbenzene	25	24.9	100	81-121
591-78-6	2-Hexanone	125	146	117	61-129
108-10-1	4-Methyl-2-pentanone	125	117	94	66-122
74-83-9	Methyl bromide	25	23.6	94	59-143
74-87-3	Methyl chloride	25	25.4	102	50-159
75-09-2	Methylene chloride	25	25.0	100	69-135
78-93-3	Methyl ethyl ketone	125	145	116	56-143
100-42-5	Styrene	25	24.7	99	78-119
71-55-6	1,1,1-Trichloroethane	25	25.9	104	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	23.4	94	72-120
79-00-5	1,1,2-Trichloroethane	25	23.7	95	76-119
127-18-4	Tetrachloroethylene	25	24.7	99	76-135
108-88-3	Toluene	25	24.7	99	80-120
79-01-6	Trichloroethylene	25	25.8	103	81-126
75-01-4	Vinyl chloride	25	25.2	101	69-159
1330-20-7	Xylene (total)	75	80.5	107	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VO882-BS	O22553.D	1	03/12/14	MM	n/a	n/a	VO882

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

FA13051-1, FA13051-2, FA13051-3, FA13051-5, FA13051-6

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

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VO883-BS	O22584.D	1	03/13/14	MM	n/a	n/a	VO883

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

FA13051-4, FA13051-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	214	171*	50-147
71-43-2	Benzene	25	24.5	98	81-122
75-27-4	Bromodichloromethane	25	24.2	97	79-123
75-25-2	Bromoform	25	25.5	102	66-123
108-90-7	Chlorobenzene	25	26.2	105	82-124
75-00-3	Chloroethane	25	21.2	85	62-144
67-66-3	Chloroform	25	23.6	94	80-124
75-15-0	Carbon disulfide	25	22.2	89	66-148
56-23-5	Carbon tetrachloride	25	26.5	106	76-136
75-34-3	1,1-Dichloroethane	25	24.0	96	81-122
75-35-4	1,1-Dichloroethylene	25	25.9	104	78-137
107-06-2	1,2-Dichloroethane	25	23.9	96	75-125
78-87-5	1,2-Dichloropropane	25	24.3	97	76-124
124-48-1	Dibromochloromethane	25	25.4	102	78-122
156-59-2	cis-1,2-Dichloroethylene	25	23.7	95	78-120
10061-01-5	cis-1,3-Dichloropropene	25	24.3	97	75-118
156-60-5	trans-1,2-Dichloroethylene	25	24.1	96	76-127
10061-02-6	trans-1,3-Dichloropropene	25	27.9	112	80-120
100-41-4	Ethylbenzene	25	24.8	99	81-121
591-78-6	2-Hexanone	125	148	118	61-129
108-10-1	4-Methyl-2-pentanone	125	120	96	66-122
74-83-9	Methyl bromide	25	24.1	96	59-143
74-87-3	Methyl chloride	25	25.8	103	50-159
75-09-2	Methylene chloride	25	24.4	98	69-135
78-93-3	Methyl ethyl ketone	125	149	119	56-143
100-42-5	Styrene	25	24.4	98	78-119
71-55-6	1,1,1-Trichloroethane	25	24.8	99	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	24.1	96	72-120
79-00-5	1,1,2-Trichloroethane	25	24.1	96	76-119
127-18-4	Tetrachloroethylene	25	24.6	98	76-135
108-88-3	Toluene	25	24.6	98	80-120
79-01-6	Trichloroethylene	25	25.1	100	81-126
75-01-4	Vinyl chloride	25	25.0	100	69-159
1330-20-7	Xylene (total)	75	79.9	107	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VO883-BS	O22584.D	1	03/13/14	MM	n/a	n/a	VO883

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

FA13051-4, FA13051-7

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	79-125%
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13040-13MS	O22576.D	20	03/12/14	MM	n/a	n/a	VO882
FA13040-13MSD	O22577.D	20	03/12/14	MM	n/a	n/a	VO882
FA13040-13 [a]	O22574.D	20	03/12/14	MM	n/a	n/a	VO882

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

FA13051-1, FA13051-2, FA13051-3, FA13051-5, FA13051-6

CAS No.	Compound	FA13040-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	500 U		2500	2210	88	2240	90	1	50-147/21
71-43-2	Benzene	20 U		500	509	102	466	93	9	81-122/14
75-27-4	Bromodichloromethane	20 U		500	354	71*	348	70*	2	79-123/19
75-25-2	Bromoform	20 U		500	127	25*	181	36*	35*	66-123/21
108-90-7	Chlorobenzene	20 U		500	547	109	496	99	10	82-124/14
75-00-3	Chloroethane	40 U		500	453	91	392	78	14	62-144/20
67-66-3	Chloroform	20 U		500	499	100	461	92	8	80-124/15
75-15-0	Carbon disulfide	5.5	I	500	358	71	264	52*	30*	66-148/23
56-23-5	Carbon tetrachloride	20 U		500	534	107	446	89	18	76-136/23
75-34-3	1,1-Dichloroethane	216		500	716	100	658	88	8	81-122/15
75-35-4	1,1-Dichloroethylene	20 U		500	535	107	515	103	4	78-137/18
107-06-2	1,2-Dichloroethane	20 U		500	500	100	468	94	7	75-125/14
78-87-5	1,2-Dichloropropane	20 U		500	513	103	471	94	9	76-124/14
124-48-1	Dibromochloromethane	20 U		500	209	42*	258	52*	21*	78-122/19
156-59-2	cis-1,2-Dichloroethylene	431		500	996	113	911	96	9	78-120/15
10061-01-5	cis-1,3-Dichloropropene	20 U		500	476	95	374	75	24*	75-118/23
156-60-5	trans-1,2-Dichloroethylene	20 U		500	507	101	466	93	8	76-127/17
10061-02-6	trans-1,3-Dichloropropene	20 U		500	549	110	445	89	21	80-120/22
100-41-4	Ethylbenzene	20 U		500	516	103	468	94	10	81-121/14
591-78-6	2-Hexanone	200 U		2500	2450	98	2380	95	3	61-129/18
108-10-1	4-Methyl-2-pentanone	100 U		2500	2460	98	2370	95	4	66-122/16
74-83-9	Methyl bromide	40 U		500	489	98	447	89	9	59-143/19
74-87-3	Methyl chloride	40 U		500	520	104	487	97	7	50-159/19
75-09-2	Methylene chloride	100 U		500	546	109	505	101	8	69-135/16
78-93-3	Methyl ethyl ketone	100 U		2500	2190	88	2140	86	2	56-143/18
100-42-5	Styrene	20 U		500	473	95	428	86	10	78-119/23
71-55-6	1,1,1-Trichloroethane	20 U		500	528	106	469	94	12	75-130/16
79-34-5	1,1,2,2-Tetrachloroethane	20 U		500	500	100	462	92	8	72-120/14
79-00-5	1,1,2-Trichloroethane	20 U		500	506	101	473	95	7	76-119/14
127-18-4	Tetrachloroethylene	20 U		500	494	99	447	89	10	76-135/16
108-88-3	Toluene	20 U		500	507	101	468	94	8	80-120/14
79-01-6	Trichloroethylene	20 U		500	536	107	500	100	7	81-126/15
75-01-4	Vinyl chloride	625		500	1130	101	1020	79	10	69-159/18
1330-20-7	Xylene (total)	60 U		1500	1660	111	1510	101	9	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13040-13MS	O22576.D	20	03/12/14	MM	n/a	n/a	VO882
FA13040-13MSD	O22577.D	20	03/12/14	MM	n/a	n/a	VO882
FA13040-13 [a]	O22574.D	20	03/12/14	MM	n/a	n/a	VO882

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

FA13051-1, FA13051-2, FA13051-3, FA13051-5, FA13051-6

CAS No.	Surrogate Recoveries	MS	MSD	FA13040-13	Limits
1868-53-7	Dibromofluoromethane	100%	101%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	97%	100%	79-125%
2037-26-5	Toluene-D8	97%	96%	100%	85-112%
460-00-4	4-Bromofluorobenzene	97%	98%	101%	83-118%

(a) Confirmation run.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13139-4MS	O22607.D	1	03/13/14	MM	n/a	n/a	VO883
FA13139-4MSD	O22608.D	1	03/13/14	MM	n/a	n/a	VO883
FA13139-4	O22595.D	1	03/13/14	MM	n/a	n/a	VO883

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

FA13051-4, FA13051-7

CAS No.	Compound	FA13139-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	24.2	I	125	134	88	137	90	2	50-147/21
71-43-2	Benzene	0.97	I	25	24.5	94	23.9	92	2	81-122/14
75-27-4	Bromodichloromethane	1.0 U		25	23.3	93	21.2	85	9	79-123/19
75-25-2	Bromoform	1.0 U		25	19.4	78	17.2	69	12	66-123/21
108-90-7	Chlorobenzene	1.0 U		25	25.3	101	24.9	100	2	82-124/14
75-00-3	Chloroethane	2.0 U		25	20.2	81	19.7	79	3	62-144/20
67-66-3	Chloroform	1.0 U		25	23.5	94	23.2	93	1	80-124/15
75-15-0	Carbon disulfide	2.0 U		25	19.9	80	18.4	74	8	66-148/23
56-23-5	Carbon tetrachloride	1.0 U		25	25.6	102	24.1	96	6	76-136/23
75-34-3	1,1-Dichloroethane	18.6		25	42.1	94	41.3	91	2	81-122/15
75-35-4	1,1-Dichloroethylene	0.46	I	25	26.2	103	26.0	102	1	78-137/18
107-06-2	1,2-Dichloroethane	1.0 U		25	23.5	94	23.5	94	0	75-125/14
78-87-5	1,2-Dichloropropane	1.0 U		25	23.2	93	23.0	92	1	76-124/14
124-48-1	Dibromochloromethane	1.0 U		25	21.8	87	20.4	82	7	78-122/19
156-59-2	cis-1,2-Dichloroethylene	219	L	25	238	76* [a]	234	60* [a]	2	78-120/15
10061-01-5	cis-1,3-Dichloropropene	1.0 U		25	16.6	66*	15.1	60*	9	75-118/23
156-60-5	trans-1,2-Dichloroethylene	4.1		25	28.8	99	28.0	96	3	76-127/17
10061-02-6	trans-1,3-Dichloropropene	1.0 U		25	18.1	72*	16.3	65*	10	80-120/22
100-41-4	Ethylbenzene	4.9		25	28.8	96	28.2	93	2	81-121/14
591-78-6	2-Hexanone	10 U		125	123	98	128	102	4	61-129/18
108-10-1	4-Methyl-2-pentanone	5.0 U		125	122	98	127	102	4	66-122/16
74-83-9	Methyl bromide	2.0 U		25	22.9	92	22.0	88	4	59-143/19
74-87-3	Methyl chloride	2.0 U		25	24.3	97	23.8	95	2	50-159/19
75-09-2	Methylene chloride	5.0 U		25	23.5	94	23.3	93	1	69-135/16
78-93-3	Methyl ethyl ketone	5.0 U		125	106	85	110	88	4	56-143/18
100-42-5	Styrene	1.0 U		25	20.8	83	20.3	81	2	78-119/23
71-55-6	1,1,1-Trichloroethane	1.0 U		25	25.3	101	24.8	99	2	75-130/16
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		25	23.1	92	23.5	94	2	72-120/14
79-00-5	1,1,2-Trichloroethane	1.0 U		25	22.7	91	23.0	92	1	76-119/14
127-18-4	Tetrachloroethylene	0.44	I	25	23.9	94	23.7	93	1	76-135/16
108-88-3	Toluene	11.6		25	34.8	93	33.9	89	3	80-120/14
79-01-6	Trichloroethylene	12.8		25	38.1	101	38.4	102	1	81-126/15
75-01-4	Vinyl chloride	0.53	I	25	24.6	96	24.5	96	0	69-159/18
1330-20-7	Xylene (total)	23.2		75	102	105	99.6	102	2	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13139-4MS	O22607.D	1	03/13/14	MM	n/a	n/a	VO883
FA13139-4MSD	O22608.D	1	03/13/14	MM	n/a	n/a	VO883
FA13139-4	O22595.D	1	03/13/14	MM	n/a	n/a	VO883

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

FA13051-4, FA13051-7

CAS No.	Surrogate Recoveries	MS	MSD	FA13139-4	Limits
1868-53-7	Dibromofluoromethane	103%	103%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	98%	98%	79-125%
2037-26-5	Toluene-D8	95%	95%	99%	85-112%
460-00-4	4-Bromofluorobenzene	97%	98%	97%	83-118%

(a) Outside control limits due to high level in sample relative to spike amount.

* = 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: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50772-MB	X033657.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13051-4, FA13051-6, FA13051-7

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: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50772-MB	X033657.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13051-4, FA13051-6, FA13051-7

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	46%	14-67%
4165-62-2	Phenol-d5	31%	10-50%

Method Blank Summary

Job Number: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50772-MB	X033657.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13051-4, FA13051-6, FA13051-7

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	84%	33-118%
4165-60-0	Nitrobenzene-d5	77%	42-108%
321-60-8	2-Fluorobiphenyl	75%	40-106%
1718-51-0	Terphenyl-d14	100%	39-121%

Blank Spike Summary

Job Number: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50772-BS	X033656.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13051-4, FA13051-6, FA13051-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	100	13.5	14	10-69
95-57-8	2-Chlorophenol	50	34.9	70	52-98
59-50-7	4-Chloro-3-methyl phenol	50	39.5	79	54-103
120-83-2	2,4-Dichlorophenol	50	36.7	73	53-103
105-67-9	2,4-Dimethylphenol	50	38.4	77	43-90
51-28-5	2,4-Dinitrophenol	100	71.3	71	44-112
534-52-1	4,6-Dinitro-o-cresol	100	79.9	80	66-121
95-48-7	2-Methylphenol	50	31.9	64	43-90
	3&4-Methylphenol	100	59.4	59	36-88
88-75-5	2-Nitrophenol	50	38.8	78	53-102
100-02-7	4-Nitrophenol	100	21.8	22	18-62
87-86-5	Pentachlorophenol	100	75.9	76	61-115
108-95-2	Phenol	50	15.4	31	19-56
95-95-4	2,4,5-Trichlorophenol	50	40.0	80	62-109
88-06-2	2,4,6-Trichlorophenol	50	39.7	79	59-107
83-32-9	Acenaphthene	50	41.4	83	61-107
208-96-8	Acenaphthylene	50	41.1	82	60-104
120-12-7	Anthracene	50	41.6	83	65-108
56-55-3	Benzo(a)anthracene	50	42.2	84	66-111
50-32-8	Benzo(a)pyrene	50	42.0	84	62-107
205-99-2	Benzo(b)fluoranthene	50	40.9	82	65-114
191-24-2	Benzo(g,h,i)perylene	50	47.2	94	66-116
207-08-9	Benzo(k)fluoranthene	50	44.2	88	65-114
101-55-3	4-Bromophenyl phenyl ether	50	35.1	70	65-109
85-68-7	Butyl benzyl phthalate	50	40.8	82	65-112
100-51-6	Benzyl Alcohol	50	33.0	66	46-94
91-58-7	2-Chloronaphthalene	50	37.6	75	57-103
106-47-8	4-Chloroaniline	50	37.8	76	49-105
86-74-8	Carbazole	50	43.0	86	59-113
218-01-9	Chrysene	50	44.0	88	66-111
111-91-1	bis(2-Chloroethoxy)methane	50	38.5	77	51-102
111-44-4	bis(2-Chloroethyl)ether	50	36.5	73	53-100
108-60-1	bis(2-Chloroisopropyl)ether	50	37.5	75	45-106
7005-72-3	4-Chlorophenyl phenyl ether	50	37.8	76	62-105
95-50-1	1,2-Dichlorobenzene	50	29.1	58	48-97
541-73-1	1,3-Dichlorobenzene	50	29.3	59	45-95

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50772-BS	X033656.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13051-4, FA13051-6, FA13051-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
106-46-7	1,4-Dichlorobenzene	50	30.9	62	45-98
121-14-2	2,4-Dinitrotoluene	50	39.2	78	61-110
606-20-2	2,6-Dinitrotoluene	50	39.1	78	63-108
91-94-1	3,3'-Dichlorobenzidine	50	47.1	94	46-117
53-70-3	Dibenzo(a,h)anthracene	50	45.1	90	66-119
132-64-9	Dibenzofuran	50	40.9	82	61-106
84-74-2	Di-n-butyl phthalate	50	36.7	73	65-107
117-84-0	Di-n-octyl phthalate	50	39.5	79	62-118
84-66-2	Diethyl phthalate	50	35.2	70	64-108
131-11-3	Dimethyl phthalate	50	35.6	71	63-106
117-81-7	bis(2-Ethylhexyl)phthalate	50	42.5	85	61-117
206-44-0	Fluoranthene	50	38.7	77	63-106
86-73-7	Fluorene	50	40.1	80	62-108
118-74-1	Hexachlorobenzene	50	41.6	83	63-108
87-68-3	Hexachlorobutadiene	50	32.0	64	42-102
77-47-4	Hexachlorocyclopentadiene	50	27.1	54	39-102
67-72-1	Hexachloroethane	50	29.4	59	42-100
193-39-5	Indeno(1,2,3-cd)pyrene	50	41.8	84	64-119
78-59-1	Isophorone	50	38.4	77	43-87
91-57-6	2-Methylnaphthalene	50	37.8	76	51-102
88-74-4	2-Nitroaniline	50	45.0	90	54-128
99-09-2	3-Nitroaniline	50	43.7	87	56-106
100-01-6	4-Nitroaniline	50	42.6	85	55-120
91-20-3	Naphthalene	50	37.8	76	47-100
98-95-3	Nitrobenzene	50	36.3	73	50-104
621-64-7	N-Nitroso-di-n-propylamine	50	41.4	83	52-104
86-30-6	N-Nitrosodiphenylamine	50	45.0	90	64-108
85-01-8	Phenanthrene	50	42.5	85	66-110
129-00-0	Pyrene	50	42.4	85	64-113
120-82-1	1,2,4-Trichlorobenzene	50	31.1	62	45-97

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	43%	14-67%
4165-62-2	Phenol-d5	28%	10-50%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50772-BS	X033656.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13051-4, FA13051-6, FA13051-7

CAS No.	Surrogate Recoveries	BSP	Limits
118-79-6	2,4,6-Tribromophenol	86%	33-118%
4165-60-0	Nitrobenzene-d5	74%	42-108%
321-60-8	2-Fluorobiphenyl	79%	40-106%
1718-51-0	Terphenyl-d14	98%	39-121%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50772-MS	X033659.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583
OP50772-MSD	X033660.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583
FA13018-2	X033658.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13051-4, FA13051-6, FA13051-7

CAS No.	Compound	FA13018-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		196	76.8	39	78.4	40	2	10-69/39
95-57-8	2-Chlorophenol	ND		98	70.8	72	66.0	67	7	52-98/25
59-50-7	4-Chloro-3-methyl phenol	ND		98	75.5	77	71.4	73	6	54-103/23
120-83-2	2,4-Dichlorophenol	ND		98	68.5	70	63.9	65	7	53-103/26
105-67-9	2,4-Dimethylphenol	ND		98	75.7	77	66.4	68	13	43-90/27
51-28-5	2,4-Dinitrophenol	ND		196	141	72	160	82	13	44-112/25
534-52-1	4,6-Dinitro-o-cresol	ND		196	147	75	160	82	8	66-121/23
95-48-7	2-Methylphenol	ND		98	73.5	75	63.6	65	14	43-90/28
	3&4-Methylphenol	ND		196	146	74	122	62	18	36-88/28
88-75-5	2-Nitrophenol	ND		98	71.9	73	67.9	69	6	53-102/29
100-02-7	4-Nitrophenol	ND		196	76.7	39	75.7	39	1	18-62/33
87-86-5	Pentachlorophenol	ND		196	143	73	157	80	9	61-115/26
108-95-2	Phenol	ND		98	50.4	51	40.4	41	22	19-56/35
95-95-4	2,4,5-Trichlorophenol	ND		98	72.0	73	72.8	74	1	62-109/22
88-06-2	2,4,6-Trichlorophenol	ND		98	71.8	73	74.2	76	3	59-107/23
83-32-9	Acenaphthene	ND		98	80.8	82	76.3	78	6	61-107/22
208-96-8	Acenaphthylene	ND		98	80.5	82	75.8	77	6	60-104/22
120-12-7	Anthracene	ND		98	79.4	81	78.9	80	1	65-108/20
56-55-3	Benzo(a)anthracene	ND		98	80.0	82	80.2	82	0	66-111/22
50-32-8	Benzo(a)pyrene	ND		98	79.3	81	80.0	82	1	62-107/23
205-99-2	Benzo(b)fluoranthene	ND		98	79.8	81	78.0	80	2	65-114/23
191-24-2	Benzo(g,h,i)perylene	ND		98	88.4	90	88.6	90	0	66-116/23
207-08-9	Benzo(k)fluoranthene	ND		98	82.8	84	83.3	85	1	65-114/24
101-55-3	4-Bromophenyl phenyl ether	ND		98	67.8	69	67.6	69	0	65-109/23
85-68-7	Butyl benzyl phthalate	ND		98	77.9	79	77.5	79	1	65-112/24
100-51-6	Benzyl Alcohol	ND		98	79.9	81	66.3	68	19	46-94/27
91-58-7	2-Chloronaphthalene	ND		98	74.2	76	67.4	69	10	57-103/23
106-47-8	4-Chloroaniline	ND		98	77.2	79	67.5	69	13	49-105/27
86-74-8	Carbazole	ND		98	82.2	84	82.6	84	0	59-113/21
218-01-9	Chrysene	ND		98	82.9	85	83.7	85	1	66-111/22
111-91-1	bis(2-Chloroethoxy)methane	ND		98	76.7	78	67.4	69	13	51-102/28
111-44-4	bis(2-Chloroethyl)ether	ND		98	75.1	77	65.3	67	14	53-100/27
108-60-1	bis(2-Chloroisopropyl)ether	ND		98	75.9	77	65.8	67	14	45-106/26
7005-72-3	4-Chlorophenyl phenyl ether	ND		98	74.0	75	71.2	73	4	62-105/20
95-50-1	1,2-Dichlorobenzene	ND		98	66.7	68	58.2	59	14	48-97/24
541-73-1	1,3-Dichlorobenzene	ND		98	67.5	69	59.1	60	13	45-95/25

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50772-MS	X033659.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583
OP50772-MSD	X033660.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583
FA13018-2	X033658.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13051-4, FA13051-6, FA13051-7

CAS No.	Compound	FA13018-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
106-46-7	1,4-Dichlorobenzene	ND		98	71.0	72	62.5	64	13	45-98/25
121-14-2	2,4-Dinitrotoluene	ND		98	77.0	79	76.8	78	0	61-110/21
606-20-2	2,6-Dinitrotoluene	ND		98	76.0	78	76.3	78	0	63-108/21
91-94-1	3,3'-Dichlorobenzidine	ND		98	87.7	89	85.9	88	2	46-117/29
53-70-3	Dibenzo(a,h)anthracene	ND		98	85.2	87	86.8	89	2	66-119/24
132-64-9	Dibenzofuran	ND		98	80.3	82	77.4	79	4	61-106/21
84-74-2	Di-n-butyl phthalate	ND		98	70.7	72	70.4	72	0	65-107/21
117-84-0	Di-n-octyl phthalate	ND		98	76.6	78	75.0	77	2	62-118/24
84-66-2	Diethyl phthalate	ND		98	67.5	69	69.1	70	2	64-108/21
131-11-3	Dimethyl phthalate	ND		98	67.9	69	69.0	70	2	63-106/22
117-81-7	bis(2-Ethylhexyl)phthalate	ND		98	80.6	82	81.5	83	1	61-117/23
206-44-0	Fluoranthene	ND		98	75.1	77	74.9	76	0	63-106/21
86-73-7	Fluorene	ND		98	79.5	81	78.6	80	1	62-108/20
118-74-1	Hexachlorobenzene	ND		98	78.2	80	79.1	81	1	63-108/22
87-68-3	Hexachlorobutadiene	ND		98	71.5	73	63.8	65	11	42-102/28
77-47-4	Hexachlorocyclopentadiene	ND		98	56.8	58	49.1	50	15	39-102/29
67-72-1	Hexachloroethane	ND		98	69.9	71	60.9	62	14	42-100/29
193-39-5	Indeno(1,2,3-cd)pyrene	ND		98	78.9	80	79.2	81	0	64-119/24
78-59-1	Isophorone	ND		98	75.2	77	65.6	67	14	43-87/25
91-57-6	2-Methylnaphthalene	ND		98	77.3	79	67.1	68	14	51-102/26
88-74-4	2-Nitroaniline	ND		98	85.6	87	84.6	86	1	54-128/24
99-09-2	3-Nitroaniline	ND		98	86.3	88	85.5	87	1	56-106/27
100-01-6	4-Nitroaniline	ND		98	84.5	86	86.8	89	3	55-120/24
91-20-3	Naphthalene	ND		98	79.0	81	69.5	71	13	47-100/29
98-95-3	Nitrobenzene	ND		98	72.3	74	64.3	66	12	50-104/28
621-64-7	N-Nitroso-di-n-propylamine	ND		98	82.8	84	70.8	72	16	52-104/25
86-30-6	N-Nitrosodiphenylamine	ND		98	85.4	87	84.6	86	1	64-108/23
85-01-8	Phenanthrene	ND		98	81.5	83	81.5	83	0	66-110/21
129-00-0	Pyrene	ND		98	80.3	82	80.5	82	0	64-113/23
120-82-1	1,2,4-Trichlorobenzene	ND		98	67.4	69	60.3	62	11	45-97/28

CAS No.	Surrogate Recoveries	MS	MSD	FA13018-2	Limits
367-12-4	2-Fluorophenol	58%	51%	46%	14-67%
4165-62-2	Phenol-d5	48%	38%	30%	10-50%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50772-MS	X033659.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583
OP50772-MSD	X033660.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583
FA13018-2	X033658.D	1	03/11/14	NAF	03/10/14	OP50772	SX1583

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13051-4, FA13051-6, FA13051-7

CAS No.	Surrogate Recoveries	MS	MSD	FA13018-2	Limits
118-79-6	2,4,6-Tribromophenol	76%	81%	99%	33-118%
4165-60-0	Nitrobenzene-d5	73%	66%	88%	42-108%
321-60-8	2-Fluorobiphenyl	77%	70%	88%	40-106%
1718-51-0	Terphenyl-d14	92%	93%	108%	39-121%

* = Outside of Control Limits.

Southeast ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF910-MB	FF22591.D	1	03/12/14	CP	n/a	n/a	GFF910

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

FA13051-2, FA13051-3, FA13051-4

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: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF910-BS	FF22592.D	1	03/12/14	CP	n/a	n/a	GFF910

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

FA13051-2, FA13051-3, FA13051-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	108	116	107	61-144
74-84-0	Ethane	219	228	104	64-143
74-85-1	Ethene	290	307	106	64-141

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13112-3MS	FF22602.D	1	03/12/14	CP	n/a	n/a	GFF910
FA13112-3	FF22599.D	1	03/12/14	CP	n/a	n/a	GFF910

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

FA13051-2, FA13051-3, FA13051-4

CAS No.	Compound	FA13112-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	7.6		108	128	111	61-144
74-84-0	Ethane	ND		219	252	115	64-143
74-85-1	Ethene	ND		290	339	117	64-141

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA13051
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13018-5DUP	FF22603.D	1	03/12/14	CP	n/a	n/a	GFF910
FA13018-5	FF22593.D	1	03/12/14	CP	n/a	n/a	GFF910

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

FA13051-2, FA13051-3, FA13051-4

CAS No.	Compound	FA13018-5 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	7.6		7.6		0	33
74-84-0	Ethane	ND		ND		nc	20
74-85-1	Ethene	ND		ND		nc	19

* = 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: FA13051
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26933
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/11/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	15	15		
Antimony	6.0	2	2.3	-0.30	<6.0
Arsenic	10	2	2.4	-1.7	<10
Barium	200	1	1		
Beryllium	4.0	.5	.5	0.0	<4.0
Cadmium	5.0	.5	.5	0.0	<5.0
Calcium	1000	50	50		
Chromium	10	1	2	0.10	<10
Cobalt	50	.5	.5		
Copper	25	1	1	0.50	<25
Iron	300	17	17		
Lead	5.0	1.1	1.1	-0.40	<5.0
Magnesium	5000	50	56		
Manganese	15	.5	1		
Molybdenum	50	.5	.5		
Nickel	40	.5	.5	-0.10	<40
Potassium	10000	200	200		
Selenium	10	2.3	2.3	0.0	<10
Silver	10	.65	.77	-0.20	<10
Sodium	10000	500	500		
Strontium	10	.4	.4		
Thallium	10	1.5	2	-1.1	<10
Tin	50	.7	1		
Titanium	10	.9	1		
Vanadium	50	.5	.5		
Zinc	20	3	3	2.4	<20

Associated samples MP26933: FA13051-4, FA13051-6, FA13051-7

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: FA13051
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26933
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:			03/11/14					03/11/14	
Metal	FA13103-1 Original	DUP	RPD	QC Limits	FA13103-1 Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum									
Antimony	0.0	0.0	NC	0-20	0.0	513	500	102.6	80-120
Arsenic	0.0	0.0	NC	0-20	0.0	2050	2000	102.5	80-120
Barium									
Beryllium	0.0	0.0	NC	0-20	0.0	54.1	50	108.2	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	50.1	50	100.2	80-120
Calcium	anr								
Chromium	1.4	1.6	13.3	0-20	1.4	205	200	101.8	80-120
Cobalt									
Copper	1.1	0.0	200.0(a)	0-20	1.1	267	250	106.4	80-120
Iron	anr								
Lead	0.0	0.0	NC	0-20	0.0	499	500	99.8	80-120
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	0.0	0.0	NC	0-20	0.0	530	500	106.0	80-120
Potassium	anr								
Selenium	0.0	0.0	NC	0-20	0.0	1870	2000	93.5	80-120
Silver	0.0	0.0	NC	0-20	0.0	50.1	50	100.2	80-120
Sodium	anr								
Strontium									
Thallium	0.0	0.0	NC	0-20	0.0	2020	2000	101.0	80-120
Tin									
Titanium									
Vanadium	anr								
Zinc	7.3	7.6	4.0	0-20	7.3	521	500	102.7	80-120

Associated samples MP26933: FA13051-4, FA13051-6, FA13051-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA13051
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26933
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/11/14

Metal	FA13103-1 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.0	508	500	101.6	1.0	20
Arsenic	0.0	2040	2000	102.0	0.5	20
Barium						
Beryllium	0.0	53.8	50	107.6	0.6	20
Cadmium	0.0	49.8	50	99.6	0.6	20
Calcium	anr					
Chromium	1.4	205	200	101.8	0.0	20
Cobalt						
Copper	1.1	264	250	105.2	1.1	20
Iron	anr					
Lead	0.0	495	500	99.0	0.8	20
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	0.0	527	500	105.4	0.6	20
Potassium	anr					
Selenium	0.0	1870	2000	93.5	0.0	20
Silver	0.0	49.9	50	99.8	0.4	20
Sodium	anr					
Strontium						
Thallium	0.0	2010	2000	100.5	0.5	20
Tin						
Titanium						
Vanadium	anr					
Zinc	7.3	517	500	101.9	0.8	20

Associated samples MP26933: FA13051-4, FA13051-6, FA13051-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA13051
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26933
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/11/14

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum				
Antimony	512	500	102.4	80-120
Arsenic	2040	2000	102.0	80-120
Barium				
Beryllium	53.7	50	107.4	80-120
Cadmium	50.8	50	101.6	80-120
Calcium	anr			
Chromium	206	200	103.0	80-120
Cobalt				
Copper	264	250	105.6	80-120
Iron	anr			
Lead	497	500	99.4	80-120
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	535	500	107.0	80-120
Potassium	anr			
Selenium	2020	2000	101.0	80-120
Silver	50.4	50	100.8	80-120
Sodium	anr			
Strontium				
Thallium	2020	2000	101.0	80-120
Tin				
Titanium				
Vanadium	anr			
Zinc	523	500	104.6	80-120

Associated samples MP26933: FA13051-4, FA13051-6, FA13051-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA13051
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26933
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/11/14

Metal	FA13103-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	0.00	0.00	NC	0-10
Arsenic	0.00	0.00	NC	0-10
Barium				
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	anr			
Chromium	1.40	0.00	100.0(a)	0-10
Cobalt				
Copper	1.10	0.00	100.0(a)	0-10
Iron	anr			
Lead	0.00	0.00	NC	0-10
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	0.00	0.00	NC	0-10
Potassium	anr			
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium	anr			
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium	anr			
Zinc	7.30	0.00	100.0(a)	0-10

Associated samples MP26933: FA13051-4, FA13051-6, FA13051-7

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: FA13051
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26933
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/11/14

Metal	Sample ml	Final ml	FA13103-1 Raw	FA13103-1 Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10			106.2	0.2	5	100	106.2	80-120
Arsenic	9.8	10			105.5	0.2	5	100	105.5	80-120
Barium										
Beryllium	9.8	10			54	0.2	2.5	50	108.0	80-120
Cadmium	9.8	10			53	0.2	2.5	50	106.0	80-120
Calcium										
Chromium	9.8	10	1.4	1.372	53.3	0.2	2.5	50	103.9	80-120
Cobalt										
Copper	9.8	10	1.1	1.078	108.5	0.2	5	100	107.4	80-120
Iron										
Lead	9.8	10			48.8	0.2	2.5	50	97.6	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel	9.8	10			109.6	0.2	5	100	109.6	80-120
Potassium										
Selenium	9.8	10			104.1	0.2	5	100	104.1	80-120
Silver	9.8	10			52.3	0.2	2.5	50	104.6	80-120
Sodium										
Strontium										
Thallium	9.8	10			99.8	0.2	5	100	99.8	80-120
Tin										
Titanium										
Vanadium										
Zinc	9.8	10	7.3	7.154	270.9	0.2	12.5	250	105.5	80-120

Associated samples MP26933: FA13051-4, FA13051-6, FA13051-7

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA13051
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26941
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/13/14

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	-0.0094	<0.50

Associated samples MP26941: FA13051-4, FA13051-6, FA13051-7

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: FA13051
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26941
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/13/14 03/13/14

Metal	FA13018-2 Original	DUP	RPD	QC Limits	FA13018-2 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	3.0	3	100.0	80-120

Associated samples MP26941: FA13051-4, FA13051-6, FA13051-7

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: FA13051
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26941 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/13/14

Metal	FA13018-2 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.0	3	100.0	0.0	20

Associated samples MP26941: FA13051-4, FA13051-6, FA13051-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA13051
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26941
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/13/14

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	80-120

Associated samples MP26941: FA13051-4, FA13051-6, FA13051-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA13051
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26941
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/13/14

Metal	FA13018-2 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP26941: FA13051-4, FA13051-6, FA13051-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

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: FA13051
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	GP23588/GN60491	2.0	0.0	mg/l	50	46.9	93.8	90-110%
Nitrogen, Nitrate	GP23588/GN60491	0.10	0.0	mg/l	2.5	2.63	105.2	90-110%
Nitrogen, Nitrite	GP23588/GN60491	0.10	0.0	mg/l	2.5	2.41	96.4	90-110%
Sulfate	GP23588/GN60491	2.0	0.0	mg/l	50	47.3	94.6	90-110%
Total Organic Carbon	GP23583/GN60481	1.0	0.0	mg/l	15	15.0	100.0	90-110%

Associated Samples:
Batch GP23583: FA13051-2, FA13051-3, FA13051-4
Batch GP23588: FA13051-2, FA13051-3, FA13051-4
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA13051
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	GP23583/GN60481	FA12970-14F	mg/l	18.0	17.8	1.1	0-20%

Associated Samples:
Batch GP23583: FA13051-2, FA13051-3, FA13051-4
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA13051
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	GP23588/GN60491	FA13051-2	mg/l	4.9	50	52.6	95.4	90-110%
Chloride	GP23588/GN60491	FA13051-4	mg/l	2.6	50	51.3	97.4	90-110%
Nitrogen, Nitrate	GP23588/GN60491	FA13051-2	mg/l	0.050 U	2.5	2.6	104.0	90-110%
Nitrogen, Nitrate	GP23588/GN60491	FA13051-4	mg/l	0.050	2.5	2.6	102.0	90-110%
Nitrogen, Nitrite	GP23588/GN60491	FA13051-2	mg/l	0.050 U	2.5	2.5	100.0	90-110%
Nitrogen, Nitrite	GP23588/GN60491	FA13051-4	mg/l	0.050 U	2.5	2.4	96.0	90-110%
Sulfate	GP23588/GN60491	FA13051-2	mg/l	2.9	50	51.3	96.8	90-110%
Sulfate	GP23588/GN60491	FA13051-4	mg/l	4.8	50	53.9	98.2	90-110%
Total Organic Carbon	GP23583/GN60481	FA12970-14F	mg/l	18.0	15	32.4	96.0	90-110%

Associated Samples:
Batch GP23583: FA13051-2, FA13051-3, FA13051-4
Batch GP23588: FA13051-2, FA13051-3, FA13051-4
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA13051
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	GP23588/GN60491	FA13051-2	mg/l	4.9	50	52.5	0.2	20%
Chloride	GP23588/GN60491	FA13051-4	mg/l	2.6	50	51.2	0.2	20%
Nitrogen, Nitrate	GP23588/GN60491	FA13051-2	mg/l	0.050 U	2.5	2.6	0.0	20%
Nitrogen, Nitrate	GP23588/GN60491	FA13051-4	mg/l	0.050	2.5	2.6	0.0	20%
Nitrogen, Nitrite	GP23588/GN60491	FA13051-2	mg/l	0.050 U	2.5	2.3	8.3	20%
Nitrogen, Nitrite	GP23588/GN60491	FA13051-4	mg/l	0.050 U	2.5	2.4	0.0	20%
Sulfate	GP23588/GN60491	FA13051-2	mg/l	2.9	50	51.1	0.4	20%
Sulfate	GP23588/GN60491	FA13051-4	mg/l	4.8	50	53.8	0.2	20%

Associated Samples:
Batch GP23588: FA13051-2, FA13051-3, FA13051-4
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Southeast ACCUTEST LABORATORIES

03/25/14

Technical Report for

United Technologies Corporation

AECOMSCG: Delavan Spray Technologies; Bamberg, SC

60269713

Accutest Job Number: FA13147

Sampling Dates: 03/10/14 - 03/11/14

Report to:

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Total number of pages in report: **71**

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

Harry Behzadi, Ph.D.
Laboratory Director

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Sample Summary

United Technologies Corporation

Job No: FA13147

AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Project No: 60269713

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA13147-1	03/10/14	14:20	RM	03/12/14	AQ	Ground Water	MW-17
FA13147-2	03/10/14	14:20	RM	03/12/14	AQ	Ground Water	MW-17-C
FA13147-3	03/10/14	17:18	RM	03/12/14	AQ	Ground Water	MW-18
FA13147-4	03/11/14	08:25	RM	03/12/14	AQ	Ground Water	MW-8
FA13147-5	03/11/14	10:37	RM	03/12/14	AQ	Ground Water	MW-11
FA13147-6	03/11/14	14:10	RM	03/12/14	AQ	Ground Water	MW-12D

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: United Technologies Corporation **Job No:** FA13147

Site: AECOMSCG: Delavan Spray Technologies; Bamberg, SC **Report Date** 3/25/2014 8:13:14 PM

6 Samples were collected between 03/10/2014 and 03/11/2014 and were received at Accutest on 03/12/2014 properly preserved, at 2 Deg. C and intact. These Samples received an Accutest job number of FA13147. 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:** VM3074

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA12948-10MS, FA12948-10MSD were used as the QC samples indicated.

FA13147-1: Sample was not preserved to a pH < 2.

FA13147-2: Sample was not preserved to a pH < 2.

FA13147-3: Sample was not preserved to a pH < 2.

FA13147-4: Sample was not preserved to a pH < 2.

FA13147-5: Sample was not preserved to a pH < 2.

FA13147-6: Sample was not preserved to a pH < 2.

Matrix: AQ **Batch ID:** VM3080

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA13345-17MS, FA13345-17MSD were used as the QC samples indicated.

FA13147-4: Sample was not preserved to a pH < 2; reported results are considered minimum values.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ **Batch ID:** OP50828

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) FA13180-23MS, FA13180-23MSD were used as the QC samples indicated.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for 3,3'-Dichlorobenzidine, 4-Nitroaniline, 4-Nitrophenol are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

RPD(s) for MSD for 4-Nitroaniline, 4-Nitrophenol are outside control limits for sample OP50828-MSD. Probable cause is due to sample non-homogeneity.

Volatiles by GC By Method RSKSOP-147/175

Matrix: AQ **Batch ID:** GFF911

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA13146-1MS, FA13146-2DUP were used as the QC samples indicated.

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** MP26949

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) FA13224-1DUP, FA13224-1MS, FA13224-1MSD, FA13224-1PS, FA13224-1SDL were used as the QC samples for metals.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for Selenium are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

RPD(s) for Duplicate for Chromium, Selenium are outside control limits for sample MP26949-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Zinc are outside control limits for sample MP26949-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 7470A

Matrix: AQ **Batch ID:** MP26941

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) FA13018-2DUP, FA13018-2MS, FA13018-2MSD, FA13018-2SDL were used as the QC samples for metals.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP23626

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) FA13133-1MS, FA13133-1MSD were used as the QC samples for Chloride, Nitrogen, Nitrite, Sulfate, Nitrogen, Nitrate.

Matrix Spike Recovery(s) for Nitrogen, Nitrate are outside control limits. Spike recovery indicates possible matrix interference. For method performance in a clean matrix, refer to Blank Spike.

Wet Chemistry By Method SM5310 B-11/SW9060A

Matrix: AQ **Batch ID:** GP23601

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) FA13018-2DUP, FA13018-2MS 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: March 25, 2014

Lovelie Metzgar, QA Officer (signature on file)

Summary of Hits

Job Number: FA13147
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 03/10/14 thru 03/11/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA13147-1	**MW-17**					
No hits reported in this sample.						
FA13147-2	**MW-17-C**					
No hits reported in this sample.						
FA13147-3	**MW-18**					
No hits reported in this sample.						
FA13147-4	**MW-8**					
Tetrachloroethylene [a]		114	5.0	1.3	ug/l	SW846 8260B
Trichloroethylene [b]		6.8	1.0	0.30	ug/l	SW846 8260B
Zinc		4.7 J	20	3.0	ug/l	SW846 6010C
FA13147-5	**MW-11**					
No hits reported in this sample.						
FA13147-6	**MW-12D**					
Tetrachloroethylene [b]		40.7	1.0	0.26	ug/l	SW846 8260B
Chloride		12.7	2.0	0.80	mg/l	EPA 300/SW846 9056A
Nitrogen, Nitrate		2.2	0.10	0.050	mg/l	EPA 300/SW846 9056A
Sulfate		3.9	2.0	0.60	mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.1	1.0	0.23	mg/l	SM5310 B-11/SW9060A

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.
(b) Sample was not preserved to a pH < 2.

Southeast ACCUTEST LABORATORIES

4

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MW-17
Lab Sample ID: FA13147-1
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/10/14
Date Received: 03/12/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M72706.D	1	03/14/14	RB	n/a	n/a	VM3074
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
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:	FA13147-1	**Date Sampled:**	03/10/14
Matrix:	AQ - Ground Water	**Date Received:**	03/12/14
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	100%		85-112%
460-00-4	4-Bromofluorobenzene	98%		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-17-C		
Lab Sample ID:	FA13147-2	**Date Sampled:**	03/10/14
Matrix:	AQ - Ground Water	**Date Received:**	03/12/14
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]	M72707.D	1	03/14/14	RB	n/a	n/a	VM3074
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
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-C		
Lab Sample ID:	FA13147-2	**Date Sampled:**	03/10/14
Matrix:	AQ - Ground Water	**Date Received:**	03/12/14
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	94%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	101%		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-18		
Lab Sample ID:	FA13147-3	**Date Sampled:**	03/10/14
Matrix:	AQ - Ground Water	**Date Received:**	03/12/14
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]	M72708.D	1	03/14/14	RB	n/a	n/a	VM3074
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
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-18		
Lab Sample ID:	FA13147-3	**Date Sampled:**	03/10/14
Matrix:	AQ - Ground Water	**Date Received:**	03/12/14
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	96%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	105%		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-8
Lab Sample ID: FA13147-4
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/11/14
Date Received: 03/12/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M72709.D	1	03/14/14	RB	n/a	n/a	VM3074
Run #2 [b]	M72830.D	5	03/20/14	RB	n/a	n/a	VM3080

	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	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	114 [c]	5.0	1.3	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	6.8	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-8		
Lab Sample ID:	FA13147-4	**Date Sampled:**	03/11/14
Matrix:	AQ - Ground Water	**Date Received:**	03/12/14
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%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	94%	94%	79-125%
2037-26-5	Toluene-D8	98%	105%	85-112%
460-00-4	4-Bromofluorobenzene	103%	102%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2; reported results are considered minimum values.
(c) Result is from Run# 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-8
Lab Sample ID: FA13147-4 **Date Sampled:** 03/11/14
Matrix: AQ - Ground Water **Date Received:** 03/12/14
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	X033737.D	1	03/14/14	FS	03/14/14	OP50828	SX1586
Run #2							

	Initial Volume	Final Volume
Run #1	1020 ml	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	49	9.8	ug/l	
95-57-8	2-Chlorophenol	ND	4.9	0.51	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	0.57	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.9	0.49	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	5.3	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.8	2.0	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	0.59	ug/l	
100-02-7	4-Nitrophenol	ND	25	4.9	ug/l	
87-86-5	Pentachlorophenol	ND	25	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	0.61	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.9	0.63	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.9	0.64	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.9	0.70	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.9	0.79	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	0.66	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.9	0.80	ug/l	
100-51-6	Benzyl Alcohol	ND	4.9	0.98	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	0.71	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.9	0.54	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.9	0.68	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-8
Lab Sample ID: FA13147-4 **Date Sampled:** 03/11/14
Matrix: AQ - Ground Water **Date Received:** 03/12/14
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	0.57	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.9	0.53	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	0.56	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.9	0.61	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	4.9	0.88	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.9	0.80	ug/l	
132-64-9	Dibenzofuran	ND	4.9	0.52	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.9	0.98	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.9	0.98	ug/l	
84-66-2	Diethyl phthalate	ND	4.9	0.98	ug/l	
131-11-3	Dimethyl phthalate	ND	4.9	0.62	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.9	1.5	ug/l	
206-44-0	Fluoranthene	ND	4.9	0.69	ug/l	
86-73-7	Fluorene	ND	4.9	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	4.9	0.65	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.9	0.49	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	4.9	0.98	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	0.62	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	1.2	ug/l	
99-09-2	3-Nitroaniline	ND	4.9	0.60	ug/l	
100-01-6	4-Nitroaniline	ND	4.9	0.75	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	0.80	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	42%		14-67%
4165-62-2	Phenol-d5	24%		10-50%
118-79-6	2,4,6-Tribromophenol	94%		33-118%

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-8		
Lab Sample ID:	FA13147-4	**Date Sampled:**	03/11/14
Matrix:	AQ - Ground Water	**Date Received:**	03/12/14
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	76%		42-108%
321-60-8	2-Fluorobiphenyl	87%		40-106%
1718-51-0	Terphenyl-d14	106%		39-121%

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-8
Lab Sample ID: FA13147-4
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/11/14
Date Received: 03/12/14
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	2.3 U	6.0	2.3	ug/l	1	03/14/14	03/14/14	LM	SW846 6010C [2]	SW846 3010A [4]
Arsenic	2.4 U	10	2.4	ug/l	1	03/14/14	03/14/14	LM	SW846 6010C [2]	SW846 3010A [4]
Beryllium	0.50 U	4.0	0.50	ug/l	1	03/14/14	03/14/14	LM	SW846 6010C [2]	SW846 3010A [4]
Cadmium	0.50 U	5.0	0.50	ug/l	1	03/14/14	03/14/14	LM	SW846 6010C [2]	SW846 3010A [4]
Chromium	2.0 U	10	2.0	ug/l	1	03/14/14	03/14/14	LM	SW846 6010C [2]	SW846 3010A [4]
Copper	1.0 U	25	1.0	ug/l	1	03/14/14	03/14/14	LM	SW846 6010C [2]	SW846 3010A [4]
Lead	1.1 U	5.0	1.1	ug/l	1	03/14/14	03/14/14	LM	SW846 6010C [2]	SW846 3010A [4]
Mercury	0.030 U	0.50	0.030	ug/l	1	03/13/14	03/13/14	JL	SW846 7470A [1]	SW846 7470A [3]
Nickel	0.50 U	40	0.50	ug/l	1	03/14/14	03/14/14	LM	SW846 6010C [2]	SW846 3010A [4]
Selenium	2.3 U	10	2.3	ug/l	1	03/14/14	03/14/14	LM	SW846 6010C [2]	SW846 3010A [4]
Silver	0.77 U	5.0	0.77	ug/l	1	03/14/14	03/14/14	LM	SW846 6010C [2]	SW846 3010A [4]
Thallium	2.0 U	10	2.0	ug/l	1	03/14/14	03/14/14	LM	SW846 6010C [2]	SW846 3010A [4]
Zinc	4.7 J	20	3.0	ug/l	1	03/14/14	03/14/14	LM	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA11451
(2) Instrument QC Batch: MA11456
(3) Prep QC Batch: MP26941
(4) Prep QC Batch: MP26949

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-11		
Lab Sample ID:	FA13147-5	**Date Sampled:**	03/11/14
Matrix:	AQ - Ground Water	**Date Received:**	03/12/14
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]	M72710.D	1	03/14/14	RB	n/a	n/a	VM3074
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
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-11		
Lab Sample ID:	FA13147-5	**Date Sampled:**	03/11/14
Matrix:	AQ - Ground Water	**Date Received:**	03/12/14
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	98%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	101%		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-12D
Lab Sample ID: FA13147-6
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/11/14
Date Received: 03/12/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	M72711.D	1	03/14/14	RB	n/a	n/a	VM3074
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	40.7	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
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-12D		
Lab Sample ID:	FA13147-6	**Date Sampled:**	03/11/14
Matrix:	AQ - Ground Water	**Date Received:**	03/12/14
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	99%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	100%		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-12D
Lab Sample ID: FA13147-6
Matrix: AQ - Ground Water
Method: RSKSOP-147/175
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/11/14
Date Received: 03/12/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF22612.D	1	03/13/14	CP	n/a	n/a	GFF911
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
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-12D
Lab Sample ID: FA13147-6
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/11/14
Date Received: 03/12/14
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride	12.7	2.0	0.80	mg/l	1	03/13/14 10:35	VK	EPA 300/SW846 9056A
Nitrogen, Nitrate	2.2	0.10	0.050	mg/l	1	03/13/14 10:35	VK	EPA 300/SW846 9056A
Nitrogen, Nitrite	0.050 U	0.10	0.050	mg/l	1	03/13/14 10:35	VK	EPA 300/SW846 9056A
Sulfate	3.9	2.0	0.60	mg/l	1	03/13/14 10:35	VK	EPA 300/SW846 9056A
Total Organic Carbon	1.1	1.0	0.23	mg/l	1	03/12/14 18:14	FN	SM5310 B-11/SW9060A

RL = Reporting Limit
MDL = Method Detection Limit

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

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA13147

AECOM — Chain of Custody and Analytical Request

Page 1 of 1
Project Number: 60269713
Chain of Custody Number [1]:
LIMS Number:

Project Name / Location: UTC Delavan Spray Technologies Site RI
Client Name: UTC
Collected by: Randy Morgan
Project Manager: Walter Gerold

Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.)	Sample Analysis Requested: (8260B) VOCs	(8270D) SVOCs	(6010C) Metals	(300.0) TDC	(300.0) NH_3	(300.0) NO3D	(300.0) SO4	(300.0) CHL	Dissolved Gases RSK175			COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
MW-17	10-Mar-2014	1420		X			X											A	1
MW-17-c	10-Mar-2014	1420		X			X											A	2
MW-18	10-Mar-2014	1718		X			X											A	3
MW-8	11-Mar-2014	0825		X			X	X	X									A	4
MW-11	11-Mar-2014	1037		X			X											A	5
~~MW-120~~ RM	11-Mar-2014	~~1410~~		X		RM	X	X	X									A(RM)	
MW-120	11-Mar-2014	1410		X			X			X	X	X	X	X	X			A	6

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	Randy Morgan	3-11-14	1500	RM		
2.	RM	03-12-14	930			
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:
Method of Shipment: Fed Ex
Analytical Lab: Accutest
Lab Recipient:
Shipped: XX
Airbill #: 8047 3475 6305
Location: Orlando FL
Date: Time:

20

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

unpreserved VOC's 7-day Hold Time
Nitrate / Nitrite 48 Hour Hold Time

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

5.1 5

FA13147: Chain of Custody
Page 1 of 3

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA13147 CLIENT: AECOM PROJECT: Delaware Spray

DATE/TIME RECEIVED: 03-12-14 930 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

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

AIRBILL NUMBERS: 8047 3475 6305

COOLER INFORMATION

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

TRIP BLANK INFORMATION

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

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.4
- [ ] OBSERVED TEMPS: 2.4
- [ ] CORRECTED TEMPS: 2.0

SAMPLE INFORMATION

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

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS: _____

TECHNICIAN SIGNATURE/DATE: 03-12-14 REVIEWER SIGNATURE/DATE: 03/12/14

NF 12/10

receipt confirmation 122910.xls

5.1 5

FA13147: Chain of Custody

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FA13147: 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: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3074-MB	M72703.D	1	03/14/14	RB	n/a	n/a	VM3074

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

FA13147-1, FA13147-2, FA13147-3, FA13147-4, FA13147-5, FA13147-6

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	2.6	5.0	2.0	ug/l	J
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: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3074-MB	M72703.D	1	03/14/14	RB	n/a	n/a	VM3074

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

FA13147-1, FA13147-2, FA13147-3, FA13147-4, FA13147-5, FA13147-6

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	100%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

Method Blank Summary

Job Number: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3080-MB	M72815.D	1	03/20/14	RB	n/a	n/a	VM3080

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

FA13147-4

CAS No.	Compound	Result	RL	MDL	Units	Q
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	92%	79-125%
2037-26-5	Toluene-D8	105%	85-112%
460-00-4	4-Bromofluorobenzene	104%	83-118%

Blank Spike Summary

Job Number: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3074-BS	M72701.D	1	03/14/14	RB	n/a	n/a	VM3074

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

FA13147-1, FA13147-2, FA13147-3, FA13147-4, FA13147-5, FA13147-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	127	102	50-147
71-43-2	Benzene	25	26.5	106	81-122
75-27-4	Bromodichloromethane	25	25.3	101	79-123
75-25-2	Bromoform	25	25.6	102	66-123
108-90-7	Chlorobenzene	25	26.4	106	82-124
75-00-3	Chloroethane	25	27.7	111	62-144
67-66-3	Chloroform	25	25.6	102	80-124
75-15-0	Carbon disulfide	25	24.3	97	66-148
56-23-5	Carbon tetrachloride	25	27.9	112	76-136
75-34-3	1,1-Dichloroethane	25	26.1	104	81-122
75-35-4	1,1-Dichloroethylene	25	30.1	120	78-137
107-06-2	1,2-Dichloroethane	25	24.2	97	75-125
78-87-5	1,2-Dichloropropane	25	25.1	100	76-124
124-48-1	Dibromochloromethane	25	24.6	98	78-122
156-59-2	cis-1,2-Dichloroethylene	25	28.1	112	78-120
10061-01-5	cis-1,3-Dichloropropene	25	26.6	106	75-118
156-60-5	trans-1,2-Dichloroethylene	25	26.7	107	76-127
10061-02-6	trans-1,3-Dichloropropene	25	24.4	98	80-120
100-41-4	Ethylbenzene	25	25.1	100	81-121
591-78-6	2-Hexanone	125	108	86	61-129
108-10-1	4-Methyl-2-pentanone	125	120	96	66-122
74-83-9	Methyl bromide	25	27.2	109	59-143
74-87-3	Methyl chloride	25	26.9	108	50-159
75-09-2	Methylene chloride	25	29.8	119	69-135
78-93-3	Methyl ethyl ketone	125	130	104	56-143
100-42-5	Styrene	25	23.8	95	78-119
71-55-6	1,1,1-Trichloroethane	25	27.7	111	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	22.3	89	72-120
79-00-5	1,1,2-Trichloroethane	25	23.4	94	76-119
127-18-4	Tetrachloroethylene	25	26.9	108	76-135
108-88-3	Toluene	25	23.9	96	80-120
79-01-6	Trichloroethylene	25	28.6	114	81-126
75-01-4	Vinyl chloride	25	27.4	110	69-159
1330-20-7	Xylene (total)	75	79.7	106	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3074-BS	M72701.D	1	03/14/14	RB	n/a	n/a	VM3074

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

FA13147-1, FA13147-2, FA13147-3, FA13147-4, FA13147-5, FA13147-6

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	94%	79-125%
2037-26-5	Toluene-D8	94%	85-112%
460-00-4	4-Bromofluorobenzene	96%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM3080-BS	M72813.D	1	03/20/14	RB	n/a	n/a	VM3080

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

FA13147-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
127-18-4	Tetrachloroethylene	25	28.0	112	76-135

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	88%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	94%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12948-10MS	M72713.D	5	03/14/14	RB	n/a	n/a	VM3074
FA12948-10MSD	M72714.D	5	03/14/14	RB	n/a	n/a	VM3074
FA12948-10 [a]	M72712.D	5	03/14/14	RB	n/a	n/a	VM3074

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

FA13147-1, FA13147-2, FA13147-3, FA13147-4, FA13147-5, FA13147-6

CAS No.	Compound	FA12948-10 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	130 U		625	602	96	612	98	2	50-147/21
71-43-2	Benzene	5.0 U		125	128	102	123	98	4	81-122/14
75-27-4	Bromodichloromethane	5.0 U		125	123	98	117	94	5	79-123/19
75-25-2	Bromoform	5.0 U		125	119	95	119	95	0	66-123/21
108-90-7	Chlorobenzene	5.0 U		125	125	100	124	99	1	82-124/14
75-00-3	Chloroethane	10 U		125	160	128	153	122	4	62-144/20
67-66-3	Chloroform	5.0 U		125	125	100	120	96	4	80-124/15
75-15-0	Carbon disulfide	10 U		125	120	96	112	90	7	66-148/23
56-23-5	Carbon tetrachloride	5.0 U		125	139	111	130	104	7	76-136/23
75-34-3	1,1-Dichloroethane	13.6		125	141	102	135	97	4	81-122/15
75-35-4	1,1-Dichloroethylene	5.0 U		125	150	120	142	114	5	78-137/18
107-06-2	1,2-Dichloroethane	5.0 U		125	119	95	116	93	3	75-125/14
78-87-5	1,2-Dichloropropane	5.0 U		125	122	98	118	94	3	76-124/14
124-48-1	Dibromochloromethane	5.0 U		125	117	94	112	90	4	78-122/19
156-59-2	cis-1,2-Dichloroethylene	5.0 U		125	129	103	127	102	2	78-120/15
10061-01-5	cis-1,3-Dichloropropene	5.0 U		125	124	99	121	97	2	75-118/23
156-60-5	trans-1,2-Dichloroethylene	12.9		125	144	105	134	97	7	76-127/17
10061-02-6	trans-1,3-Dichloropropene	5.0 U		125	110	88	112	90	2	80-120/22
100-41-4	Ethylbenzene	5.0 U		125	118	94	115	92	3	81-121/14
591-78-6	2-Hexanone	50 U		625	524	84	507	81	3	61-129/18
108-10-1	4-Methyl-2-pentanone	25 U		625	566	91	558	89	1	66-122/16
74-83-9	Methyl bromide	10 U		125	152	122	142	114	7	59-143/19
74-87-3	Methyl chloride	10 U		125	133	106	126	101	5	50-159/19
75-09-2	Methylene chloride	25 U		125	143	114	136	109	5	69-135/16
78-93-3	Methyl ethyl ketone	440		625	1020	93	1020	93	0	56-143/18
100-42-5	Styrene	5.0 U		125	111	89	108	86	3	78-119/23
71-55-6	1,1,1-Trichloroethane	5.0 U		125	134	107	125	100	7	75-130/16
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U		125	112	90	117	94	4	72-120/14
79-00-5	1,1,2-Trichloroethane	5.0 U		125	110	88	109	87	1	76-119/14
127-18-4	Tetrachloroethylene	5.0 U		125	125	100	122	98	2	76-135/16
108-88-3	Toluene	5.0 U		125	111	89	110	88	1	80-120/14
79-01-6	Trichloroethylene	5.0 U		125	133	106	125	100	6	81-126/15
75-01-4	Vinyl chloride	32.2		125	172	112	165	106	4	69-159/18
1330-20-7	Xylene (total)	15 U		375	371	99	358	95	4	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA12948-10MS	M72713.D	5	03/14/14	RB	n/a	n/a	VM3074
FA12948-10MSD	M72714.D	5	03/14/14	RB	n/a	n/a	VM3074
FA12948-10 [a]	M72712.D	5	03/14/14	RB	n/a	n/a	VM3074

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

FA13147-1, FA13147-2, FA13147-3, FA13147-4, FA13147-5, FA13147-6

CAS No.	Surrogate Recoveries	MS	MSD	FA12948-10	Limits
1868-53-7	Dibromofluoromethane	105%	103%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	95%	95%	98%	79-125%
2037-26-5	Toluene-D8	94%	94%	100%	85-112%
460-00-4	4-Bromofluorobenzene	93%	98%	102%	83-118%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13345-17MS	M72834.D	5	03/20/14	RB	n/a	n/a	VM3080
FA13345-17MSD	M72835.D	5	03/20/14	RB	n/a	n/a	VM3080
FA13345-17 [a]	M72819.D	5	03/20/14	RB	n/a	n/a	VM3080

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

FA13147-4

CAS No.	Compound	FA13345-17 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	5.0	U	125	136	109	125	100	8	76-135/16

CAS No.	Surrogate Recoveries	MS	MSD	FA13345-17	Limits
1868-53-7	Dibromofluoromethane	96%	98%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	89%	88%	91%	79-125%
2037-26-5	Toluene-D8	98%	99%	104%	85-112%
460-00-4	4-Bromofluorobenzene	94%	95%	101%	83-118%

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

* = 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: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50828-MB	X033732.D	1	03/14/14	FS	03/14/14	OP50828	SX1586

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13147-4

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: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50828-MB	X033732.D	1	03/14/14	FS	03/14/14	OP50828	SX1586

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13147-4

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	40%	14-67%
4165-62-2	Phenol-d5	24%	10-50%

Method Blank Summary

Job Number: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50828-MB	X033732.D	1	03/14/14	FS	03/14/14	OP50828	SX1586

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13147-4

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	93%	33-118%
4165-60-0	Nitrobenzene-d5	78%	42-108%
321-60-8	2-Fluorobiphenyl	85%	40-106%
1718-51-0	Terphenyl-d14	106%	39-121%

Blank Spike Summary

Job Number: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50828-BS	X033731.D	1	03/14/14	FS	03/14/14	OP50828	SX1586

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13147-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	100	18.9	19	10-69
95-57-8	2-Chlorophenol	50	41.8	84	52-98
59-50-7	4-Chloro-3-methyl phenol	50	41.0	82	54-103
120-83-2	2,4-Dichlorophenol	50	43.4	87	53-103
105-67-9	2,4-Dimethylphenol	50	41.2	82	43-90
51-28-5	2,4-Dinitrophenol	100	90.8	91	44-112
534-52-1	4,6-Dinitro-o-cresol	100	88.2	88	66-121
95-48-7	2-Methylphenol	50	34.7	69	43-90
	3&4-Methylphenol	100	62.7	63	36-88
88-75-5	2-Nitrophenol	50	44.6	89	53-102
100-02-7	4-Nitrophenol	100	22.6	23	18-62
87-86-5	Pentachlorophenol	100	85.1	85	61-115
108-95-2	Phenol	50	15.3	31	19-56
95-95-4	2,4,5-Trichlorophenol	50	44.5	89	62-109
88-06-2	2,4,6-Trichlorophenol	50	46.1	92	59-107
83-32-9	Acenaphthene	50	47.2	94	61-107
208-96-8	Acenaphthylene	50	47.6	95	60-104
120-12-7	Anthracene	50	44.8	90	65-108
56-55-3	Benzo(a)anthracene	50	45.8	92	66-111
50-32-8	Benzo(a)pyrene	50	45.8	92	62-107
205-99-2	Benzo(b)fluoranthene	50	45.9	92	65-114
191-24-2	Benzo(g,h,i)perylene	50	48.3	97	66-116
207-08-9	Benzo(k)fluoranthene	50	48.8	98	65-114
101-55-3	4-Bromophenyl phenyl ether	50	38.0	76	65-109
85-68-7	Butyl benzyl phthalate	50	42.4	85	65-112
100-51-6	Benzyl Alcohol	50	32.4	65	46-94
91-58-7	2-Chloronaphthalene	50	43.5	87	57-103
106-47-8	4-Chloroaniline	50	40.2	80	49-105
86-74-8	Carbazole	50	45.3	91	59-113
218-01-9	Chrysene	50	48.0	96	66-111
111-91-1	bis(2-Chloroethoxy)methane	50	41.0	82	51-102
111-44-4	bis(2-Chloroethyl)ether	50	42.1	84	53-100
108-60-1	bis(2-Chloroisopropyl)ether	50	35.3	71	45-106
7005-72-3	4-Chlorophenyl phenyl ether	50	42.9	86	62-105
95-50-1	1,2-Dichlorobenzene	50	36.8	74	48-97
541-73-1	1,3-Dichlorobenzene	50	36.5	73	45-95

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50828-BS	X033731.D	1	03/14/14	FS	03/14/14	OP50828	SX1586

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13147-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
106-46-7	1,4-Dichlorobenzene	50	38.9	78	45-98
121-14-2	2,4-Dinitrotoluene	50	44.5	89	61-110
606-20-2	2,6-Dinitrotoluene	50	44.9	90	63-108
91-94-1	3,3'-Dichlorobenzidine	50	43.2	86	46-117
53-70-3	Dibenzo(a,h)anthracene	50	47.3	95	66-119
132-64-9	Dibenzofuran	50	45.8	92	61-106
84-74-2	Di-n-butyl phthalate	50	42.3	85	65-107
117-84-0	Di-n-octyl phthalate	50	43.1	86	62-118
84-66-2	Diethyl phthalate	50	42.5	85	64-108
131-11-3	Dimethyl phthalate	50	39.4	79	63-106
117-81-7	bis(2-Ethylhexyl)phthalate	50	44.5	89	61-117
206-44-0	Fluoranthene	50	46.5	93	63-106
86-73-7	Fluorene	50	49.0	98	62-108
118-74-1	Hexachlorobenzene	50	45.1	90	63-108
87-68-3	Hexachlorobutadiene	50	42.6	85	42-102
77-47-4	Hexachlorocyclopentadiene	50	29.8	60	39-102
67-72-1	Hexachloroethane	50	36.0	72	42-100
193-39-5	Indeno(1,2,3-cd)pyrene	50	43.8	88	64-119
78-59-1	Isophorone	50	40.6	81	43-87
91-57-6	2-Methylnaphthalene	50	44.6	89	51-102
88-74-4	2-Nitroaniline	50	38.6	77	54-128
99-09-2	3-Nitroaniline	50	44.2	88	56-106
100-01-6	4-Nitroaniline	50	43.3	87	55-120
91-20-3	Naphthalene	50	45.3	91	47-100
98-95-3	Nitrobenzene	50	38.8	78	50-104
621-64-7	N-Nitroso-di-n-propylamine	50	41.9	84	52-104
86-30-6	N-Nitrosodiphenylamine	50	46.3	93	64-108
85-01-8	Phenanthrene	50	46.9	94	66-110
129-00-0	Pyrene	50	43.7	87	64-113
120-82-1	1,2,4-Trichlorobenzene	50	39.9	80	45-97

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	43%	14-67%
4165-62-2	Phenol-d5	27%	10-50%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50828-BS	X033731.D	1	03/14/14	FS	03/14/14	OP50828	SX1586

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13147-4

CAS No.	Surrogate Recoveries	BSP	Limits
118-79-6	2,4,6-Tribromophenol	91%	33-118%
4165-60-0	Nitrobenzene-d5	79%	42-108%
321-60-8	2-Fluorobiphenyl	88%	40-106%
1718-51-0	Terphenyl-d14	98%	39-121%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50828-MS	X033744.D	1	03/14/14	FS	03/14/14	OP50828	SX1586
OP50828-MSD	X033745.D	1	03/14/14	FS	03/14/14	OP50828	SX1586
FA13180-23	X033743.D	1	03/14/14	FS	03/14/14	OP50828	SX1586

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13147-4

CAS No.	Compound	FA13180-23 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	47 U		189	81.8	43	94.0	50	14	10-69/39
95-57-8	2-Chlorophenol	4.7 U		94.3	79.5	84	81.3	86	2	52-98/25
59-50-7	4-Chloro-3-methyl phenol	4.7 U		94.3	76.4	81	79.4	84	4	54-103/23
120-83-2	2,4-Dichlorophenol	4.7 U		94.3	80.0	85	83.9	89	5	53-103/26
105-67-9	2,4-Dimethylphenol	4.7 U		94.3	79.0	84	83.5	89	6	43-90/27
51-28-5	2,4-Dinitrophenol	24 U		189	172	91	172	91	0	44-112/25
534-52-1	4,6-Dinitro-o-cresol	9.4 U		189	160	85	162	86	1	66-121/23
95-48-7	2-Methylphenol	4.7 U		94.3	70.8	75	76.3	81	7	43-90/28
	3&4-Methylphenol	4.7 U		189	136	72	148	78	8	36-88/28
88-75-5	2-Nitrophenol	4.7 U		94.3	81.1	86	83.0	88	2	53-102/29
100-02-7	4-Nitrophenol	24 U		189	162	86*	ND	0*	200*	18-62/33
87-86-5	Pentachlorophenol	24 U		189	192	102	194	103	1	61-115/26
108-95-2	Phenol	4.7 U		94.3	42.1	45	48.4	51	14	19-56/35
95-95-4	2,4,5-Trichlorophenol	4.7 U		94.3	87.9	93	87.7	93	0	62-109/22
88-06-2	2,4,6-Trichlorophenol	4.7 U		94.3	87.6	93	88.3	94	1	59-107/23
83-32-9	Acenaphthene	4.7 U		94.3	88.3	94	89.8	95	2	61-107/22
208-96-8	Acenaphthylene	4.7 U		94.3	87.7	93	89.8	95	2	60-104/22
120-12-7	Anthracene	4.7 U		94.3	82.7	88	85.6	91	3	65-108/20
56-55-3	Benzo(a)anthracene	4.7 U		94.3	85.4	91	87.7	93	3	66-111/22
50-32-8	Benzo(a)pyrene	4.7 U		94.3	85.6	91	86.1	91	1	62-107/23
205-99-2	Benzo(b)fluoranthene	4.7 U		94.3	85.6	91	87.5	93	2	65-114/23
191-24-2	Benzo(g,h,i)perylene	4.7 U		94.3	88.2	93	88.7	94	1	66-116/23
207-08-9	Benzo(k)fluoranthene	4.7 U		94.3	81.5	86	83.7	89	3	65-114/24
101-55-3	4-Bromophenyl phenyl ether	4.7 U		94.3	72.4	77	74.7	79	3	65-109/23
85-68-7	Butyl benzyl phthalate	4.7 U		94.3	82.5	87	83.6	89	1	65-112/24
100-51-6	Benzyl Alcohol	4.7 U		94.3	74.2	79	79.7	84	7	46-94/27
91-58-7	2-Chloronaphthalene	4.7 U		94.3	80.7	86	82.2	87	2	57-103/23
106-47-8	4-Chloroaniline	4.7 U		94.3	51.0	54	59.0	63	15	49-105/27
86-74-8	Carbazole	4.7 U		94.3	85.7	91	87.3	93	2	59-113/21
218-01-9	Chrysene	4.7 U		94.3	88.0	93	90.0	95	2	66-111/22
111-91-1	bis(2-Chloroethoxy)methane	4.7 U		94.3	75.1	80	77.9	83	4	51-102/28
111-44-4	bis(2-Chloroethyl)ether	4.7 U		94.3	80.4	85	81.1	86	1	53-100/27
108-60-1	bis(2-Chloroisopropyl)ether	4.7 U		94.3	65.9	70	66.6	71	1	45-106/26
7005-72-3	4-Chlorophenyl phenyl ether	4.7 U		94.3	82.4	87	84.4	89	2	62-105/20
95-50-1	1,2-Dichlorobenzene	4.7 U		94.3	72.8	77	73.9	78	1	48-97/24
541-73-1	1,3-Dichlorobenzene	4.7 U		94.3	73.5	78	73.3	78	0	45-95/25

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50828-MS	X033744.D	1	03/14/14	FS	03/14/14	OP50828	SX1586
OP50828-MSD	X033745.D	1	03/14/14	FS	03/14/14	OP50828	SX1586
FA13180-23	X033743.D	1	03/14/14	FS	03/14/14	OP50828	SX1586

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13147-4

CAS No.	Compound	FA13180-23 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
106-46-7	1,4-Dichlorobenzene	4.7 U		94.3	78.1	83	78.4	83	0	45-98/25
121-14-2	2,4-Dinitrotoluene	4.7 U		94.3	82.0	87	83.8	89	2	61-110/21
606-20-2	2,6-Dinitrotoluene	4.7 U		94.3	85.3	90	86.0	91	1	63-108/21
91-94-1	3,3'-Dichlorobenzidine	4.7 U		94.3	ND	0*	ND	0*	nc	46-117/29
53-70-3	Dibenzo(a,h)anthracene	4.7 U		94.3	86.7	92	86.6	92	0	66-119/24
132-64-9	Dibenzofuran	4.7 U		94.3	86.8	92	87.0	92	0	61-106/21
84-74-2	Di-n-butyl phthalate	4.7 U		94.3	78.1	83	79.5	84	2	65-107/21
117-84-0	Di-n-octyl phthalate	4.7 U		94.3	81.7	87	83.0	88	2	62-118/24
84-66-2	Diethyl phthalate	4.7 U		94.3	78.1	83	79.0	84	1	64-108/21
131-11-3	Dimethyl phthalate	4.7 U		94.3	73.0	77	74.7	79	2	63-106/22
117-81-7	bis(2-Ethylhexyl)phthalate	4.7 U		94.3	85.3	90	88.3	94	3	61-117/23
206-44-0	Fluoranthene	4.7 U		94.3	84.0	89	87.1	92	4	63-106/21
86-73-7	Fluorene	4.7 U		94.3	91.0	96	92.4	98	2	62-108/20
118-74-1	Hexachlorobenzene	4.7 U		94.3	85.4	91	88.2	93	3	63-108/22
87-68-3	Hexachlorobutadiene	4.7 U		94.3	85.8	91	87.5	93	2	42-102/28
77-47-4	Hexachlorocyclopentadiene	4.7 U		94.3	56.1	59	53.5	57	5	39-102/29
67-72-1	Hexachloroethane	4.7 U		94.3	75.4	80	75.6	80	0	42-100/29
193-39-5	Indeno(1,2,3-cd)pyrene	4.7 U		94.3	79.6	84	80.0	85	1	64-119/24
78-59-1	Isophorone	4.7 U		94.3	72.8	77	75.9	80	4	43-87/25
91-57-6	2-Methylnaphthalene	4.7 U		94.3	84.5	90	86.9	92	3	51-102/26
88-74-4	2-Nitroaniline	4.7 U		94.3	69.1	73	72.6	77	5	54-128/24
99-09-2	3-Nitroaniline	4.7 U		94.3	55.9	59	61.8	66	10	56-106/27
100-01-6	4-Nitroaniline	4.7 U		94.3	26.9	29*	35.5	38*	28*	55-120/24
91-20-3	Naphthalene	4.7 U		94.3	86.1	91	88.1	93	2	47-100/29
98-95-3	Nitrobenzene	4.7 U		94.3	68.6	73	70.6	75	3	50-104/28
621-64-7	N-Nitroso-di-n-propylamine	4.7 U		94.3	79.7	84	81.9	87	3	52-104/25
86-30-6	N-Nitrosodiphenylamine	4.7 U		94.3	86.9	92	89.0	94	2	64-108/23
85-01-8	Phenanthrene	4.7 U		94.3	85.9	91	88.4	94	3	66-110/21
129-00-0	Pyrene	4.7 U		94.3	81.2	86	84.1	89	4	64-113/23
120-82-1	1,2,4-Trichlorobenzene	4.7 U		94.3	78.2	83	79.2	84	1	45-97/28

CAS No.	Surrogate Recoveries	MS	MSD	FA13180-23	Limits
367-12-4	2-Fluorophenol	54%	58%	43%	14-67%
4165-62-2	Phenol-d5	39%	45%	26%	10-50%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50828-MS	X033744.D	1	03/14/14	FS	03/14/14	OP50828	SX1586
OP50828-MSD	X033745.D	1	03/14/14	FS	03/14/14	OP50828	SX1586
FA13180-23	X033743.D	1	03/14/14	FS	03/14/14	OP50828	SX1586

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13147-4

CAS No.	Surrogate Recoveries	MS	MSD	FA13180-23	Limits
118-79-6	2,4,6-Tribromophenol	96%	99%	109%	33-118%
4165-60-0	Nitrobenzene-d5	77%	78%	81%	42-108%
321-60-8	2-Fluorobiphenyl	91%	91%	90%	40-106%
1718-51-0	Terphenyl-d14	98%	101%	110%	39-121%

* = Outside of Control Limits.

Southeast ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF911-MB	FF22607.D	1	03/13/14	CP	n/a	n/a	GFF911

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

FA13147-6

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: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF911-BS	FF22608.D	1	03/13/14	CP	n/a	n/a	GFF911

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

FA13147-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	108	104	96	61-144
74-84-0	Ethane	219	201	92	64-143
74-85-1	Ethene	290	271	93	64-141

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13146-1MS	FF22620.D	1	03/13/14	CP	n/a	n/a	GFF911
FA13146-1	FF22609.D	1	03/13/14	CP	n/a	n/a	GFF911

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

FA13147-6

CAS No.	Compound	FA13146-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	38.5		108	148	101	61-144
74-84-0	Ethane	ND		219	230	105	64-143
74-85-1	Ethene	ND		290	310	107	64-141

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA13147
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13146-2DUP	FF22619.D	1	03/13/14	CP	n/a	n/a	GFF911
FA13146-2	FF22610.D	1	03/13/14	CP	n/a	n/a	GFF911

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

FA13147-6

CAS No.	Compound	FA13146-2 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	8.7		8.9		2	33
74-84-0	Ethane	ND		ND		nc	20
74-85-1	Ethene	ND		ND		nc	19

* = Outside of Control Limits.

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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: FA13147
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26941 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/13/14

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	-0.0094	<0.50

Associated samples MP26941: FA13147-4

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: FA13147
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26941
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date:			03/13/14					03/13/14	
Metal	FA13018-2 Original	DUP	RPD	QC Limits	FA13018-2 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	3.0	3	100.0	80-120

Associated samples MP26941: FA13147-4

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: FA13147
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26941 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/13/14

Metal	FA13018-2 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.0	3	100.0	0.0	20

Associated samples MP26941: FA13147-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA13147
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26941
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/13/14

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	80-120

Associated samples MP26941: FA13147-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA13147
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26941
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/13/14

Metal	FA13018-2 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP26941: FA13147-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA13147
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26949
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:				03/14/14		03/14/14	
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Aluminum	200	15	15				
Antimony	6.0	2	2.3	0.40	<6.0	0.80	<6.0
Arsenic	10	2	2.4	-0.10	<10	-0.90	<10
Barium	200	1	1				
Beryllium	4.0	.5	.5	-0.10	<4.0	-0.10	<4.0
Cadmium	5.0	.5	.5	0.0	<5.0	0.0	<5.0
Calcium	1000	50	50				
Chromium	10	1	2	0.10	<10	0.20	<10
Cobalt	50	.5	.5				
Copper	25	1	1	0.10	<25	-0.10	<25
Iron	300	17	17				
Lead	5.0	1.1	1.1	-0.30	<5.0	-0.30	<5.0
Magnesium	5000	50	56				
Manganese	15	.5	1				
Molybdenum	50	.5	.5				
Nickel	40	.5	.5	0.0	<40	-0.10	<40
Potassium	10000	200	200				
Selenium	10	2.3	2.3	0.40	<10	-0.20	<10
Silver	10	.65	.77	0.0	<10	-0.30	<10
Sodium	10000	500	500				
Strontium	10	.4	.4				
Thallium	10	1.5	2	-2.0	<10	-3.5	<10
Tin	50	.7	1				
Titanium	10	.9	1				
Vanadium	50	.5	.5				
Zinc	20	3	3	1.7	<20	6.2	<20

Associated samples MP26949: FA13147-4

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: FA13147
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26949
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:		03/14/14				03/14/14		
Metal	FA13224-1 Original	DUP	RPD	QC Limits	FA13224-1 Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr								
Antimony	0.0	0.0	NC	0-20	0.0	506	500	101.2	80-120
Arsenic	0.0	0.0	NC	0-20	0.0	2030	2000	101.5	80-120
Barium	anr								
Beryllium	0.0	0.0	NC	0-20	0.0	50.3	50	100.6	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	49.5	50	99.0	80-120
Calcium									
Chromium	0.0	1.2	200.0(a)	0-20	0.0	203	200	101.5	80-120
Cobalt	anr								
Copper	0.0	0.0	NC	0-20	0.0	259	250	103.6	80-120
Iron									
Lead	0.0	0.0	NC	0-20	0.0	486	500	97.2	80-120
Magnesium									
Manganese	anr								
Molybdenum	anr								
Nickel	0.0	0.0	NC	0-20	0.0	501	500	100.2	80-120
Potassium									
Selenium	0.0	2.9	200.0(a)	0-20	0.0	999	2000	50.0N(b)	80-120
Silver	0.0	0.0	NC	0-20	0.0	51.3	50	102.6	80-120
Sodium	anr								
Strontium									
Thallium	0.0	0.0	NC	0-20	0.0	1920	2000	96.0	80-120
Tin									
Titanium									
Vanadium									
Zinc	5.7	6.2	8.4	0-20	5.7	502	500	99.3	80-120

Associated samples MP26949: FA13147-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.
(b) Spike recovery indicates possible matrix interference.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA13147
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26949
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/14/14

Metal	FA13224-1 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	0.0	498	500	99.6	1.6	20
Arsenic	0.0	2000	2000	100.0	1.5	20
Barium	anr					
Beryllium	0.0	49.5	50	99.0	1.6	20
Cadmium	0.0	48.6	50	97.2	1.8	20
Calcium						
Chromium	0.0	198	200	99.0	2.5	20
Cobalt	anr					
Copper	0.0	253	250	101.2	2.3	20
Iron						
Lead	0.0	481	500	96.2	1.0	20
Magnesium						
Manganese	anr					
Molybdenum	anr					
Nickel	0.0	490	500	98.0	2.2	20
Potassium						
Selenium	0.0	1060	2000	53.0N(a)	5.9	20
Silver	0.0	49.4	50	98.8	3.8	20
Sodium	anr					
Strontium						
Thallium	0.0	1890	2000	94.5	1.6	20
Tin						
Titanium						
Vanadium						
Zinc	5.7	491	500	97.1	2.2	20

Associated samples MP26949: FA13147-4

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) Spike recovery indicates possible matrix interference.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA13147
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26949
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/14/14

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr			
Antimony	494	500	98.8	80-120
Arsenic	1970	2000	98.5	80-120
Barium	anr			
Beryllium	50.5	50	101.0	80-120
Cadmium	50.5	50	101.0	80-120
Calcium				
Chromium	205	200	102.5	80-120
Cobalt	anr			
Copper	254	250	101.6	80-120
Iron				
Lead	481	500	96.2	80-120
Magnesium				
Manganese	anr			
Molybdenum	anr			
Nickel	515	500	103.0	80-120
Potassium				
Selenium	1950	2000	97.5	80-120
Silver	48.8	50	97.6	80-120
Sodium	anr			
Strontium				
Thallium	1930	2000	96.5	80-120
Tin				
Titanium				
Vanadium				
Zinc	509	500	101.8	80-120

Associated samples MP26949: FA13147-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA13147
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26949
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/14/14

Metal	FA13224-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	0.00	0.00	NC	0-10
Arsenic	0.00	0.00	NC	0-10
Barium	anr			
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	0.00	0.00	NC	0-10
Cobalt	anr			
Copper	0.00	0.00	NC	0-10
Iron				
Lead	0.00	0.00	NC	0-10
Magnesium				
Manganese	anr			
Molybdenum	anr			
Nickel	0.00	0.00	NC	0-10
Potassium				
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium	anr			
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium				
Zinc	5.70	15.6	173.7(a)	0-10

Associated samples MP26949: FA13147-4

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: FA13147
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26949
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/14/14

Metal	Sample ml	Final ml	FA13224-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10			99.8	0.2	5	100	99.8	80-120
Arsenic	9.8	10			102.6	0.2	5	100	102.6	80-120
Barium										
Beryllium	9.8	10			50.2	0.2	2.5	50	100.4	80-120
Cadmium	9.8	10			49.5	0.2	2.5	50	99.0	80-120
Calcium										
Chromium	9.8	10			52.1	0.2	2.5	50	104.2	80-120
Cobalt										
Copper	9.8	10			101.2	0.2	5	100	101.2	80-120
Iron										
Lead	9.8	10			49	0.2	2.5	50	98.0	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel	9.8	10			99.6	0.2	5	100	99.6	80-120
Potassium										
Selenium	9.8	10			98.1	0.2	5	100	98.1	80-120
Silver	9.8	10			52.9	0.2	2.5	50	105.8	80-120
Sodium										
Strontium										
Thallium	9.8	10			90.4	0.2	5	100	90.4	80-120
Tin										
Titanium										
Vanadium										
Zinc	9.8	10	5.7	5.586	256	0.2	12.5	250	100.2	80-120

Associated samples MP26949: FA13147-4

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

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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: FA13147
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	GP23626/GN60582	2.0	0.0	mg/l	50	47.4	94.8	90-110%
Fluoride	GP23626/GN60582			mg/l	2.5	2.27	90.8	90-110%
Nitrogen, Nitrate	GP23626/GN60582	0.10	0.0	mg/l	2.5	2.46	98.4	90-110%
Nitrogen, Nitrite	GP23626/GN60582	0.10	0.0	mg/l	2.5	2.41	96.4	90-110%
Sulfate	GP23626/GN60582	2.0	0.0	mg/l	50	48.2	96.4	90-110%
Total Organic Carbon	GP23601/GN60536	1.0	0.0	mg/l	15	15.0	100.0	90-110%

Associated Samples:
Batch GP23601: FA13147-6
Batch GP23626: FA13147-6
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA13147
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	GP23601/GN60536	FA13018-2	mg/l	0.42	0.47	11.2	0-20%

Associated Samples:
Batch GP23601: FA13147-6
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA13147
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	GP23626/GN60585	FA13133-1	mg/l	22.3	50	72.7	100.8	90-110%
Fluoride	GP23626/GN60585	FA13133-1	mg/l	0.71	2.5	3.3	103.6	90-110%
Nitrogen, Nitrate	GP23626/GN60585	FA13133-1	mg/l	1.6	2.5	4.5	116.0N(a)	90-110%
Nitrogen, Nitrite	GP23626/GN60585	FA13133-1	mg/l	0.050 U	2.5	2.6	104.0	90-110%
Sulfate	GP23626/GN60585	FA13133-1	mg/l	13.0	50	64.4	102.8	90-110%
Total Organic Carbon	GP23601/GN60536	FA13018-2	mg/l	0.42	15	16.4	106.5	90-110%

Associated Samples:
Batch GP23601: FA13147-6
Batch GP23626: FA13147-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery indicates possible matrix interference.

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA13147
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	GP23626/GN60585	FA13133-1	mg/l	22.3	50	72.4	0.4	20%
Fluoride	GP23626/GN60585	FA13133-1	mg/l	0.71	2.5	3.2	3.1	20%
Nitrogen, Nitrate	GP23626/GN60585	FA13133-1	mg/l	1.6	2.5	4.1	9.3	20%
Nitrogen, Nitrite	GP23626/GN60585	FA13133-1	mg/l	0.050 U	2.5	2.6	0.0	20%
Sulfate	GP23626/GN60585	FA13133-1	mg/l	13.0	50	63.0	2.2	20%

Associated Samples:
Batch GP23626: FA13147-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

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ACCUTEST LABORATORIES

03/24/14

Technical Report for

United Technologies Corporation

AECOMSCG: Delavan Spray Technologies; Bamberg, SC

60314964

Accutest Job Number: FA13211

Sampling Date: 03/11/14

Report to:

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Total number of pages in report: **87**

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Harry Behzadi, Ph.D.
Laboratory Director

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Sample Summary

United Technologies Corporation

Job No: FA13211

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA13211-1	03/11/14	18:40	RM	03/13/14	AQ	Ground Water	MW-21
FA13211-2	03/11/14	18:40	RM	03/13/14	AQ	Ground Water	MW-21-C
FA13211-3	03/11/14	08:37	RM	03/13/14	AQ	Ground Water	MW-21D
FA13211-4	03/11/14	10:17	RM	03/13/14	AQ	Ground Water	MW-6
FA13211-5	03/11/14	12:13	RM	03/13/14	AQ	Ground Water	MW-13D
FA13211-6	03/11/14	14:32	RM	03/13/14	AQ	Ground Water	MW-22D

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: United Technologies Corporation **Job No:** FA13211

Site: AECOMSCG: Delavan Spray Technologies; Bamberg, SC **Report Date** 3/24/2014 3:12:03 PM

6 Samples were collected on 03/11/2014 and were received at Accutest SE on 03/13/2014 properly preserved, at 3 Deg. C and intact. These Samples received an Accutest job number of FA13211. 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:** VB3949

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA13063-17MS, FA13063-17MSD were used as the QC samples indicated.

FA13211-3: Sample was not preserved to a pH < 2.

FA13211-6: Sample was not preserved to a pH < 2.

Matrix: AQ **Batch ID:** VI336

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA13063-4MS, FA13063-4MSD were used as the QC samples indicated.

FA13211-1: Sample was not preserved to a pH < 2.

FA13211-2: Sample was not preserved to a pH < 2.

FA13211-3: Sample was not preserved to a pH < 2.

FA13211-4: Sample was not preserved to a pH < 2.

FA13211-5: Sample was not preserved to a pH < 2.

FA13211-6: Sample was not preserved to a pH < 2.

FA13211-1 for Methylene chloride: Suspected laboratory contaminant.

FA13211-3 for Methylene chloride: Suspected laboratory contaminant.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ **Batch ID:** OP50828

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) FA13180-23MS, FA13180-23MSD were used as the QC samples indicated.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for 3,3'-Dichlorobenzidine, 4-Nitroaniline, 4-Nitrophenol are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

RPD(s) for MSD for 4-Nitroaniline, 4-Nitrophenol are outside control limits for sample OP50828-MSD. Probable cause is due to sample non-homogeneity.

Sample(s) FA13211-3 has surrogates outside control limits. Probable cause is due to matrix interference.

FA13211-3: Confirmation run.

Matrix: AQ **Batch ID:** OP50883

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) FA13211-3 have surrogates outside control limits. Probable cause is due to matrix interference.

FA13211-3 for Phenol-d5: Outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.

FA13211-3 for 2-Fluorophenol: Outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.

Volatiles by GC By Method RSKSOP-147/175

Matrix: AQ **Batch ID:** GFF912

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA13200-1MS, FA13211-5DUP were used as the QC samples indicated.

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** MP26964

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) FA13211-1DUP, FA13211-1MS, FA13211-1MSD, FA13211-1PS, FA13211-1SDL were used as the QC samples for metals.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for Antimony are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

RPD(s) for Serial Dilution for Arsenic, Beryllium, Chromium, Lead, Zinc are outside control limits for sample MP26964-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 7470A

Matrix: AQ **Batch ID:** MP26948

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) FA13211-1DUP, FA13211-1MS, FA13211-1MSD, FA13211-1SDL were used as the QC samples for metals.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP23612

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) FA13201-3MS, FA13201-3MSD were used as the QC samples for Chloride, Nitrogen, Nitrite, Sulfate, Nitrogen, Nitrate.

Matrix Spike Recovery(s) for Nitrogen, Nitrate are outside control limits. Spike recovery indicates possible matrix interference. For method performance in a clean matrix, refer to Blank Spike.

FA13211-5 for Nitrogen, Nitrate: Sample analyzed beyond hold time.

FA13211-5 for Nitrogen, Nitrite: Sample analyzed beyond hold time.

Wet Chemistry By Method SM5310 B-11/SW9060A

Matrix: AQ **Batch ID:** GP23610

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) FA13192-1DUP, FA13192-1MS were used as the QC samples for Total Organic Carbon.

Matrix Spike Recovery(s) for Total Organic Carbon are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

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:

_____

Lovelie Metzgar, QA Officer (signature on file)

Date: March 24, 2014

Summary of Hits

Job Number: FA13211
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 03/11/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA13211-1	**MW-21**					
cis-1,2-Dichloroethylene [a]		466	200	65	ug/l	SW846 8260B
Methylene chloride [b]		765 J	1000	400	ug/l	SW846 8260B
Tetrachloroethylene [a]		16300	200	51	ug/l	SW846 8260B
Trichloroethylene [a]		209	200	60	ug/l	SW846 8260B
1,2-Dichlorobenzene		9.1	4.9	0.49	ug/l	SW846 8270D
Fluorene		0.61 J	4.9	0.49	ug/l	SW846 8270D
2-Methylnaphthalene		7.4	4.9	0.52	ug/l	SW846 8270D
Naphthalene		2.4 J	4.9	0.49	ug/l	SW846 8270D
Arsenic		3.2 J	10	2.4	ug/l	SW846 6010C
Beryllium		1.5 J	4.0	0.50	ug/l	SW846 6010C
Lead		6.7	5.0	1.1	ug/l	SW846 6010C
Zinc		10.9 J	20	3.0	ug/l	SW846 6010C
FA13211-2	**MW-21-C**					
No hits reported in this sample.						
FA13211-3	**MW-21D**					
Bromodichloromethane [a]		10.4	2.0	0.52	ug/l	SW846 8260B
Chloroform [a]		131	2.0	0.62	ug/l	SW846 8260B
Carbon disulfide [a]		1.8 J	4.0	0.40	ug/l	SW846 8260B
1,1-Dichloroethylene [a]		1.5 J	2.0	0.51	ug/l	SW846 8260B
Dibromochloromethane [a]		1.8 J	2.0	0.72	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [a]		0.84 J	2.0	0.65	ug/l	SW846 8260B
Methylene chloride [b]		13.3	10	4.0	ug/l	SW846 8260B
Tetrachloroethylene [a]		283	5.0	1.3	ug/l	SW846 8260B
Toluene [a]		0.41 J	2.0	0.40	ug/l	SW846 8260B
Chromium		10.5	10	2.0	ug/l	SW846 6010C
Selenium		6.5 J	10	2.3	ug/l	SW846 6010C
Zinc		7.1 J	20	3.0	ug/l	SW846 6010C
FA13211-4	**MW-6**					
Chloroform [a]		0.59 J	1.0	0.31	ug/l	SW846 8260B
Zinc		18.4 J	20	3.0	ug/l	SW846 6010C
FA13211-5	**MW-13D**					
Chloroform [a]		0.60 J	1.0	0.31	ug/l	SW846 8260B
1,1-Dichloroethylene [a]		3.6	1.0	0.25	ug/l	SW846 8260B
1,1,1-Trichloroethane [a]		1.0	1.0	0.34	ug/l	SW846 8260B
Tetrachloroethylene [a]		94.1	1.0	0.26	ug/l	SW846 8260B

Summary of Hits

Job Number: FA13211
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 03/11/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Methane		7.5	0.50	0.16	ug/l	RSKSOP-147/175
Chloride		9.8	2.0	0.80	mg/l	EPA 300/SW846 9056A
Nitrogen, Nitrate [c]		1.7	0.10	0.050	mg/l	EPA 300/SW846 9056A
Sulfate		0.66 J	2.0	0.60	mg/l	EPA 300/SW846 9056A
FA13211-6	**MW-22D**					
Bromodichloromethane [a]		7.2	1.0	0.26	ug/l	SW846 8260B
Chloroform [a]		180	2.5	0.78	ug/l	SW846 8260B
1,1-Dichloroethylene [a]		2.5	1.0	0.25	ug/l	SW846 8260B
Dibromochloromethane [a]		0.68 J	1.0	0.36	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [a]		0.35 J	1.0	0.33	ug/l	SW846 8260B
Tetrachloroethylene [a]		99.8	1.0	0.26	ug/l	SW846 8260B
Trichloroethylene [a]		0.33 J	1.0	0.30	ug/l	SW846 8260B

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Suspected laboratory contaminant.
(c) Sample analyzed beyond hold time.

Southeast ACCUTEST LABORATORIES

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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MW-21
Lab Sample ID: FA13211-1
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/11/14
Date Received: 03/13/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I19097.D	200	03/17/14	WV	n/a	n/a	VI336
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	466	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 [b]	765	1000	400	ug/l	J
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	16300	200	51	ug/l	
108-88-3	Toluene	ND	200	40	ug/l	
79-01-6	Trichloroethylene	209	200	60	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-21		
Lab Sample ID:	FA13211-1	**Date Sampled:**	03/11/14
Matrix:	AQ - Ground Water	**Date Received:**	03/13/14
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	101%		83-118%
17060-07-0	1,2-Dichloroethane-D4	99%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	103%		83-118%

(a) Sample was not preserved to a pH < 2.
(b) Suspected laboratory contaminant.

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-21
Lab Sample ID: FA13211-1 **Date Sampled:** 03/11/14
Matrix: AQ - Ground Water **Date Received:** 03/13/14
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	X033738.D	1	03/14/14	FS	03/14/14	OP50828	SX1586
Run #2							

	Initial Volume	Final Volume
Run #1	1020 ml	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	49	9.8	ug/l	
95-57-8	2-Chlorophenol	ND	4.9	0.51	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	0.57	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.9	0.49	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	5.3	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.8	2.0	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	0.59	ug/l	
100-02-7	4-Nitrophenol	ND	25	4.9	ug/l	
87-86-5	Pentachlorophenol	ND	25	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	0.61	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.9	0.63	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.9	0.64	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.9	0.70	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.9	0.79	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	0.66	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.9	0.80	ug/l	
100-51-6	Benzyl Alcohol	ND	4.9	0.98	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	0.71	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.9	0.54	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.9	0.68	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-21
Lab Sample ID: FA13211-1 **Date Sampled:** 03/11/14
Matrix: AQ - Ground Water **Date Received:** 03/13/14
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	0.57	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.9	0.53	ug/l	
95-50-1	1,2-Dichlorobenzene	9.1	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	0.56	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.9	0.61	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	4.9	0.88	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.9	0.80	ug/l	
132-64-9	Dibenzofuran	ND	4.9	0.52	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.9	0.98	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.9	0.98	ug/l	
84-66-2	Diethyl phthalate	ND	4.9	0.98	ug/l	
131-11-3	Dimethyl phthalate	ND	4.9	0.62	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.9	1.5	ug/l	
206-44-0	Fluoranthene	ND	4.9	0.69	ug/l	
86-73-7	Fluorene	0.61	4.9	0.49	ug/l	J
118-74-1	Hexachlorobenzene	ND	4.9	0.65	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.9	0.49	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	4.9	0.98	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	0.62	ug/l	
78-59-1	Isophorone	ND	4.9	0.49	ug/l	
91-57-6	2-Methylnaphthalene	7.4	4.9	0.52	ug/l	
88-74-4	2-Nitroaniline	ND	4.9	1.2	ug/l	
99-09-2	3-Nitroaniline	ND	4.9	0.60	ug/l	
100-01-6	4-Nitroaniline	ND	4.9	0.75	ug/l	
91-20-3	Naphthalene	2.4	4.9	0.49	ug/l	J
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	0.80	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	19%		14-67%
4165-62-2	Phenol-d5	12%		10-50%
118-79-6	2,4,6-Tribromophenol	44%		33-118%

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-21		
Lab Sample ID:	FA13211-1	**Date Sampled:**	03/11/14
Matrix:	AQ - Ground Water	**Date Received:**	03/13/14
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	69%		42-108%
321-60-8	2-Fluorobiphenyl	76%		40-106%
1718-51-0	Terphenyl-d14	81%		39-121%

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-21
Lab Sample ID: FA13211-1
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/11/14
Date Received: 03/13/14
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	2.3 U	6.0	2.3	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Arsenic	3.2 J	10	2.4	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Beryllium	1.5 J	4.0	0.50	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Cadmium	0.50 U	5.0	0.50	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Chromium	2.0 U	10	2.0	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Copper	1.0 U	25	1.0	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Lead	6.7	5.0	1.1	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Mercury	0.030 U	0.50	0.030	ug/l	1	03/14/14	03/14/14	JL	SW846 7470A [1]	SW846 7470A [3]
Nickel	0.50 U	40	0.50	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Selenium	2.3 U	10	2.3	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Silver	0.77 U	5.0	0.77	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Thallium	2.0 U	10	2.0	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Zinc	10.9 J	20	3.0	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA11455
(2) Instrument QC Batch: MA11464
(3) Prep QC Batch: MP26948
(4) Prep QC Batch: MP26964

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-C		
Lab Sample ID:	FA13211-2	**Date Sampled:**	03/11/14
Matrix:	AQ - Ground Water	**Date Received:**	03/13/14
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]	I19098.D	1	03/17/14	WV	n/a	n/a	VI336
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
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-21-C		
Lab Sample ID:	FA13211-2	**Date Sampled:**	03/11/14
Matrix:	AQ - Ground Water	**Date Received:**	03/13/14
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	99%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	103%		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-21D		
Lab Sample ID:	FA13211-3	**Date Sampled:**	03/11/14
Matrix:	AQ - Ground Water	**Date Received:**	03/13/14
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]	I19099.D	2	03/17/14	WV	n/a	n/a	VI336
Run #2 [a]	B096916.D	5	03/18/14	WV	n/a	n/a	VB3949

	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	50	21	ug/l	
71-43-2	Benzene	ND	2.0	0.49	ug/l	
75-27-4	Bromodichloromethane	10.4	2.0	0.52	ug/l	
75-25-2	Bromoform	ND	2.0	0.77	ug/l	
108-90-7	Chlorobenzene	ND	2.0	0.48	ug/l	
75-00-3	Chloroethane	ND	4.0	1.0	ug/l	
67-66-3	Chloroform	131	2.0	0.62	ug/l	
75-15-0	Carbon disulfide	1.8	4.0	0.40	ug/l	J
56-23-5	Carbon tetrachloride	ND	2.0	0.79	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	0.51	ug/l	
75-35-4	1,1-Dichloroethylene	1.5	2.0	0.51	ug/l	J
107-06-2	1,2-Dichloroethane	ND	2.0	0.48	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.71	ug/l	
124-48-1	Dibromochloromethane	1.8	2.0	0.72	ug/l	J
156-59-2	cis-1,2-Dichloroethylene	0.84	2.0	0.65	ug/l	J
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.42	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.69	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.42	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.56	ug/l	
591-78-6	2-Hexanone	ND	20	4.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	2.0	ug/l	
74-83-9	Methyl bromide	ND	4.0	1.1	ug/l	
74-87-3	Methyl chloride	ND	4.0	1.1	ug/l	
75-09-2	Methylene chloride [b]	13.3	10	4.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	3.0	ug/l	
100-42-5	Styrene	ND	2.0	0.47	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.67	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.55	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.63	ug/l	
127-18-4	Tetrachloroethylene	283 [c]	5.0	1.3	ug/l	
108-88-3	Toluene	0.41	2.0	0.40	ug/l	J
79-01-6	Trichloroethylene	ND	2.0	0.60	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-21D		
Lab Sample ID:	FA13211-3	**Date Sampled:**	03/11/14
Matrix:	AQ - Ground Water	**Date Received:**	03/13/14
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	2.0	0.65	ug/l	
1330-20-7	Xylene (total)	ND	6.0	1.3	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	95%	79-125%
2037-26-5	Toluene-D8	100%	101%	85-112%
460-00-4	4-Bromofluorobenzene	103%	98%	83-118%

(a) Sample was not preserved to a pH < 2.
(b) Suspected laboratory contaminant.
(c) Result is from Run# 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-21D
Lab Sample ID: FA13211-3
Matrix: AQ - Ground Water
Method: SW846 8270D SW846 3510C
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/11/14
Date Received: 03/13/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0677258.D	1	03/21/14	NAF	03/18/14	OP50883	SL3420
Run #2 [a]	X033739.D	1	03/14/14	FS	03/14/14	OP50828	SX1586

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2	1020 ml	1.0 ml

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	48	9.6	ug/l	
95-57-8	2-Chlorophenol	ND	4.8	0.50	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.8	0.48	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.8	0.55	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	0.48	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	5.2	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.6	1.9	ug/l	
95-48-7	2-Methylphenol	ND	4.8	0.48	ug/l	
	3&4-Methylphenol	ND	4.8	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	0.57	ug/l	
100-02-7	4-Nitrophenol	ND	24	4.8	ug/l	
87-86-5	Pentachlorophenol	ND	24	4.8	ug/l	
108-95-2	Phenol	ND	4.8	0.48	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.8	0.94	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	0.53	ug/l	
83-32-9	Acenaphthene	ND	4.8	0.48	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.48	ug/l	
120-12-7	Anthracene	ND	4.8	0.59	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.62	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.63	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.69	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.77	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.49	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	4.8	0.64	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.8	0.78	ug/l	
100-51-6	Benzyl Alcohol	ND	4.8	0.96	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.8	0.53	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	0.48	ug/l	
86-74-8	Carbazole	ND	4.8	0.59	ug/l	
218-01-9	Chrysene	ND	4.8	0.69	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.8	0.53	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.8	0.66	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-21D
Lab Sample ID: FA13211-3 **Date Sampled:** 03/11/14
Matrix: AQ - Ground Water **Date Received:** 03/13/14
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	4.8	0.56	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.8	0.52	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.8	0.48	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.8	0.48	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.8	0.48	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	4.8	0.55	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.8	0.60	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	4.8	0.87	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.78	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.51	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.8	0.96	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.8	0.96	ug/l	
84-66-2	Diethyl phthalate	ND	4.8	0.96	ug/l	
131-11-3	Dimethyl phthalate	ND	4.8	0.61	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.8	1.5	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.67	ug/l	
86-73-7	Fluorene	ND	4.8	0.48	ug/l	
118-74-1	Hexachlorobenzene	ND	4.8	0.64	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.8	0.48	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	4.8	0.96	ug/l	
67-72-1	Hexachloroethane	ND	4.8	0.48	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.60	ug/l	
78-59-1	Isophorone	ND	4.8	0.48	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.51	ug/l	
88-74-4	2-Nitroaniline	ND	4.8	1.1	ug/l	
99-09-2	3-Nitroaniline	ND	4.8	0.58	ug/l	
100-01-6	4-Nitroaniline	ND	4.8	0.73	ug/l	
91-20-3	Naphthalene	ND	4.8	0.48	ug/l	
98-95-3	Nitrobenzene	ND	4.8	0.48	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.8	0.48	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	0.51	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.57	ug/l	
129-00-0	Pyrene	ND	4.8	0.78	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	0% [b]	0%	14-67%
4165-62-2	Phenol-d5	0% [b]	0%	10-50%
118-79-6	2,4,6-Tribromophenol	41%	39%	33-118%

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-21D		
Lab Sample ID:	FA13211-3	**Date Sampled:**	03/11/14
Matrix:	AQ - Ground Water	**Date Received:**	03/13/14
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	67%	69%	42-108%
321-60-8	2-Fluorobiphenyl	70%	281%	40-106%
1718-51-0	Terphenyl-d14	68%	80%	39-121%

(a) Confirmation run.
(b) Outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.

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: FA13211-3
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/11/14
Date Received: 03/13/14
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	2.3 U	6.0	2.3	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Arsenic	2.4 U	10	2.4	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Beryllium	0.50 U	4.0	0.50	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Cadmium	0.50 U	5.0	0.50	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Chromium	10.5	10	2.0	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Copper	1.0 U	25	1.0	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Lead	1.1 U	5.0	1.1	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Mercury	0.030 U	0.50	0.030	ug/l	1	03/14/14	03/14/14	JL	SW846 7470A [1]	SW846 7470A [3]
Nickel	0.50 U	40	0.50	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Selenium	6.5 J	10	2.3	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Silver	0.77 U	5.0	0.77	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Thallium	2.0 U	10	2.0	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Zinc	7.1 J	20	3.0	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA11455
(2) Instrument QC Batch: MA11464
(3) Prep QC Batch: MP26948
(4) Prep QC Batch: MP26964

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-6
Lab Sample ID: FA13211-4
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/11/14
Date Received: 03/13/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I19100.D	1	03/17/14	WV	n/a	n/a	VI336
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	0.59	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:	MW-6		
Lab Sample ID:	FA13211-4	**Date Sampled:**	03/11/14
Matrix:	AQ - Ground Water	**Date Received:**	03/13/14
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	99%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	103%		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-6		
Lab Sample ID:	FA13211-4	**Date Sampled:**	03/11/14
Matrix:	AQ - Ground Water	**Date Received:**	03/13/14
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	X033740.D	1	03/14/14	FS	03/14/14	OP50828	SX1586
Run #2							

	Initial Volume	Final Volume
Run #1	1020 ml	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	49	9.8	ug/l	
95-57-8	2-Chlorophenol	ND	4.9	0.51	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	0.57	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.9	0.49	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	5.3	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.8	2.0	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	0.59	ug/l	
100-02-7	4-Nitrophenol	ND	25	4.9	ug/l	
87-86-5	Pentachlorophenol	ND	25	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	0.61	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.9	0.63	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.9	0.64	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.9	0.70	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.9	0.79	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	0.66	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.9	0.80	ug/l	
100-51-6	Benzyl Alcohol	ND	4.9	0.98	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	0.71	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.9	0.54	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.9	0.68	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-6
Lab Sample ID: FA13211-4 **Date Sampled:** 03/11/14
Matrix: AQ - Ground Water **Date Received:** 03/13/14
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	0.57	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.9	0.53	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	0.56	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.9	0.61	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	4.9	0.88	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.9	0.80	ug/l	
132-64-9	Dibenzofuran	ND	4.9	0.52	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.9	0.98	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.9	0.98	ug/l	
84-66-2	Diethyl phthalate	ND	4.9	0.98	ug/l	
131-11-3	Dimethyl phthalate	ND	4.9	0.62	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.9	1.5	ug/l	
206-44-0	Fluoranthene	ND	4.9	0.69	ug/l	
86-73-7	Fluorene	ND	4.9	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	4.9	0.65	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.9	0.49	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	4.9	0.98	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	0.62	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	1.2	ug/l	
99-09-2	3-Nitroaniline	ND	4.9	0.60	ug/l	
100-01-6	4-Nitroaniline	ND	4.9	0.75	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	0.80	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	42%		14-67%
4165-62-2	Phenol-d5	26%		10-50%
118-79-6	2,4,6-Tribromophenol	90%		33-118%

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-6		
Lab Sample ID:	FA13211-4	**Date Sampled:**	03/11/14
Matrix:	AQ - Ground Water	**Date Received:**	03/13/14
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	75%		42-108%
321-60-8	2-Fluorobiphenyl	87%		40-106%
1718-51-0	Terphenyl-d14	107%		39-121%

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-6
Lab Sample ID: FA13211-4
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/11/14
Date Received: 03/13/14
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	2.3 U	6.0	2.3	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Arsenic	2.4 U	10	2.4	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Beryllium	0.50 U	4.0	0.50	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Cadmium	0.50 U	5.0	0.50	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Chromium	2.0 U	10	2.0	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Copper	1.0 U	25	1.0	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Lead	1.1 U	5.0	1.1	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Mercury	0.030 U	0.50	0.030	ug/l	1	03/14/14	03/14/14	JL	SW846 7470A [1]	SW846 7470A [3]
Nickel	0.50 U	40	0.50	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Selenium	2.3 U	10	2.3	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Silver	0.77 U	5.0	0.77	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Thallium	2.0 U	10	2.0	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]
Zinc	18.4 J	20	3.0	ug/l	1	03/18/14	03/18/14	LM	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA11455
(2) Instrument QC Batch: MA11464
(3) Prep QC Batch: MP26948
(4) Prep QC Batch: MP26964

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-13D
Lab Sample ID: FA13211-5
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/11/14
Date Received: 03/13/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I19101.D	1	03/17/14	WV	n/a	n/a	VI336
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	0.60	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	3.6	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	1.0	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	94.1	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
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		
Lab Sample ID:	FA13211-5	**Date Sampled:**	03/11/14
Matrix:	AQ - Ground Water	**Date Received:**	03/13/14
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	100%		79-125%
2037-26-5	Toluene-D8	102%		85-112%
460-00-4	4-Bromofluorobenzene	105%		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-13D
Lab Sample ID: FA13211-5
Matrix: AQ - Ground Water
Method: RSKSOP-147/175
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/11/14
Date Received: 03/13/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF22649.D	1	03/14/14	CP	n/a	n/a	GFF912
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	7.5	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
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
Lab Sample ID: FA13211-5
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/11/14
Date Received: 03/13/14
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride	9.8	2.0	0.80	mg/l	1	03/13/14 18:00	VK	EPA 300/SW846 9056A
Nitrogen, Nitrate [a]	1.7	0.10	0.050	mg/l	1	03/13/14 18:00	VK	EPA 300/SW846 9056A
Nitrogen, Nitrite [a]	0.050 U	0.10	0.050	mg/l	1	03/13/14 18:00	VK	EPA 300/SW846 9056A
Sulfate	0.66 J	2.0	0.60	mg/l	1	03/13/14 18:00	VK	EPA 300/SW846 9056A
Total Organic Carbon	0.23 U	1.0	0.23	mg/l	1	03/15/14 05:34	FN	SM5310 B-11/SW9060A

(a) Sample analyzed beyond hold time.

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: FA13211-6
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/11/14
Date Received: 03/13/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I19102.D	1	03/17/14	WV	n/a	n/a	VI336
Run #2 [a]	B096917.D	2.5	03/18/14	WV	n/a	n/a	VB3949

	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	7.2	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	180 [b]	2.5	0.78	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	2.5	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	0.68	1.0	0.36	ug/l	J
156-59-2	cis-1,2-Dichloroethylene	0.35	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	99.8	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	0.33	1.0	0.30	ug/l	J

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-22D		
Lab Sample ID:	FA13211-6	**Date Sampled:**	03/11/14
Matrix:	AQ - Ground Water	**Date Received:**	03/13/14
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%	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	95%	79-125%
2037-26-5	Toluene-D8	100%	106%	85-112%
460-00-4	4-Bromofluorobenzene	103%	98%	83-118%

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

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA 13 211

AECOM — Chain of Custody and Analytical Request

Page: 1 of 1
Project Number: ~~60260838~~
Chain of Custody Number [1]: ~~60314764~~
LIMS Number:

Project Name / Location: UTC Delavan Spray Technologies Site RI
Client Name: UTC
Collected by: Randy Morgan
Project Manager:

	Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.)	VOCs (8260B)	SVOCs (8270D)	Metals (6010C) PM13	TDC SM 5310B	NO2 (300)	NO3 (300)	SO4 (300)	CHL (300)	Alkalinity RSK175		COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
1	MW-21	11-March-2014	1840		X		~~RM 2840~~	X	X	X								A	
2	MW-21-e	11-Mar-2014	1840		X		~~RM 2840~~	X										A	
3	MW-21D	12-Mar-2014	0837		X		~~RM 0837~~	X	X	X								A	
4	MW-6	12-Mar-2014	1017		X		~~RM DUP~~	X	X	X								A	
5	MW-13D	12-Mar-2014	1213		X			X			X	X	X	X	X	X		A	
6	MW-23D	12-Mar 2014	1432		X			X										A	

Randy Morgan 3-12-14

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.	Randy Morgan	3-12-14	1500	FX		10:00
2.	FX			Connie (Alst)	3-13-14	
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:
Method of Shipment: Fed Ex
Analytical Lab: Accutest
Lab Recipient:
Shipped:
Airbill #: 8049 3475 9920
Location: Orlando FLA
Date: Time:

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

Unpreserved VOC's 7 Day Hold Time
Nitrate/Nitrite 48 Hour Hold Time

3-0

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

5.1 5

FA13211: Chain of Custody
Page 1 of 4

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA 13 211 CLIENT: AECOM PROJECT: WTC DELAVAN 3-

DATE/TIME RECEIVED: 3-13-14 10:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

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

AIRBILL NUMBERS: 8047 3475 9922

COOLER INFORMATION

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

TRIP BLANK INFORMATION

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

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.4
- [ ] OBSERVED TEMPS: 3.4
- [ ] CORRECTED TEMPS: 3.0

SAMPLE INFORMATION

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

(APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS)

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE: 3-13-14 REVIEWER SIGNATURE/DATE: 03-13-14

NF 12/10

receipt confirmation 122910.xls

5.1 5

FA13211: Chain of Custody

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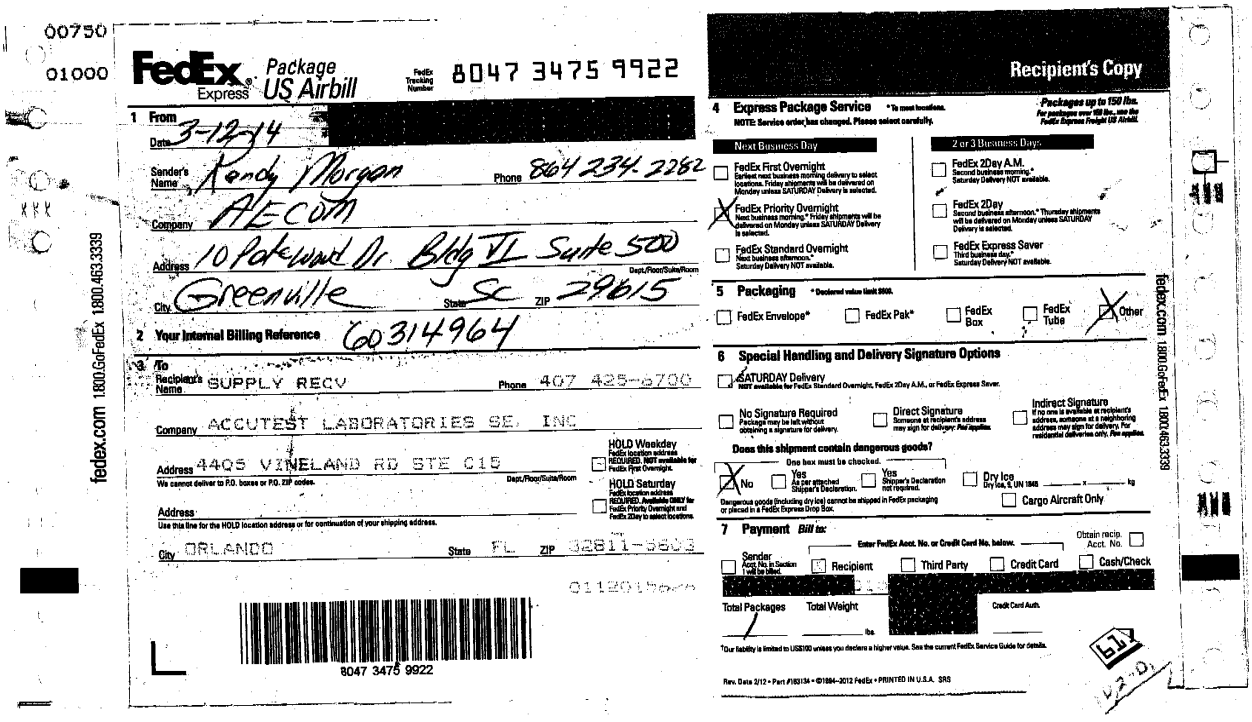

00750
01000

FedEx Express Package US Airbill

FedEx Tracking Number 8047 3475 9922

Recipient's Copy

1 From
Date 3-12-14
Sender's Name Randy Morgan Phone 864 234-2282
Company AECOM
Address 10 Patewood Dr. Bldg VI Suite 500 Dept/Floor/Suite/Room
City Greenville State SC ZIP 29615

2 Your Internal Billing Reference 60314964

3 To
Recipient's Name SUPPLY RECV Phone 407 425-6700
Company ACCUTEST LABORATORIES SE, INC
Address 4405 VINELAND RD STE C15 Dept/Floor/Suite/Room
We cannot deliver to P.O. boxes or P.O. ZIP codes.
Address
Use this line for the HOLD location address or for continuation of your shipping address.
City ORLANDO State FL ZIP 32811-5603

HOLD Weekday
FedEx location address REQUIRED. NOT available for FedEx First Overnight.
HOLD Saturday
FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

8047 3475 9922

4 Express Package Service
NOTE: Service order has changed. Please select carefully.
* To most locations. Packages up to 150 lbs.

Next Business Day
- FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days
- FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.
- FedEx Envelope*
- FedEx Pak*
- FedEx Box
- FedEx Tube
- [X] Other

6 Special Handling and Delivery Signature Options
- SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.
- No Signature Required — Package may be left without obtaining a signature for delivery.
- Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?
One box must be checked.
- [X] No
- Yes — As per attached Shipper's Declaration.
- Yes — Shipper's Declaration not required.
- Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg
- Cargo Aircraft Only

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

7 Payment Bill to:
Enter FedEx Acct. No. or Credit Card No. below.
Obtain recip. Acct. No.
- Sender — Acct. No. in Section 7 will be billed.
- [X] Recipient
- Third Party
- Credit Card
- Cash/Check

Total Packages
Total Weight lbs.
Credit Card Auth.

*Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

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FA13211: Chain of Custody
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Job Change Order: FA13211_3/21/2014

Requested Date:	3/21/2014	**Received Date:**	3/13/2014
Account Name:	United Technologies Corporation	**Due Date:**	3/27/2014
Project Description:	AECOMSCG: Delavan Spray Technologies;	**Deliverable:**	COMMBN
CSR:	HW	**TAT (Days):**	14

Sample #:
FA13211-6

Change: per client sample ID should be MW-22D not MW-23D as listed on COC

MW-22D

Above Changes Doria Cullom- AECOM **Date:** 3/21/2014

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.

Page 1 of 1

FA13211: Chain of Custody
Page 4 of 4

Southeast ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI336-MB	I19082.D	1	03/17/14	WV	n/a	n/a	VI336

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

FA13211-1, FA13211-2, FA13211-3, FA13211-4, FA13211-5, FA13211-6

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: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI336-MB	I19082.D	1	03/17/14	WV	n/a	n/a	VI336

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

FA13211-1, FA13211-2, FA13211-3, FA13211-4, FA13211-5, FA13211-6

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	96%	79-125%
2037-26-5	Toluene-D8	101%	85-112%
460-00-4	4-Bromofluorobenzene	104%	83-118%

Method Blank Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB3949-MB	B096911.D	1	03/18/14	WV	n/a	n/a	VB3949

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

FA13211-3, FA13211-6

CAS No.	Compound	Result	RL	MDL	Units	Q
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	95%	79-125%
2037-26-5	Toluene-D8	101%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

Blank Spike Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI336-BS	I19081.D	1	03/17/14	WV	n/a	n/a	VI336

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

FA13211-1, FA13211-2, FA13211-3, FA13211-4, FA13211-5, FA13211-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	179	143	50-147
71-43-2	Benzene	25	24.1	96	81-122
75-27-4	Bromodichloromethane	25	23.2	93	79-123
75-25-2	Bromoform	25	21.5	86	66-123
108-90-7	Chlorobenzene	25	25.1	100	82-124
75-00-3	Chloroethane	25	19.7	79	62-144
67-66-3	Chloroform	25	23.0	92	80-124
75-15-0	Carbon disulfide	25	22.7	91	66-148
56-23-5	Carbon tetrachloride	25	24.9	100	76-136
75-34-3	1,1-Dichloroethane	25	23.7	95	81-122
75-35-4	1,1-Dichloroethylene	25	26.2	105	78-137
107-06-2	1,2-Dichloroethane	25	22.3	89	75-125
78-87-5	1,2-Dichloropropane	25	23.5	94	76-124
124-48-1	Dibromochloromethane	25	23.0	92	78-122
156-59-2	cis-1,2-Dichloroethylene	25	23.3	93	78-120
10061-01-5	cis-1,3-Dichloropropene	25	23.2	93	75-118
156-60-5	trans-1,2-Dichloroethylene	25	24.3	97	76-127
10061-02-6	trans-1,3-Dichloropropene	25	24.4	98	80-120
100-41-4	Ethylbenzene	25	23.8	95	81-121
591-78-6	2-Hexanone	125	122	98	61-129
108-10-1	4-Methyl-2-pentanone	125	105	84	66-122
74-83-9	Methyl bromide	25	22.0	88	59-143
74-87-3	Methyl chloride	25	22.0	88	50-159
75-09-2	Methylene chloride	25	23.3	93	69-135
78-93-3	Methyl ethyl ketone	125	123	98	56-143
100-42-5	Styrene	25	22.3	89	78-119
71-55-6	1,1,1-Trichloroethane	25	24.8	99	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	21.3	85	72-120
79-00-5	1,1,2-Trichloroethane	25	22.5	90	76-119
127-18-4	Tetrachloroethylene	25	20.9	84	76-135
108-88-3	Toluene	25	23.5	94	80-120
79-01-6	Trichloroethylene	25	24.1	96	81-126
75-01-4	Vinyl chloride	25	22.5	90	69-159
1330-20-7	Xylene (total)	75	75.6	101	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI336-BS	I19081.D	1	03/17/14	WV	n/a	n/a	VI336

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

FA13211-1, FA13211-2, FA13211-3, FA13211-4, FA13211-5, FA13211-6

CAS No.	Surrogate Recoveries	BSP	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	99%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB3949-BS	B096910.D	1	03/18/14	WV	n/a	n/a	VB3949

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

FA13211-3, FA13211-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-66-3	Chloroform	25	24.5	98	80-124
127-18-4	Tetrachloroethylene	25	26.5	106	76-135

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	94%	79-125%
2037-26-5	Toluene-D8	104%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13063-4MS	I19103.D	1	03/17/14	WV	n/a	n/a	VI336
FA13063-4MSD	I19104.D	1	03/17/14	WV	n/a	n/a	VI336
FA13063-4	I19094.D	1	03/17/14	WV	n/a	n/a	VI336

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

FA13211-1, FA13211-2, FA13211-3, FA13211-4, FA13211-5, FA13211-6

CAS No.	Compound	FA13063-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	96.9	78	115	92	17	50-147/21
71-43-2	Benzene	ND		25	22.6	90	24.6	98	8	81-122/14
75-27-4	Bromodichloromethane	ND		25	21.7	87	22.4	90	3	79-123/19
75-25-2	Bromoform	ND		25	20.3	81	20.2	81	0	66-123/21
108-90-7	Chlorobenzene	ND		25	23.6	94	26.0	104	10	82-124/14
75-00-3	Chloroethane	ND		25	20.2	81	22.4	90	10	62-144/20
67-66-3	Chloroform	ND		25	22.2	89	24.9	100	11	80-124/15
75-15-0	Carbon disulfide	ND		25	20.2	81	18.6	74	8	66-148/23
56-23-5	Carbon tetrachloride	ND		25	22.8	91	23.5	94	3	76-136/23
75-34-3	1,1-Dichloroethane	ND		25	22.8	91	25.8	103	12	81-122/15
75-35-4	1,1-Dichloroethylene	ND		25	24.0	96	27.0	108	12	78-137/18
107-06-2	1,2-Dichloroethane	ND		25	21.2	85	23.9	96	12	75-125/14
78-87-5	1,2-Dichloropropane	ND		25	21.8	87	24.6	98	12	76-124/14
124-48-1	Dibromochloromethane	ND		25	21.7	87	21.8	87	0	78-122/19
156-59-2	cis-1,2-Dichloroethylene	ND		25	22.0	88	25.2	101	14	78-120/15
10061-01-5	cis-1,3-Dichloropropene	ND		25	20.4	82	21.4	86	5	75-118/23
156-60-5	trans-1,2-Dichloroethylene	ND		25	22.6	90	25.3	101	11	76-127/17
10061-02-6	trans-1,3-Dichloropropene	ND		25	22.7	91	23.0	92	1	80-120/22
100-41-4	Ethylbenzene	ND		25	22.2	89	24.5	98	10	81-121/14
591-78-6	2-Hexanone	ND		125	97.9	78	116	93	17	61-129/18
108-10-1	4-Methyl-2-pentanone	ND		125	99.5	80	115	92	14	66-122/16
74-83-9	Methyl bromide	ND		25	22.1	88	24.1	96	9	59-143/19
74-87-3	Methyl chloride	ND		25	22.5	90	26.0	104	14	50-159/19
75-09-2	Methylene chloride	ND		25	21.9	88	25.3	101	14	69-135/16
78-93-3	Methyl ethyl ketone	ND		125	92.4	74	108	86	16	56-143/18
100-42-5	Styrene	ND		25	19.8	79	22.8	91	14	78-119/23
71-55-6	1,1,1-Trichloroethane	ND		25	23.1	92	25.6	102	10	75-130/16
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	20.5	82	23.5	94	14	72-120/14
79-00-5	1,1,2-Trichloroethane	ND		25	21.5	86	24.0	96	11	76-119/14
127-18-4	Tetrachloroethylene	ND		25	19.1	76	20.3	81	6	76-135/16
108-88-3	Toluene	ND		25	21.9	88	23.8	95	8	80-120/14
79-01-6	Trichloroethylene	ND		25	22.5	90	25.5	102	13	81-126/15
75-01-4	Vinyl chloride	ND		25	22.3	89	25.2	101	12	69-159/18
1330-20-7	Xylene (total)	ND		75	70.2	94	78.0	104	11	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13063-4MS	I19103.D	1	03/17/14	WV	n/a	n/a	VI336
FA13063-4MSD	I19104.D	1	03/17/14	WV	n/a	n/a	VI336
FA13063-4	I19094.D	1	03/17/14	WV	n/a	n/a	VI336

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

FA13211-1, FA13211-2, FA13211-3, FA13211-4, FA13211-5, FA13211-6

CAS No.	Surrogate Recoveries	MS	MSD	FA13063-4	Limits
1868-53-7	Dibromofluoromethane	101%	103%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	98%	100%	79-125%
2037-26-5	Toluene-D8	97%	95%	101%	85-112%
460-00-4	4-Bromofluorobenzene	99%	99%	105%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13063-17MS	B096923.D	25	03/18/14	WV	n/a	n/a	VB3949
FA13063-17MSD	B096924.D	25	03/18/14	WV	n/a	n/a	VB3949
FA13063-17	B096914.D	25	03/18/14	WV	n/a	n/a	VB3949

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

FA13211-3, FA13211-6

CAS No.	Compound	FA13063-17 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-66-3	Chloroform	ND		625	704	113	718	115	2	80-124/15
127-18-4	Tetrachloroethylene	ND		625	761	122	746	119	2	76-135/16

CAS No.	Surrogate Recoveries	MS	MSD	FA13063-17	Limits
1868-53-7	Dibromofluoromethane	94%	96%	92%	83-118%
17060-07-0	1,2-Dichloroethane-D4	95%	96%	95%	79-125%
2037-26-5	Toluene-D8	103%	101%	102%	85-112%
460-00-4	4-Bromofluorobenzene	94%	98%	100%	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: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50828-MB	X033732.D	1	03/14/14	FS	03/14/14	OP50828	SX1586

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13211-1, FA13211-4

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: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50828-MB	X033732.D	1	03/14/14	FS	03/14/14	OP50828	SX1586

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13211-1, FA13211-4

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	40%	14-67%
4165-62-2	Phenol-d5	24%	10-50%

Method Blank Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50828-MB	X033732.D	1	03/14/14	FS	03/14/14	OP50828	SX1586

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13211-1, FA13211-4

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	93%	33-118%
4165-60-0	Nitrobenzene-d5	78%	42-108%
321-60-8	2-Fluorobiphenyl	85%	40-106%
1718-51-0	Terphenyl-d14	106%	39-121%

Method Blank Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50883-MB	L0677241.D	1	03/20/14	NAF	03/18/14	OP50883	SL3419

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13211-3

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: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50883-MB	L0677241.D	1	03/20/14	NAF	03/18/14	OP50883	SL3419

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13211-3

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	40%	14-67%
4165-62-2	Phenol-d5	25%	10-50%

Method Blank Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50883-MB	L0677241.D	1	03/20/14	NAF	03/18/14	OP50883	SL3419

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13211-3

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	69%	33-118%
4165-60-0	Nitrobenzene-d5	68%	42-108%
321-60-8	2-Fluorobiphenyl	66%	40-106%
1718-51-0	Terphenyl-d14	72%	39-121%

Blank Spike Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50828-BS	X033731.D	1	03/14/14	FS	03/14/14	OP50828	SX1586

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13211-1, FA13211-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	100	18.9	19	10-69
95-57-8	2-Chlorophenol	50	41.8	84	52-98
59-50-7	4-Chloro-3-methyl phenol	50	41.0	82	54-103
120-83-2	2,4-Dichlorophenol	50	43.4	87	53-103
105-67-9	2,4-Dimethylphenol	50	41.2	82	43-90
51-28-5	2,4-Dinitrophenol	100	90.8	91	44-112
534-52-1	4,6-Dinitro-o-cresol	100	88.2	88	66-121
95-48-7	2-Methylphenol	50	34.7	69	43-90
	3&4-Methylphenol	100	62.7	63	36-88
88-75-5	2-Nitrophenol	50	44.6	89	53-102
100-02-7	4-Nitrophenol	100	22.6	23	18-62
87-86-5	Pentachlorophenol	100	85.1	85	61-115
108-95-2	Phenol	50	15.3	31	19-56
95-95-4	2,4,5-Trichlorophenol	50	44.5	89	62-109
88-06-2	2,4,6-Trichlorophenol	50	46.1	92	59-107
83-32-9	Acenaphthene	50	47.2	94	61-107
208-96-8	Acenaphthylene	50	47.6	95	60-104
120-12-7	Anthracene	50	44.8	90	65-108
56-55-3	Benzo(a)anthracene	50	45.8	92	66-111
50-32-8	Benzo(a)pyrene	50	45.8	92	62-107
205-99-2	Benzo(b)fluoranthene	50	45.9	92	65-114
191-24-2	Benzo(g,h,i)perylene	50	48.3	97	66-116
207-08-9	Benzo(k)fluoranthene	50	48.8	98	65-114
101-55-3	4-Bromophenyl phenyl ether	50	38.0	76	65-109
85-68-7	Butyl benzyl phthalate	50	42.4	85	65-112
100-51-6	Benzyl Alcohol	50	32.4	65	46-94
91-58-7	2-Chloronaphthalene	50	43.5	87	57-103
106-47-8	4-Chloroaniline	50	40.2	80	49-105
86-74-8	Carbazole	50	45.3	91	59-113
218-01-9	Chrysene	50	48.0	96	66-111
111-91-1	bis(2-Chloroethoxy)methane	50	41.0	82	51-102
111-44-4	bis(2-Chloroethyl)ether	50	42.1	84	53-100
108-60-1	bis(2-Chloroisopropyl)ether	50	35.3	71	45-106
7005-72-3	4-Chlorophenyl phenyl ether	50	42.9	86	62-105
95-50-1	1,2-Dichlorobenzene	50	36.8	74	48-97
541-73-1	1,3-Dichlorobenzene	50	36.5	73	45-95

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50828-BS	X033731.D	1	03/14/14	FS	03/14/14	OP50828	SX1586

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13211-1, FA13211-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
106-46-7	1,4-Dichlorobenzene	50	38.9	78	45-98
121-14-2	2,4-Dinitrotoluene	50	44.5	89	61-110
606-20-2	2,6-Dinitrotoluene	50	44.9	90	63-108
91-94-1	3,3'-Dichlorobenzidine	50	43.2	86	46-117
53-70-3	Dibenzo(a,h)anthracene	50	47.3	95	66-119
132-64-9	Dibenzofuran	50	45.8	92	61-106
84-74-2	Di-n-butyl phthalate	50	42.3	85	65-107
117-84-0	Di-n-octyl phthalate	50	43.1	86	62-118
84-66-2	Diethyl phthalate	50	42.5	85	64-108
131-11-3	Dimethyl phthalate	50	39.4	79	63-106
117-81-7	bis(2-Ethylhexyl)phthalate	50	44.5	89	61-117
206-44-0	Fluoranthene	50	46.5	93	63-106
86-73-7	Fluorene	50	49.0	98	62-108
118-74-1	Hexachlorobenzene	50	45.1	90	63-108
87-68-3	Hexachlorobutadiene	50	42.6	85	42-102
77-47-4	Hexachlorocyclopentadiene	50	29.8	60	39-102
67-72-1	Hexachloroethane	50	36.0	72	42-100
193-39-5	Indeno(1,2,3-cd)pyrene	50	43.8	88	64-119
78-59-1	Isophorone	50	40.6	81	43-87
91-57-6	2-Methylnaphthalene	50	44.6	89	51-102
88-74-4	2-Nitroaniline	50	38.6	77	54-128
99-09-2	3-Nitroaniline	50	44.2	88	56-106
100-01-6	4-Nitroaniline	50	43.3	87	55-120
91-20-3	Naphthalene	50	45.3	91	47-100
98-95-3	Nitrobenzene	50	38.8	78	50-104
621-64-7	N-Nitroso-di-n-propylamine	50	41.9	84	52-104
86-30-6	N-Nitrosodiphenylamine	50	46.3	93	64-108
85-01-8	Phenanthrene	50	46.9	94	66-110
129-00-0	Pyrene	50	43.7	87	64-113
120-82-1	1,2,4-Trichlorobenzene	50	39.9	80	45-97

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	43%	14-67%
4165-62-2	Phenol-d5	27%	10-50%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50828-BS	X033731.D	1	03/14/14	FS	03/14/14	OP50828	SX1586

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13211-1, FA13211-4

CAS No.	Surrogate Recoveries	BSP	Limits
118-79-6	2,4,6-Tribromophenol	91%	33-118%
4165-60-0	Nitrobenzene-d5	79%	42-108%
321-60-8	2-Fluorobiphenyl	88%	40-106%
1718-51-0	Terphenyl-d14	98%	39-121%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50883-BS	L0677242.D	1	03/20/14	NAF	03/18/14	OP50883	SL3419

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13211-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	100	15.4	15	10-69
95-57-8	2-Chlorophenol	50	34.3	69	52-98
59-50-7	4-Chloro-3-methyl phenol	50	35.7	71	54-103
120-83-2	2,4-Dichlorophenol	50	33.1	66	53-103
105-67-9	2,4-Dimethylphenol	50	34.3	69	43-90
51-28-5	2,4-Dinitrophenol	100	86.3	86	44-112
534-52-1	4,6-Dinitro-o-cresol	100	97.7	98	66-121
95-48-7	2-Methylphenol	50	30.3	61	43-90
	3&4-Methylphenol	100	53.7	54	36-88
88-75-5	2-Nitrophenol	50	33.3	67	53-102
100-02-7	4-Nitrophenol	100	34.0	34	18-62
87-86-5	Pentachlorophenol	100	92.2	92	61-115
108-95-2	Phenol	50	17.0	34	19-56
95-95-4	2,4,5-Trichlorophenol	50	39.1	78	62-109
88-06-2	2,4,6-Trichlorophenol	50	39.9	80	59-107
83-32-9	Acenaphthene	50	40.9	82	61-107
208-96-8	Acenaphthylene	50	40.7	81	60-104
120-12-7	Anthracene	50	41.5	83	65-108
56-55-3	Benzo(a)anthracene	50	42.6	85	66-111
50-32-8	Benzo(a)pyrene	50	42.0	84	62-107
205-99-2	Benzo(b)fluoranthene	50	40.6	81	65-114
191-24-2	Benzo(g,h,i)perylene	50	51.5	103	66-116
207-08-9	Benzo(k)fluoranthene	50	41.2	82	65-114
101-55-3	4-Bromophenyl phenyl ether	50	34.8	70	65-109
85-68-7	Butyl benzyl phthalate	50	37.8	76	65-112
100-51-6	Benzyl Alcohol	50	29.5	59	46-94
91-58-7	2-Chloronaphthalene	50	36.5	73	57-103
106-47-8	4-Chloroaniline	50	35.6	71	49-105
86-74-8	Carbazole	50	42.3	85	59-113
218-01-9	Chrysene	50	44.4	89	66-111
111-91-1	bis(2-Chloroethoxy)methane	50	33.4	67	51-102
111-44-4	bis(2-Chloroethyl)ether	50	34.3	69	53-100
108-60-1	bis(2-Chloroisopropyl)ether	50	36.5	73	45-106
7005-72-3	4-Chlorophenyl phenyl ether	50	38.1	76	62-105
95-50-1	1,2-Dichlorobenzene	50	28.4	57	48-97
541-73-1	1,3-Dichlorobenzene	50	28.3	57	45-95

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50883-BS	L0677242.D	1	03/20/14	NAF	03/18/14	OP50883	SL3419

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13211-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
106-46-7	1,4-Dichlorobenzene	50	28.6	57	45-98
121-14-2	2,4-Dinitrotoluene	50	39.7	79	61-110
606-20-2	2,6-Dinitrotoluene	50	40.3	81	63-108
91-94-1	3,3'-Dichlorobenzidine	50	40.1	80	46-117
53-70-3	Dibenzo(a,h)anthracene	50	52.3	105	66-119
132-64-9	Dibenzofuran	50	39.8	80	61-106
84-74-2	Di-n-butyl phthalate	50	38.8	78	65-107
117-84-0	Di-n-octyl phthalate	50	36.9	74	62-118
84-66-2	Diethyl phthalate	50	37.3	75	64-108
131-11-3	Dimethyl phthalate	50	37.8	76	63-106
117-81-7	bis(2-Ethylhexyl)phthalate	50	40.7	81	61-117
206-44-0	Fluoranthene	50	43.3	87	63-106
86-73-7	Fluorene	50	42.1	84	62-108
118-74-1	Hexachlorobenzene	50	41.5	83	63-108
87-68-3	Hexachlorobutadiene	50	29.9	60	42-102
77-47-4	Hexachlorocyclopentadiene	50	26.2	52	39-102
67-72-1	Hexachloroethane	50	28.2	56	42-100
193-39-5	Indeno(1,2,3-cd)pyrene	50	48.5	97	64-119
78-59-1	Isophorone	50	34.8	70	43-87
91-57-6	2-Methylnaphthalene	50	32.8	66	51-102
88-74-4	2-Nitroaniline	50	42.9	86	54-128
99-09-2	3-Nitroaniline	50	42.7	85	56-106
100-01-6	4-Nitroaniline	50	44.7	89	55-120
91-20-3	Naphthalene	50	32.0	64	47-100
98-95-3	Nitrobenzene	50	32.7	65	50-104
621-64-7	N-Nitroso-di-n-propylamine	50	38.2	76	52-104
86-30-6	N-Nitrosodiphenylamine	50	45.3	91	64-108
85-01-8	Phenanthrene	50	43.4	87	66-110
129-00-0	Pyrene	50	40.5	81	64-113
120-82-1	1,2,4-Trichlorobenzene	50	28.4	57	45-97

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	47%	14-67%
4165-62-2	Phenol-d5	30%	10-50%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50883-BS	L0677242.D	1	03/20/14	NAF	03/18/14	OP50883	SL3419

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13211-3

CAS No.	Surrogate Recoveries	BSP	Limits
118-79-6	2,4,6-Tribromophenol	84%	33-118%
4165-60-0	Nitrobenzene-d5	68%	42-108%
321-60-8	2-Fluorobiphenyl	76%	40-106%
1718-51-0	Terphenyl-d14	92%	39-121%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50828-MS	X033744.D	1	03/14/14	FS	03/14/14	OP50828	SX1586
OP50828-MSD	X033745.D	1	03/14/14	FS	03/14/14	OP50828	SX1586
FA13180-23	X033743.D	1	03/14/14	FS	03/14/14	OP50828	SX1586

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13211-1, FA13211-4

CAS No.	Compound	FA13180-23 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	47 U		189	81.8	43	94.0	50	14	10-69/39
95-57-8	2-Chlorophenol	4.7 U		94.3	79.5	84	81.3	86	2	52-98/25
59-50-7	4-Chloro-3-methyl phenol	4.7 U		94.3	76.4	81	79.4	84	4	54-103/23
120-83-2	2,4-Dichlorophenol	4.7 U		94.3	80.0	85	83.9	89	5	53-103/26
105-67-9	2,4-Dimethylphenol	4.7 U		94.3	79.0	84	83.5	89	6	43-90/27
51-28-5	2,4-Dinitrophenol	24 U		189	172	91	172	91	0	44-112/25
534-52-1	4,6-Dinitro-o-cresol	9.4 U		189	160	85	162	86	1	66-121/23
95-48-7	2-Methylphenol	4.7 U		94.3	70.8	75	76.3	81	7	43-90/28
	3&4-Methylphenol	4.7 U		189	136	72	148	78	8	36-88/28
88-75-5	2-Nitrophenol	4.7 U		94.3	81.1	86	83.0	88	2	53-102/29
100-02-7	4-Nitrophenol	24 U		189	162	86*	ND	0*	200*	18-62/33
87-86-5	Pentachlorophenol	24 U		189	192	102	194	103	1	61-115/26
108-95-2	Phenol	4.7 U		94.3	42.1	45	48.4	51	14	19-56/35
95-95-4	2,4,5-Trichlorophenol	4.7 U		94.3	87.9	93	87.7	93	0	62-109/22
88-06-2	2,4,6-Trichlorophenol	4.7 U		94.3	87.6	93	88.3	94	1	59-107/23
83-32-9	Acenaphthene	4.7 U		94.3	88.3	94	89.8	95	2	61-107/22
208-96-8	Acenaphthylene	4.7 U		94.3	87.7	93	89.8	95	2	60-104/22
120-12-7	Anthracene	4.7 U		94.3	82.7	88	85.6	91	3	65-108/20
56-55-3	Benzo(a)anthracene	4.7 U		94.3	85.4	91	87.7	93	3	66-111/22
50-32-8	Benzo(a)pyrene	4.7 U		94.3	85.6	91	86.1	91	1	62-107/23
205-99-2	Benzo(b)fluoranthene	4.7 U		94.3	85.6	91	87.5	93	2	65-114/23
191-24-2	Benzo(g,h,i)perylene	4.7 U		94.3	88.2	93	88.7	94	1	66-116/23
207-08-9	Benzo(k)fluoranthene	4.7 U		94.3	81.5	86	83.7	89	3	65-114/24
101-55-3	4-Bromophenyl phenyl ether	4.7 U		94.3	72.4	77	74.7	79	3	65-109/23
85-68-7	Butyl benzyl phthalate	4.7 U		94.3	82.5	87	83.6	89	1	65-112/24
100-51-6	Benzyl Alcohol	4.7 U		94.3	74.2	79	79.7	84	7	46-94/27
91-58-7	2-Chloronaphthalene	4.7 U		94.3	80.7	86	82.2	87	2	57-103/23
106-47-8	4-Chloroaniline	4.7 U		94.3	51.0	54	59.0	63	15	49-105/27
86-74-8	Carbazole	4.7 U		94.3	85.7	91	87.3	93	2	59-113/21
218-01-9	Chrysene	4.7 U		94.3	88.0	93	90.0	95	2	66-111/22
111-91-1	bis(2-Chloroethoxy)methane	4.7 U		94.3	75.1	80	77.9	83	4	51-102/28
111-44-4	bis(2-Chloroethyl)ether	4.7 U		94.3	80.4	85	81.1	86	1	53-100/27
108-60-1	bis(2-Chloroisopropyl)ether	4.7 U		94.3	65.9	70	66.6	71	1	45-106/26
7005-72-3	4-Chlorophenyl phenyl ether	4.7 U		94.3	82.4	87	84.4	89	2	62-105/20
95-50-1	1,2-Dichlorobenzene	4.7 U		94.3	72.8	77	73.9	78	1	48-97/24
541-73-1	1,3-Dichlorobenzene	4.7 U		94.3	73.5	78	73.3	78	0	45-95/25

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50828-MS	X033744.D	1	03/14/14	FS	03/14/14	OP50828	SX1586
OP50828-MSD	X033745.D	1	03/14/14	FS	03/14/14	OP50828	SX1586
FA13180-23	X033743.D	1	03/14/14	FS	03/14/14	OP50828	SX1586

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13211-1, FA13211-4

CAS No.	Compound	FA13180-23 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
106-46-7	1,4-Dichlorobenzene	4.7 U		94.3	78.1	83	78.4	83	0	45-98/25
121-14-2	2,4-Dinitrotoluene	4.7 U		94.3	82.0	87	83.8	89	2	61-110/21
606-20-2	2,6-Dinitrotoluene	4.7 U		94.3	85.3	90	86.0	91	1	63-108/21
91-94-1	3,3'-Dichlorobenzidine	4.7 U		94.3	ND	0*	ND	0*	nc	46-117/29
53-70-3	Dibenzo(a,h)anthracene	4.7 U		94.3	86.7	92	86.6	92	0	66-119/24
132-64-9	Dibenzofuran	4.7 U		94.3	86.8	92	87.0	92	0	61-106/21
84-74-2	Di-n-butyl phthalate	4.7 U		94.3	78.1	83	79.5	84	2	65-107/21
117-84-0	Di-n-octyl phthalate	4.7 U		94.3	81.7	87	83.0	88	2	62-118/24
84-66-2	Diethyl phthalate	4.7 U		94.3	78.1	83	79.0	84	1	64-108/21
131-11-3	Dimethyl phthalate	4.7 U		94.3	73.0	77	74.7	79	2	63-106/22
117-81-7	bis(2-Ethylhexyl)phthalate	4.7 U		94.3	85.3	90	88.3	94	3	61-117/23
206-44-0	Fluoranthene	4.7 U		94.3	84.0	89	87.1	92	4	63-106/21
86-73-7	Fluorene	4.7 U		94.3	91.0	96	92.4	98	2	62-108/20
118-74-1	Hexachlorobenzene	4.7 U		94.3	85.4	91	88.2	93	3	63-108/22
87-68-3	Hexachlorobutadiene	4.7 U		94.3	85.8	91	87.5	93	2	42-102/28
77-47-4	Hexachlorocyclopentadiene	4.7 U		94.3	56.1	59	53.5	57	5	39-102/29
67-72-1	Hexachloroethane	4.7 U		94.3	75.4	80	75.6	80	0	42-100/29
193-39-5	Indeno(1,2,3-cd)pyrene	4.7 U		94.3	79.6	84	80.0	85	1	64-119/24
78-59-1	Isophorone	4.7 U		94.3	72.8	77	75.9	80	4	43-87/25
91-57-6	2-Methylnaphthalene	4.7 U		94.3	84.5	90	86.9	92	3	51-102/26
88-74-4	2-Nitroaniline	4.7 U		94.3	69.1	73	72.6	77	5	54-128/24
99-09-2	3-Nitroaniline	4.7 U		94.3	55.9	59	61.8	66	10	56-106/27
100-01-6	4-Nitroaniline	4.7 U		94.3	26.9	29*	35.5	38*	28*	55-120/24
91-20-3	Naphthalene	4.7 U		94.3	86.1	91	88.1	93	2	47-100/29
98-95-3	Nitrobenzene	4.7 U		94.3	68.6	73	70.6	75	3	50-104/28
621-64-7	N-Nitroso-di-n-propylamine	4.7 U		94.3	79.7	84	81.9	87	3	52-104/25
86-30-6	N-Nitrosodiphenylamine	4.7 U		94.3	86.9	92	89.0	94	2	64-108/23
85-01-8	Phenanthrene	4.7 U		94.3	85.9	91	88.4	94	3	66-110/21
129-00-0	Pyrene	4.7 U		94.3	81.2	86	84.1	89	4	64-113/23
120-82-1	1,2,4-Trichlorobenzene	4.7 U		94.3	78.2	83	79.2	84	1	45-97/28

CAS No.	Surrogate Recoveries	MS	MSD	FA13180-23	Limits
367-12-4	2-Fluorophenol	54%	58%	43%	14-67%
4165-62-2	Phenol-d5	39%	45%	26%	10-50%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50828-MS	X033744.D	1	03/14/14	FS	03/14/14	OP50828	SX1586
OP50828-MSD	X033745.D	1	03/14/14	FS	03/14/14	OP50828	SX1586
FA13180-23	X033743.D	1	03/14/14	FS	03/14/14	OP50828	SX1586

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13211-1, FA13211-4

CAS No.	Surrogate Recoveries	MS	MSD	FA13180-23	Limits
118-79-6	2,4,6-Tribromophenol	96%	99%	109%	33-118%
4165-60-0	Nitrobenzene-d5	77%	78%	81%	42-108%
321-60-8	2-Fluorobiphenyl	91%	91%	90%	40-106%
1718-51-0	Terphenyl-d14	98%	101%	110%	39-121%

* = Outside of Control Limits.

Southeast ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF912-MB	FF22635.D	1	03/14/14	CP	n/a	n/a	GFF912

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

FA13211-5

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: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF912-BS	FF22636.D	1	03/14/14	CP	n/a	n/a	GFF912

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

FA13211-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
74-82-8	Methane	108	118	109	61-144
74-84-0	Ethane	219	231	105	64-143
74-85-1	Ethene	290	311	107	64-141

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13200-1MS	FF22643.D	1	03/14/14	CP	n/a	n/a	GFF912
FA13200-1	FF22638.D	1	03/14/14	CP	n/a	n/a	GFF912

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

FA13211-5

CAS No.	Compound	FA13200-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	12.4		108	115	95	61-144
74-84-0	Ethane	ND		219	215	98	64-143
74-85-1	Ethene	ND		290	290	100	64-141

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA13211
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13211-5DUP	FF22650.D	1	03/14/14	CP	n/a	n/a	GFF912
FA13211-5	FF22649.D	1	03/14/14	CP	n/a	n/a	GFF912

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

FA13211-5

CAS No.	Compound	FA13211-5 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	7.5		7.8		4	33
74-84-0	Ethane	ND		ND		nc	20
74-85-1	Ethene	ND		ND		nc	19

* = Outside of Control Limits.

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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: FA13211
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26948 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date:				03/14/14		03/14/14	
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Mercury	0.50	.03	.03	-0.012	<0.50	-0.021	<0.50

Associated samples MP26948: FA13211-1, FA13211-3, FA13211-4

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: FA13211
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26948
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/14/14 03/14/14

Metal	FA13211-1 Original	DUP	RPD	QC Limits	FA13211-1 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	3.1	3	103.3	80-120

Associated samples MP26948: FA13211-1, FA13211-3, FA13211-4

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: FA13211
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26948 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/14/14

Metal	FA13211-1 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.1	3	103.3	0.0	20

Associated samples MP26948: FA13211-1, FA13211-3, FA13211-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA13211
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26948
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/14/14

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	80-120

Associated samples MP26948: FA13211-1, FA13211-3, FA13211-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA13211
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26948 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/14/14

Metal	FA13211-1 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP26948: FA13211-1, FA13211-3, FA13211-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA13211
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26964
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:				03/18/14		03/18/14	
Metal	RL	IDL	MDL	MB raw	MB final	MB raw	MB final
Aluminum	200	15	15				
Antimony	6.0	2	2.3	0.30	<6.0	0.50	<6.0
Arsenic	10	2	2.4	0.70	<10	-0.60	<10
Barium	200	1	1				
Beryllium	4.0	.5	.5	0.0	<4.0	0.0	<4.0
Cadmium	5.0	.5	.5	-0.10	<5.0	-0.10	<5.0
Calcium	1000	50	50				
Chromium	10	1	2	0.40	<10	0.0	<10
Cobalt	50	.5	.5				
Copper	25	1	1	-1.5	<25	-0.90	<25
Iron	300	17	17				
Lead	5.0	1.1	1.1	-0.10	<5.0	0.40	<5.0
Magnesium	5000	50	56				
Manganese	15	.5	1				
Molybdenum	50	.5	.5				
Nickel	40	.5	.5	0.0	<40	-0.10	<40
Potassium	10000	200	200				
Selenium	10	2.3	2.3	1.3	<10	0.80	<10
Silver	10	.65	.77	-0.10	<10	0.10	<10
Sodium	10000	500	500				
Strontium	10	.4	.4				
Thallium	10	1.5	2	-0.50	<10	-1.6	<10
Tin	50	.7	1				
Titanium	10	.9	1				
Vanadium	50	.5	.5				
Zinc	20	3	3	3.2	<20	5.6	<20

Associated samples MP26964: FA13211-1, FA13211-3, FA13211-4

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: FA13211
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26964
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:			03/18/14					03/18/14	
Metal	FA13211-1 Original	DUP	RPD	QC Limits	FA13211-1 Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr								
Antimony	0.0	0.0	NC	0-20	0.0	359	500	71.8N(a)	80-120
Arsenic	3.2	3.7	14.5	0-20	3.2	1980	2000	98.8	80-120
Barium	anr								
Beryllium	1.5	1.4	6.9	0-20	1.5	49.7	50	96.4	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	48.5	50	97.0	80-120
Calcium									
Chromium	1.5	1.4	6.9	0-20	1.5	200	200	99.3	80-120
Cobalt									
Copper	0.0	0.0	NC	0-20	0.0	245	250	98.0	80-120
Iron	anr								
Lead	6.7	7.2	7.2	0-20	6.7	509	500	100.5	80-120
Magnesium									
Manganese	anr								
Molybdenum									
Nickel	0.0	0.0	NC	0-20	0.0	497	500	99.4	80-120
Potassium									
Selenium	0.0	0.0	NC	0-20	0.0	1990	2000	99.5	80-120
Silver	0.0	0.0	NC	0-20	0.0	48.5	50	97.0	80-120
Sodium									
Strontium									
Thallium	0.0	0.0	NC	0-20	0.0	2030	2000	101.5	80-120
Tin									
Titanium									
Vanadium									
Zinc	10.9	10.7	1.9	0-20	10.9	501	500	98.0	80-120

Associated samples MP26964: FA13211-1, FA13211-3, FA13211-4

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) Spike recovery indicates possible matrix interference.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA13211
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26964
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/18/14

Metal	FA13211-1 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	0.0	353	500	70.6N(a)	1.7	20
Arsenic	3.2	1980	2000	98.8	0.0	20
Barium	anr					
Beryllium	1.5	49.8	50	96.6	0.2	20
Cadmium	0.0	48.7	50	97.4	0.4	20
Calcium						
Chromium	1.5	203	200	100.8	1.5	20
Cobalt						
Copper	0.0	246	250	98.4	0.4	20
Iron	anr					
Lead	6.7	511	500	100.9	0.4	20
Magnesium						
Manganese	anr					
Molybdenum						
Nickel	0.0	500	500	100.0	0.6	20
Potassium						
Selenium	0.0	1990	2000	99.5	0.0	20
Silver	0.0	49.1	50	98.2	1.2	20
Sodium						
Strontium						
Thallium	0.0	2040	2000	102.0	0.5	20
Tin						
Titanium						
Vanadium						
Zinc	10.9	502	500	98.2	0.2	20

Associated samples MP26964: FA13211-1, FA13211-3, FA13211-4

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) Spike recovery indicates possible matrix interference.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA13211
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26964
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/18/14

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr			
Antimony	506	500	101.2	80-120
Arsenic	2020	2000	101.0	80-120
Barium	anr			
Beryllium	50.0	50	100.0	80-120
Cadmium	50.3	50	100.6	80-120
Calcium				
Chromium	206	200	103.0	80-120
Cobalt				
Copper	255	250	102.0	80-120
Iron	anr			
Lead	493	500	98.6	80-120
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	518	500	103.6	80-120
Potassium				
Selenium	2040	2000	102.0	80-120
Silver	50.6	50	101.2	80-120
Sodium				
Strontium				
Thallium	2010	2000	100.5	80-120
Tin				
Titanium				
Vanadium				
Zinc	509	500	101.8	80-120

Associated samples MP26964: FA13211-1, FA13211-3, FA13211-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA13211
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26964
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/18/14

Metal	FA13211-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	0.00	0.00	NC	0-10
Arsenic	3.20	0.00	100.0(a)	0-10
Barium	anr			
Beryllium	1.50	0.00	100.0(a)	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	1.50	0.00	100.0(a)	0-10
Cobalt				
Copper	0.00	0.00	NC	0-10
Iron	anr			
Lead	6.70	0.00	100.0(a)	0-10
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	0.00	0.00	NC	0-10
Potassium				
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium				
Zinc	10.9	0.00	100.0(a)	0-10

Associated samples MP26964: FA13211-1, FA13211-3, FA13211-4

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: FA13211
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26964
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/18/14

Metal	Sample ml	Final ml	FA13211-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10			104.3	0.2	5	100	104.3	80-120
Arsenic	9.8	10	3.2	3.136	109.5	0.2	5	100	106.4	80-120
Barium										
Beryllium	9.8	10	1.5	1.47	52.5	0.2	2.5	50	102.1	80-120
Cadmium	9.8	10			52.6	0.2	2.5	50	105.2	80-120
Calcium										
Chromium	9.8	10	1.5	1.47	54.2	0.2	2.5	50	105.5	80-120
Cobalt										
Copper	9.8	10			102.7	0.2	5	100	102.7	80-120
Iron										
Lead	9.8	10	6.7	6.566	59	0.2	2.5	50	104.9	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel	9.8	10			107.4	0.2	5	100	107.4	80-120
Potassium										
Selenium	9.8	10			103.6	0.2	5	100	103.6	80-120
Silver	9.8	10			52.7	0.2	2.5	50	105.4	80-120
Sodium										
Strontium										
Thallium	9.8	10			109.1	0.2	5	100	109.1	80-120
Tin										
Titanium										
Vanadium										
Zinc	9.8	10	10.9	10.682	273.3	0.2	12.5	250	105.0	80-120

Associated samples MP26964: FA13211-1, FA13211-3, FA13211-4

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

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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: FA13211
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	GP23612/GN60577	2.0	0.0	mg/l	50	48.7	97.4	90-110%
Nitrogen, Nitrate	GP23612/GN60577	0.10	0.0	mg/l	2.5	2.46	98.4	90-110%
Nitrogen, Nitrite	GP23612/GN60577	0.10	0.0	mg/l	2.5	2.42	96.8	90-110%
Sulfate	GP23612/GN60577	2.0	0.0	mg/l	50	47.4	94.8	90-110%
Total Organic Carbon	GP23610/GN60549	1.0	0.0	mg/l	15	15.7	104.7	90-110%

Associated Samples:
Batch GP23610: FA13211-5
Batch GP23612: FA13211-5
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA13211
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	GP23610/GN60549	FA13192-1	mg/l	248	248	0.0	0-20%

Associated Samples:
Batch GP23610: FA13211-5
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA13211
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	GP23612/GN60577	FA13201-3	mg/l	3.8	50	54.7	101.8	90-110%
Nitrogen, Nitrate	GP23612/GN60577	FA13201-3	mg/l	1.5	2.5	3.5	80.0N(a)	90-110%
Nitrogen, Nitrite	GP23612/GN60577	FA13201-3	mg/l	0.0	2.5	2.5	100.0	90-110%
Sulfate	GP23612/GN60577	FA13201-3	mg/l	6.6	50	52.8	92.4	90-110%
Total Organic Carbon	GP23610/GN60549	FA13192-1	mg/l	248	15	255	46.7(b)	90-110%

Associated Samples:
Batch GP23610: FA13211-5
Batch GP23612: FA13211-5
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery indicates possible matrix interference.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA13211
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	GP23612/GN60577	FA13201-3	mg/l	3.8	50	54.7	0.0	20%
Nitrogen, Nitrate	GP23612/GN60577	FA13201-3	mg/l	1.5	2.5	3.4	2.9	20%
Nitrogen, Nitrite	GP23612/GN60577	FA13201-3	mg/l	0.0	2.5	2.5	0.0	20%
Sulfate	GP23612/GN60577	FA13201-3	mg/l	6.6	50	52.0	1.5	20%

Associated Samples:
Batch GP23612: FA13211-5
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

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03/27/14

Technical Report for

United Technologies Corporation

AECOMSCG: Delavan Spray Technologies; Bamberg, SC

60314964

Accutest Job Number: FA13258

Sampling Dates: 03/12/14 - 03/13/14

Report to:

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Total number of pages in report: **124**

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

Harry Behzadi, Ph.D.
Laboratory Director

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Sample Summary

United Technologies Corporation

Job No: FA13258

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA13258-1	03/12/14	16:37	RM	03/14/14	AQ	Ground Water	MW-23D
FA13258-2	03/12/14	16:37	RM	03/14/14	AQ	Ground Water	MW-23D-C
FA13258-3	03/12/14	17:37	RM	03/14/14	AQ	Ground Water	MW-4
FA13258-4	03/12/14	18:40	RM	03/14/14	SO	Soil	IDW-5
FA13258-5	03/12/14	19:20	RM	03/14/14	SO	Soil	IDW-6
FA13258-6	03/12/14	19:40	RM	03/14/14	SO	Soil	IDW-7
FA13258-7	03/12/14	20:00	RM	03/14/14	SO	Soil	IDW-8
FA13258-8	03/13/14	08:30	RM	03/14/14	SO	Soil	IDW-9
FA13258-9	03/13/14	08:55	RM	03/14/14	AQ	Ground Water	IDW-1
FA13258-10	03/13/14	09:15	RM	03/14/14	AQ	Ground Water	IDW-2
FA13258-11	03/13/14	09:33	RM	03/14/14	AQ	Ground Water	IDW-3
FA13258-12	03/13/14	09:48	RM	03/14/14	AQ	Ground Water	IDW-4

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

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: United Technologies Corporation **Job No:** FA13258

Site: AECOMSCG: Delavan Spray Technologies; Bamberg, SC **Report Date** 3/27/2014 9:53:23 PM

12 Samples were collected between 03/12/2014 and 03/13/2014 and were received at Accutest SE on 03/14/2014 properly preserved, at 3 Deg. C and intact. These Samples received an Accutest job number of FA13258. 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:** VN3278

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA13044-17MS, FA13044-17MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Acetone are outside control limits. Blank Spike recovery is biased high. Analyte is non-detect in associated samples; therefore data integrity is not compromised.

Matrix Spike Recovery(s) for 1,1-Dichloroethylene are outside control limits. Probable cause is due to matrix interference.

FA13258-10: Sample was not preserved to a pH < 2. Sample was treated with an anti-foaming agent.

FA13258-11: Sample was not preserved to a pH < 2.

FA13258-12: Sample was not preserved to a pH < 2.

FA13258-10 for Acetone: Associated BS recovery outside control limits.

FA13258-10 for Methylene chloride: Suspected laboratory contaminant.

FA13258-11 for Acetone: Associated BS recovery outside control limits.

FA13258-11 for Methylene chloride: Suspected laboratory contaminant.

FA13258-12 for Acetone: Associated BS recovery outside control limits.

Matrix: AQ **Batch ID:** VP875

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA13180-22MS, FA13180-22MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Acetone are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

Matrix Spike Duplicate Recovery(s) for Acetone, Bromoform, trans-1,3-Dichloropropene are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

FA13258-1: Sample was not preserved to a pH < 2.

FA13258-2: Sample was not preserved to a pH < 2.

FA13258-3: Sample was not preserved to a pH < 2.

Matrix: AQ **Batch ID:** VP877

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA13237-6MS, FA13237-6MSD were used as the QC samples indicated.

Matrix Spike Duplicate Recovery(s) for trans-1,3-Dichloropropene are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

FA13258-9: Sample was not preserved to a pH < 2.

Volatiles by GCMS By Method SW846 8260B

Matrix: LEACHATE **Batch ID:** OP50903

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA13424-1MS, FA13424-1MSD, FA13258-4DUP were used as the QC samples indicated.

Blank Spike Recovery(s) for 1,1-Dichloroethylene are outside control limits. Blank Spike recovery is biased high. Analyte is non-detect in associated samples; therefore data integrity is not compromised.

Matrix Spike Recovery(s) for 1,1-Dichloroethylene are outside control limits. Probable cause is due to matrix interference.

FA13258-4 for 1,1-Dichloroethylene: Associated BS recovery outside control limits.

FA13258-5 for 1,1-Dichloroethylene: Associated BS recovery outside control limits.

FA13258-6 for 1,1-Dichloroethylene: Associated BS recovery outside control limits.

FA13258-7 for 1,1-Dichloroethylene: Associated BS recovery outside control limits.

FA13258-8 for 1,1-Dichloroethylene: Associated BS recovery outside control limits.

FA13258-4DUP for 1,1-Dichloroethylene: Associated BS recovery outside control limits.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ **Batch ID:** OP50856

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) FA13237-28MS, FA13237-28MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Benzoic Acid are outside control limits. Sporadic marginal failure.

Matrix Spike Recovery(s) for 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4-Nitroaniline, bis(2-Chloroethyl)ether, Naphthalene, Pentachlorophenol are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4-Nitroaniline, bis(2-Chloroethyl)ether, Pentachlorophenol are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for 3-Nitroaniline, 4-Nitroaniline are outside control limits for sample OP50856-MSD. Probable cause is due to sample non-homogeneity.

Sample(s) OP50856-MB has surrogates outside control limits.

FA13258-9 for Benzoic Acid: Associated BS recovery outside control limits.

FA13258-10 for Benzoic Acid: Confirmed by re-extraction and reanalysis.

FA13258-11 for Benzoic Acid: Associated BS recovery outside control limits.

FA13258-12 for Benzoic Acid: Associated BS recovery outside control limits.

Matrix: AQ **Batch ID:** OP50943

FA13258-10: Confirmation run.

Matrix: LEACHATE **Batch ID:** OP50926

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) FA13258-4DUP, FA13385-1MS, FA13385-1MSD were used as the QC samples indicated.

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** MP26972

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) FA13288-1DUP, FA13288-1MS, FA13288-1MSD, FA13288-1PS, FA13288-1SDL were used as the QC samples for metals.

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** MP26972

Matrix Spike Recovery(s) for Cadmium, Nickel, Zinc 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 Duplicate for Thallium are outside control limits for sample MP26972-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Antimony, Selenium, Silver, Thallium are outside control limits for sample MP26972-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP26972-PS1 for Cadmium: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

MP26972-PS1 for Lead: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

MP26972-PS1 for Zinc: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

Matrix: LEACHATE **Batch ID:** MP26987

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) FA13258-4DUP, FA13385-1MS, FA13385-1MSD, FA13385-1SDL, FA13258-4DUP were used as the QC samples for metals.

RPD(s) for Duplicate for Selenium are outside control limits for sample MP26987-D2. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Lead, Nickel, Selenium are outside control limits for sample MP26987-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 7470A

Matrix: AQ **Batch ID:** MP26956

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) FA13258-9DUP, FA13258-9MS, FA13258-9MSD, FA13258-9SDL were used as the QC samples for metals.

Matrix: LEACHATE **Batch ID:** MP26991

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) FA13385-1MS, FA13385-1MSD, FA13385-1SDL, FA13258-4DUP were used as the QC samples for metals.

RPD(s) for Duplicate for Mercury are outside control limits for sample MP26991-D2. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Mercury are outside control limits for sample MP26991-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: March 27, 2014

Lovelie Metzgar, QA Officer (signature on file)

Summary of Hits

Job Number: FA13258
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 03/12/14 thru 03/13/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA13258-1	**MW-23D**					
No hits reported in this sample.						
FA13258-2	**MW-23D-C**					
No hits reported in this sample.						
FA13258-3	**MW-4**					
No hits reported in this sample.						
FA13258-4	**IDW-5**					
Copper		0.020 J	0.25	0.010	mg/l	SW846 6010C
Selenium		0.035 J	0.10	0.023	mg/l	SW846 6010C
FA13258-5	**IDW-6**					
Nickel		0.0090 J	0.40	0.0050	mg/l	SW846 6010C
Selenium		0.036 J	0.10	0.023	mg/l	SW846 6010C
FA13258-6	**IDW-7**					
Selenium		0.026 J	0.10	0.023	mg/l	SW846 6010C
FA13258-7	**IDW-8**					
Selenium		0.029 J	0.10	0.023	mg/l	SW846 6010C
FA13258-8	**IDW-9**					
Chromium		0.061 J	0.10	0.020	mg/l	SW846 6010C
Nickel		0.0090 J	0.40	0.0050	mg/l	SW846 6010C
Selenium		0.028 J	0.10	0.023	mg/l	SW846 6010C
FA13258-9	**IDW-1**					
Tetrachloroethylene [a]		3.8	1.0	0.26	ug/l	SW846 8260B
Toluene [a]		0.23 J	1.0	0.20	ug/l	SW846 8260B
Nickel		0.90 J	40	0.50	ug/l	SW846 6010C
Zinc		43.3	20	3.0	ug/l	SW846 6010C

Summary of Hits

Job Number: FA13258
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 03/12/14 thru 03/13/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA13258-10	**IDW-2**					
Methylene chloride [b]		20.8 J	25	10	ug/l	SW846 8260B
Tetrachloroethylene [c]		384	5.0	1.3	ug/l	SW846 8260B
Trichloroethylene [c]		1.6 J	5.0	1.5	ug/l	SW846 8260B
Benzoic Acid [d]		20.2 J	48	9.6	ug/l	SW846 8270D
Benzyl Alcohol		4.1 J	4.8	0.96	ug/l	SW846 8270D
Chromium		5.2 J	10	2.0	ug/l	SW846 6010C
Copper		3.5 J	25	1.0	ug/l	SW846 6010C
Nickel		4.3 J	40	0.50	ug/l	SW846 6010C
Zinc		17.0 J	20	3.0	ug/l	SW846 6010C
FA13258-11	**IDW-3**					
cis-1,2-Dichloroethylene [a]		206	100	33	ug/l	SW846 8260B
Methylene chloride [e]		329 J	500	200	ug/l	SW846 8260B
Tetrachloroethylene [a]		6710	100	26	ug/l	SW846 8260B
Trichloroethylene [a]		86.5 J	100	30	ug/l	SW846 8260B
1,2-Dichlorobenzene		2.3 J	4.8	0.48	ug/l	SW846 8270D
Chromium		3.6 J	10	2.0	ug/l	SW846 6010C
Zinc		11.4 J	20	3.0	ug/l	SW846 6010C
FA13258-12	**IDW-4**					
1,1-Dichloroethylene [a]		0.58 J	1.0	0.25	ug/l	SW846 8260B
Tetrachloroethylene [a]		23.2	1.0	0.26	ug/l	SW846 8260B
Chromium		12.5	10	2.0	ug/l	SW846 6010C
Zinc		9.8 J	20	3.0	ug/l	SW846 6010C

(a) Sample was not preserved to a pH < 2.
(b) Sample was not preserved to a pH < 2. Sample was treated with an anti-foaming agent. Suspected laboratory contaminant.
(c) Sample was not preserved to a pH < 2. Sample was treated with an anti-foaming agent.
(d) Confirmed by re-extraction and reanalysis.
(e) Sample was not preserved to a pH < 2. Suspected laboratory contaminant.

Southeast ACCUTEST LABORATORIES

4

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-23D		
Lab Sample ID:	FA13258-1	**Date Sampled:**	03/12/14
Matrix:	AQ - Ground Water	**Date Received:**	03/14/14
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]	P23431.D	1	03/18/14	EG	n/a	n/a	VP875
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
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:	FA13258-1	**Date Sampled:**	03/12/14
Matrix:	AQ - Ground Water	**Date Received:**	03/14/14
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	96%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	103%		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-23D-C		
Lab Sample ID:	FA13258-2	**Date Sampled:**	03/12/14
Matrix:	AQ - Ground Water	**Date Received:**	03/14/14
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]	P23432.D	1	03/18/14	EG	n/a	n/a	VP875
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
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-C		
Lab Sample ID:	FA13258-2	**Date Sampled:**	03/12/14
Matrix:	AQ - Ground Water	**Date Received:**	03/14/14
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	97%		85-112%
460-00-4	4-Bromofluorobenzene	101%		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-4		
Lab Sample ID:	FA13258-3	**Date Sampled:**	03/12/14
Matrix:	AQ - Ground Water	**Date Received:**	03/14/14
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]	P23433.D	1	03/18/14	EG	n/a	n/a	VP875
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
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-4		
Lab Sample ID:	FA13258-3	**Date Sampled:**	03/12/14
Matrix:	AQ - Ground Water	**Date Received:**	03/14/14
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	95%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	102%		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-5
Lab Sample ID: FA13258-4 **Date Sampled:** 03/12/14
Matrix: SO - Soil **Date Received:** 03/14/14
Method: SW846 8260B SW846 1311 **Percent Solids:** n/a
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N0075116.D	10	03/24/14	RB	03/20/14	OP50903	VN3280
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP List **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.010	0.0024	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.010	0.0024	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.010	0.0031	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.010	0.0040	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	D029	0.70	0.010	0.0025	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.010	0.0024	mg/l	
106-46-7	p-Dichlorobenzene	ND	D027	7.5	0.010	0.0020	mg/l	
78-93-3	Methyl ethyl ketone	ND	D035	200	0.050	0.015	mg/l	
127-18-4	Tetrachloroethylene	ND	D039	0.70	0.010	0.0026	mg/l	
79-01-6	Trichloroethylene	ND	D040	0.50	0.010	0.0030	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.010	0.0033	mg/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	94%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 6/96) 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-5
Lab Sample ID: FA13258-4 **Date Sampled:** 03/12/14
Matrix: SO - Soil **Date Received:** 03/14/14
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	L0677281.D	1	03/24/14	NAF	03/21/14	OP50926	SL3421
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP List **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.050	0.0050	mg/l	
	3&4-Methylphenol	ND	D024	200	0.050	0.012	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.25	0.050	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.0097	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0055	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.050	0.0050	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.050	0.0057	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.050	0.0066	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.050	0.0050	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0050	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.050	0.0050	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.10	0.020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	51%		14-67%
4165-62-2	Phenol-d5	33%		10-50%
118-79-6	2,4,6-Tribromophenol	84%		33-118%
4165-60-0	Nitrobenzene-d5	81%		42-108%
321-60-8	2-Fluorobiphenyl	78%		40-106%
1718-51-0	Terphenyl-d14	89%		39-121%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 6/96) 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-5
Lab Sample ID: FA13258-4
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/12/14
Date Received: 03/14/14
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	MDL	Units	DF	Prep	Analyzed	By	Method
Antimony	0.023 U			0.060	0.023	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Arsenic	0.024 U	D004	5.0	0.10	0.024	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Beryllium	0.0050 U			0.040	0.0050	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Cadmium	0.0050 U	D006	1.0	0.050	0.0050	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Chromium	0.020 U	D007	5.0	0.10	0.020	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Copper	0.020 J			0.25	0.010	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Lead	0.011 U	D008	5.0	0.050	0.011	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Mercury	0.00050 U	D009	0.20	0.0050	0.00050	mg/l	1	03/24/14	03/24/14	JL	SW846 7470A [2]
Nickel	0.0050 U			0.40	0.0050	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Selenium	0.035 J	D010	1.0	0.10	0.023	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Silver	0.0077 U	D011	5.0	0.10	0.0077	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Thallium	0.020 U			0.10	0.020	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Zinc	0.10 U			0.20	0.10	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]

(1) Instrument QC Batch: MA11472
(2) Instrument QC Batch: MA11475
(3) Prep QC Batch: MP26987
(4) Prep QC Batch: MP26991

RL = Reporting Limit MDL = Method Detection Limit U = Indicates a result < MDL
MCL = Maximum Contamination Level (40 CFR 261 6/96) J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: IDW-6
Lab Sample ID: FA13258-5 **Date Sampled:** 03/12/14
Matrix: SO - Soil **Date Received:** 03/14/14
Method: SW846 8260B SW846 1311 **Percent Solids:** n/a
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N0075118.D	10	03/24/14	RB	03/20/14	OP50903	VN3280
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP List **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.010	0.0024	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.010	0.0024	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.010	0.0031	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.010	0.0040	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	D029	0.70	0.010	0.0025	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.010	0.0024	mg/l	
106-46-7	p-Dichlorobenzene	ND	D027	7.5	0.010	0.0020	mg/l	
78-93-3	Methyl ethyl ketone	ND	D035	200	0.050	0.015	mg/l	
127-18-4	Tetrachloroethylene	ND	D039	0.70	0.010	0.0026	mg/l	
79-01-6	Trichloroethylene	ND	D040	0.50	0.010	0.0030	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.010	0.0033	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		83-118%
17060-07-0	1,2-Dichloroethane-D4	98%		79-125%
2037-26-5	Toluene-D8	93%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

(a) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 6/96) 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-6
Lab Sample ID: FA13258-5 **Date Sampled:** 03/12/14
Matrix: SO - Soil **Date Received:** 03/14/14
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	L0677283.D	1	03/24/14	NAF	03/21/14	OP50926	SL3421
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP List **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.050	0.0050	mg/l	
	3&4-Methylphenol	ND	D024	200	0.050	0.012	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.25	0.050	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.0097	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0055	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.050	0.0050	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.050	0.0057	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.050	0.0066	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.050	0.0050	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0050	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.050	0.0050	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.10	0.020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	55%		14-67%
4165-62-2	Phenol-d5	35%		10-50%
118-79-6	2,4,6-Tribromophenol	93%		33-118%
4165-60-0	Nitrobenzene-d5	88%		42-108%
321-60-8	2-Fluorobiphenyl	91%		40-106%
1718-51-0	Terphenyl-d14	98%		39-121%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 6/96) 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-6
Lab Sample ID: FA13258-5
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/12/14
Date Received: 03/14/14
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	MDL	Units	DF	Prep	Analyzed	By	Method
Antimony	0.023 U			0.060	0.023	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Arsenic	0.024 U	D004	5.0	0.10	0.024	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Beryllium	0.0050 U			0.040	0.0050	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Cadmium	0.0050 U	D006	1.0	0.050	0.0050	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Chromium	0.020 U	D007	5.0	0.10	0.020	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Copper	0.010 U			0.25	0.010	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Lead	0.011 U	D008	5.0	0.050	0.011	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Mercury	0.00050 U	D009	0.20	0.0050	0.00050	mg/l	1	03/24/14	03/24/14	JL	SW846 7470A [2]
Nickel	0.0090 J			0.40	0.0050	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Selenium	0.036 J	D010	1.0	0.10	0.023	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Silver	0.0077 U	D011	5.0	0.10	0.0077	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Thallium	0.020 U			0.10	0.020	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Zinc	0.10 U			0.20	0.10	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]

(1) Instrument QC Batch: MA11472
(2) Instrument QC Batch: MA11475
(3) Prep QC Batch: MP26987
(4) Prep QC Batch: MP26991

RL = Reporting Limit MDL = Method Detection Limit U = Indicates a result < MDL
MCL = Maximum Contamination Level (40 CFR 261 6/96) J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	IDW-7		
Lab Sample ID:	FA13258-6	**Date Sampled:**	03/12/14
Matrix:	SO - Soil	**Date Received:**	03/14/14
Method:	SW846 8260B SW846 1311	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N0075119.D	10	03/24/14	RB	03/20/14	OP50903	VN3280
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP List **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.010	0.0024	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.010	0.0024	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.010	0.0031	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.010	0.0040	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	D029	0.70	0.010	0.0025	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.010	0.0024	mg/l	
106-46-7	p-Dichlorobenzene	ND	D027	7.5	0.010	0.0020	mg/l	
78-93-3	Methyl ethyl ketone	ND	D035	200	0.050	0.015	mg/l	
127-18-4	Tetrachloroethylene	ND	D039	0.70	0.010	0.0026	mg/l	
79-01-6	Trichloroethylene	ND	D040	0.50	0.010	0.0030	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.010	0.0033	mg/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	96%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261 6/96)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: IDW-7
Lab Sample ID: FA13258-6 **Date Sampled:** 03/12/14
Matrix: SO - Soil **Date Received:** 03/14/14
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	L0677284.D	1	03/24/14	NAF	03/21/14	OP50926	SL3421
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP List **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.050	0.0050	mg/l	
	3&4-Methylphenol	ND	D024	200	0.050	0.012	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.25	0.050	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.0097	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0055	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.050	0.0050	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.050	0.0057	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.050	0.0066	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.050	0.0050	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0050	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.050	0.0050	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.10	0.020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	44%		14-67%
4165-62-2	Phenol-d5	27%		10-50%
118-79-6	2,4,6-Tribromophenol	84%		33-118%
4165-60-0	Nitrobenzene-d5	75%		42-108%
321-60-8	2-Fluorobiphenyl	74%		40-106%
1718-51-0	Terphenyl-d14	92%		39-121%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 6/96) 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-7
Lab Sample ID: FA13258-6
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/12/14
Date Received: 03/14/14
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	MDL	Units	DF	Prep	Analyzed	By	Method
Antimony	0.023 U			0.060	0.023	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Arsenic	0.024 U	D004	5.0	0.10	0.024	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Beryllium	0.0050 U			0.040	0.0050	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Cadmium	0.0050 U	D006	1.0	0.050	0.0050	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Chromium	0.020 U	D007	5.0	0.10	0.020	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Copper	0.010 U			0.25	0.010	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Lead	0.011 U	D008	5.0	0.050	0.011	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Mercury	0.00050 U	D009	0.20	0.0050	0.00050	mg/l	1	03/24/14	03/24/14	JL	SW846 7470A [2]
Nickel	0.0050 U			0.40	0.0050	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Selenium	0.026 J	D010	1.0	0.10	0.023	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Silver	0.0077 U	D011	5.0	0.10	0.0077	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Thallium	0.020 U			0.10	0.020	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Zinc	0.10 U			0.20	0.10	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]

(1) Instrument QC Batch: MA11472
(2) Instrument QC Batch: MA11475
(3) Prep QC Batch: MP26987
(4) Prep QC Batch: MP26991

RL = Reporting Limit MDL = Method Detection Limit U = Indicates a result < MDL
MCL = Maximum Contamination Level (40 CFR 261 6/96) J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: IDW-8
Lab Sample ID: FA13258-7
Matrix: SO - Soil
Method: SW846 8260B SW846 1311
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/12/14
Date Received: 03/14/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N0075120.D	10	03/24/14	RB	03/20/14	OP50903	VN3280
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP List **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.010	0.0024	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.010	0.0024	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.010	0.0031	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.010	0.0040	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	D029	0.70	0.010	0.0025	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.010	0.0024	mg/l	
106-46-7	p-Dichlorobenzene	ND	D027	7.5	0.010	0.0020	mg/l	
78-93-3	Methyl ethyl ketone	ND	D035	200	0.050	0.015	mg/l	
127-18-4	Tetrachloroethylene	ND	D039	0.70	0.010	0.0026	mg/l	
79-01-6	Trichloroethylene	ND	D040	0.50	0.010	0.0030	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.010	0.0033	mg/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	95%		83-118%

(a) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261 6/96)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: IDW-8
Lab Sample ID: FA13258-7
Matrix: SO - Soil
Method: SW846 8270D SW846 3510C
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/12/14
Date Received: 03/14/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0677285.D	1	03/24/14	NAF	03/21/14	OP50926	SL3421
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP List **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.050	0.0050	mg/l	
	3&4-Methylphenol	ND	D024	200	0.050	0.012	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.25	0.050	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.0097	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0055	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.050	0.0050	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.050	0.0057	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.050	0.0066	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.050	0.0050	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0050	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.050	0.0050	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.10	0.020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	41%		14-67%
4165-62-2	Phenol-d5	26%		10-50%
118-79-6	2,4,6-Tribromophenol	83%		33-118%
4165-60-0	Nitrobenzene-d5	74%		42-108%
321-60-8	2-Fluorobiphenyl	74%		40-106%
1718-51-0	Terphenyl-d14	94%		39-121%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261 6/96)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: IDW-8
Lab Sample ID: FA13258-7
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/12/14
Date Received: 03/14/14
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	MDL	Units	DF	Prep	Analyzed	By	Method
Antimony	0.023 U			0.060	0.023	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Arsenic	0.024 U	D004	5.0	0.10	0.024	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Beryllium	0.0050 U			0.040	0.0050	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Cadmium	0.0050 U	D006	1.0	0.050	0.0050	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Chromium	0.020 U	D007	5.0	0.10	0.020	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Copper	0.010 U			0.25	0.010	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Lead	0.011 U	D008	5.0	0.050	0.011	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Mercury	0.00050 U	D009	0.20	0.0050	0.00050	mg/l	1	03/24/14	03/24/14	JL	SW846 7470A [2]
Nickel	0.0050 U			0.40	0.0050	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Selenium	0.029 J	D010	1.0	0.10	0.023	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Silver	0.0077 U	D011	5.0	0.10	0.0077	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Thallium	0.020 U			0.10	0.020	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Zinc	0.10 U			0.20	0.10	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]

(1) Instrument QC Batch: MA11472
(2) Instrument QC Batch: MA11475
(3) Prep QC Batch: MP26987
(4) Prep QC Batch: MP26991

RL = Reporting Limit MDL = Method Detection Limit U = Indicates a result < MDL
MCL = Maximum Contamination Level (40 CFR 261 6/96) J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: IDW-9
Lab Sample ID: FA13258-8 **Date Sampled:** 03/13/14
Matrix: SO - Soil **Date Received:** 03/14/14
Method: SW846 8260B SW846 1311 **Percent Solids:** n/a
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N0075121.D	10	03/24/14	RB	03/20/14	OP50903	VN3280
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP List **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.010	0.0024	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.010	0.0024	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.010	0.0031	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.010	0.0040	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	D029	0.70	0.010	0.0025	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.010	0.0024	mg/l	
106-46-7	p-Dichlorobenzene	ND	D027	7.5	0.010	0.0020	mg/l	
78-93-3	Methyl ethyl ketone	ND	D035	200	0.050	0.015	mg/l	
127-18-4	Tetrachloroethylene	ND	D039	0.70	0.010	0.0026	mg/l	
79-01-6	Trichloroethylene	ND	D040	0.50	0.010	0.0030	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.010	0.0033	mg/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	94%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 6/96) 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-9
Lab Sample ID: FA13258-8 **Date Sampled:** 03/13/14
Matrix: SO - Soil **Date Received:** 03/14/14
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	L0677286.D	1	03/24/14	NAF	03/21/14	OP50926	SL3421
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP List **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.050	0.0050	mg/l	
	3&4-Methylphenol	ND	D024	200	0.050	0.012	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.25	0.050	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.0097	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0055	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.050	0.0050	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.050	0.0057	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.050	0.0066	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.050	0.0050	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0050	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.050	0.0050	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.10	0.020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	52%		14-67%
4165-62-2	Phenol-d5	33%		10-50%
118-79-6	2,4,6-Tribromophenol	93%		33-118%
4165-60-0	Nitrobenzene-d5	86%		42-108%
321-60-8	2-Fluorobiphenyl	84%		40-106%
1718-51-0	Terphenyl-d14	92%		39-121%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261 6/96)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: IDW-9
Lab Sample ID: FA13258-8
Matrix: SO - Soil
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/13/14
Date Received: 03/14/14
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	MDL	Units	DF	Prep	Analyzed	By	Method
Antimony	0.023 U			0.060	0.023	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Arsenic	0.024 U	D004	5.0	0.10	0.024	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Beryllium	0.0050 U			0.040	0.0050	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Cadmium	0.0050 U	D006	1.0	0.050	0.0050	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Chromium	0.061 J	D007	5.0	0.10	0.020	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Copper	0.010 U			0.25	0.010	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Lead	0.011 U	D008	5.0	0.050	0.011	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Mercury	0.00050 U	D009	0.20	0.0050	0.00050	mg/l	1	03/24/14	03/24/14	JL	SW846 7470A [2]
Nickel	0.0090 J			0.40	0.0050	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Selenium	0.028 J	D010	1.0	0.10	0.023	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Silver	0.0077 U	D011	5.0	0.10	0.0077	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Thallium	0.020 U			0.10	0.020	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]
Zinc	0.10 U			0.20	0.10	mg/l	1	03/21/14	03/21/14	LM	SW846 6010C [1]

(1) Instrument QC Batch: MA11472
(2) Instrument QC Batch: MA11475
(3) Prep QC Batch: MP26987
(4) Prep QC Batch: MP26991

RL = Reporting Limit MDL = Method Detection Limit U = Indicates a result < MDL
MCL = Maximum Contamination Level (40 CFR 261 6/96) J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: IDW-1
Lab Sample ID: FA13258-9
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/13/14
Date Received: 03/14/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	P23485.D	1	03/19/14	EG	n/a	n/a	VP877
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	3.8	1.0	0.26	ug/l	
108-88-3	Toluene	0.23	1.0	0.20	ug/l	J
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:	IDW-1		
Lab Sample ID:	FA13258-9	**Date Sampled:**	03/13/14
Matrix:	AQ - Ground Water	**Date Received:**	03/14/14
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	95%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	101%		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-1
Lab Sample ID: FA13258-9 **Date Sampled:** 03/13/14
Matrix: AQ - Ground Water **Date Received:** 03/14/14
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	X033777.D	1	03/18/14	FS	03/17/14	OP50856	SX1587
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid [a]	ND	48	9.6	ug/l	
95-57-8	2-Chlorophenol	ND	4.8	0.50	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.8	0.48	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.8	0.55	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	0.48	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	5.2	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.6	1.9	ug/l	
95-48-7	2-Methylphenol	ND	4.8	0.48	ug/l	
	3&4-Methylphenol	ND	4.8	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	0.57	ug/l	
100-02-7	4-Nitrophenol	ND	24	4.8	ug/l	
87-86-5	Pentachlorophenol	ND	24	4.8	ug/l	
108-95-2	Phenol	ND	4.8	0.48	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.8	0.94	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	0.53	ug/l	
83-32-9	Acenaphthene	ND	4.8	0.48	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.48	ug/l	
120-12-7	Anthracene	ND	4.8	0.59	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.62	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.63	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.69	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.77	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.49	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	4.8	0.64	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.8	0.78	ug/l	
100-51-6	Benzyl Alcohol	ND	4.8	0.96	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.8	0.53	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	0.48	ug/l	
86-74-8	Carbazole	ND	4.8	0.59	ug/l	
218-01-9	Chrysene	ND	4.8	0.69	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.8	0.53	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.8	0.66	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-1
Lab Sample ID: FA13258-9 **Date Sampled:** 03/13/14
Matrix: AQ - Ground Water **Date Received:** 03/14/14
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	4.8	0.56	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.8	0.52	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.8	0.48	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.8	0.48	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.8	0.48	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	4.8	0.55	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.8	0.60	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	4.8	0.87	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.78	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.51	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.8	0.96	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.8	0.96	ug/l	
84-66-2	Diethyl phthalate	ND	4.8	0.96	ug/l	
131-11-3	Dimethyl phthalate	ND	4.8	0.61	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.8	1.5	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.67	ug/l	
86-73-7	Fluorene	ND	4.8	0.48	ug/l	
118-74-1	Hexachlorobenzene	ND	4.8	0.64	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.8	0.48	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	4.8	0.96	ug/l	
67-72-1	Hexachloroethane	ND	4.8	0.48	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.60	ug/l	
78-59-1	Isophorone	ND	4.8	0.48	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.51	ug/l	
88-74-4	2-Nitroaniline	ND	4.8	1.1	ug/l	
99-09-2	3-Nitroaniline	ND	4.8	0.58	ug/l	
100-01-6	4-Nitroaniline	ND	4.8	0.73	ug/l	
91-20-3	Naphthalene	ND	4.8	0.48	ug/l	
98-95-3	Nitrobenzene	ND	4.8	0.48	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.8	0.48	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	0.51	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.57	ug/l	
129-00-0	Pyrene	ND	4.8	0.78	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	26%		14-67%
4165-62-2	Phenol-d5	16%		10-50%
118-79-6	2,4,6-Tribromophenol	66%		33-118%

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:	IDW-1		
Lab Sample ID:	FA13258-9	**Date Sampled:**	03/13/14
Matrix:	AQ - Ground Water	**Date Received:**	03/14/14
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	61%		42-108%
321-60-8	2-Fluorobiphenyl	56%		40-106%
1718-51-0	Terphenyl-d14	65%		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-1
Lab Sample ID: FA13258-9
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/13/14
Date Received: 03/14/14
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	2.3 U	6.0	2.3	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Arsenic	2.4 U	10	2.4	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Beryllium	0.50 U	4.0	0.50	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Cadmium	0.50 U	5.0	0.50	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Chromium	2.0 U	10	2.0	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Copper	1.0 U	25	1.0	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Lead	1.1 U	5.0	1.1	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Mercury	0.030 U	0.50	0.030	ug/l	1	03/17/14	03/17/14	JL	SW846 7470A [1]	SW846 7470A [3]
Nickel	0.90 J	40	0.50	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Selenium	2.3 U	10	2.3	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Silver	0.77 U	5.0	0.77	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Thallium	2.0 U	10	2.0	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Zinc	43.3	20	3.0	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA11457
(2) Instrument QC Batch: MA11467
(3) Prep QC Batch: MP26956
(4) Prep QC Batch: MP26972

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:	IDW-2		
Lab Sample ID:	FA13258-10	**Date Sampled:**	03/13/14
Matrix:	AQ - Ground Water	**Date Received:**	03/14/14
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]	N0075061.D	5	03/20/14	RB	n/a	n/a	VN3278
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	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	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 [c]	20.8	25	10	ug/l	J
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	384	5.0	1.3	ug/l	
108-88-3	Toluene	ND	5.0	1.0	ug/l	
79-01-6	Trichloroethylene	1.6	5.0	1.5	ug/l	J

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-2		
Lab Sample ID:	FA13258-10	**Date Sampled:**	03/13/14
Matrix:	AQ - Ground Water	**Date Received:**	03/14/14
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	104%		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	102%		83-118%

(a) Sample was not preserved to a pH < 2. Sample was treated with an anti-foaming agent.
(b) Associated BS recovery outside control limits.
(c) Suspected laboratory contaminant.

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-2
Lab Sample ID: FA13258-10 **Date Sampled:** 03/13/14
Matrix: AQ - Ground Water **Date Received:** 03/14/14
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	X033778.D	1	03/18/14	FS	03/17/14	OP50856	SX1587
Run #2 [a]	X033941.D	1	03/26/14	FS	03/21/14	OP50943	SX1594

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2	1010 ml	1.0 ml

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid [b]	20.2	48	9.6	ug/l	J
95-57-8	2-Chlorophenol	ND	4.8	0.50	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.8	0.48	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.8	0.55	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	0.48	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	5.2	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.6	1.9	ug/l	
95-48-7	2-Methylphenol	ND	4.8	0.48	ug/l	
	3&4-Methylphenol	ND	4.8	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	0.57	ug/l	
100-02-7	4-Nitrophenol	ND	24	4.8	ug/l	
87-86-5	Pentachlorophenol	ND	24	4.8	ug/l	
108-95-2	Phenol	ND	4.8	0.48	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.8	0.94	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	0.53	ug/l	
83-32-9	Acenaphthene	ND	4.8	0.48	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.48	ug/l	
120-12-7	Anthracene	ND	4.8	0.59	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.62	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.63	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.69	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.77	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.49	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	4.8	0.64	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.8	0.78	ug/l	
100-51-6	Benzyl Alcohol	4.1	4.8	0.96	ug/l	J
91-58-7	2-Chloronaphthalene	ND	4.8	0.53	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	0.48	ug/l	
86-74-8	Carbazole	ND	4.8	0.59	ug/l	
218-01-9	Chrysene	ND	4.8	0.69	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.8	0.53	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.8	0.66	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-2
Lab Sample ID: FA13258-10 **Date Sampled:** 03/13/14
Matrix: AQ - Ground Water **Date Received:** 03/14/14
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	4.8	0.56	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.8	0.52	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.8	0.48	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.8	0.48	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.8	0.48	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	4.8	0.55	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.8	0.60	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	4.8	0.87	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.78	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.51	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.8	0.96	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.8	0.96	ug/l	
84-66-2	Diethyl phthalate	ND	4.8	0.96	ug/l	
131-11-3	Dimethyl phthalate	ND	4.8	0.61	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.8	1.5	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.67	ug/l	
86-73-7	Fluorene	ND	4.8	0.48	ug/l	
118-74-1	Hexachlorobenzene	ND	4.8	0.64	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.8	0.48	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	4.8	0.96	ug/l	
67-72-1	Hexachloroethane	ND	4.8	0.48	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.60	ug/l	
78-59-1	Isophorone	ND	4.8	0.48	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.51	ug/l	
88-74-4	2-Nitroaniline	ND	4.8	1.1	ug/l	
99-09-2	3-Nitroaniline	ND	4.8	0.58	ug/l	
100-01-6	4-Nitroaniline	ND	4.8	0.73	ug/l	
91-20-3	Naphthalene	ND	4.8	0.48	ug/l	
98-95-3	Nitrobenzene	ND	4.8	0.48	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.8	0.48	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	0.51	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.57	ug/l	
129-00-0	Pyrene	ND	4.8	0.78	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	35%	40%	14-67%
4165-62-2	Phenol-d5	24%	25%	10-50%
118-79-6	2,4,6-Tribromophenol	91%	88%	33-118%

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:	IDW-2		
Lab Sample ID:	FA13258-10	**Date Sampled:**	03/13/14
Matrix:	AQ - Ground Water	**Date Received:**	03/14/14
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	68%	90%	42-108%
321-60-8	2-Fluorobiphenyl	74%	81%	40-106%
1718-51-0	Terphenyl-d14	97%	99%	39-121%

(a) Confirmation run.
(b) Confirmed by re-extraction and reanalysis.

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-2
Lab Sample ID: FA13258-10
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/13/14
Date Received: 03/14/14
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	2.3 U	6.0	2.3	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Arsenic	2.4 U	10	2.4	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Beryllium	0.50 U	4.0	0.50	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Cadmium	0.50 U	5.0	0.50	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Chromium	5.2 J	10	2.0	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Copper	3.5 J	25	1.0	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Lead	1.1 U	5.0	1.1	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Mercury	0.030 U	0.50	0.030	ug/l	1	03/17/14	03/17/14	JL	SW846 7470A [1]	SW846 7470A [3]
Nickel	4.3 J	40	0.50	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Selenium	2.3 U	10	2.3	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Silver	0.77 U	5.0	0.77	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Thallium	2.0 U	10	2.0	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Zinc	17.0 J	20	3.0	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA11457
(2) Instrument QC Batch: MA11467
(3) Prep QC Batch: MP26956
(4) Prep QC Batch: MP26972

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:	IDW-3		
Lab Sample ID:	FA13258-11	**Date Sampled:**	03/13/14
Matrix:	AQ - Ground Water	**Date Received:**	03/14/14
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]	N0075062.D	100	03/20/14	RB	n/a	n/a	VN3278
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	2500	1100	ug/l	
71-43-2	Benzene	ND	100	24	ug/l	
75-27-4	Bromodichloromethane	ND	100	26	ug/l	
75-25-2	Bromoform	ND	100	38	ug/l	
108-90-7	Chlorobenzene	ND	100	24	ug/l	
75-00-3	Chloroethane	ND	200	50	ug/l	
67-66-3	Chloroform	ND	100	31	ug/l	
75-15-0	Carbon disulfide	ND	200	20	ug/l	
56-23-5	Carbon tetrachloride	ND	100	40	ug/l	
75-34-3	1,1-Dichloroethane	ND	100	26	ug/l	
75-35-4	1,1-Dichloroethylene	ND	100	25	ug/l	
107-06-2	1,2-Dichloroethane	ND	100	24	ug/l	
78-87-5	1,2-Dichloropropane	ND	100	36	ug/l	
124-48-1	Dibromochloromethane	ND	100	36	ug/l	
156-59-2	cis-1,2-Dichloroethylene	206	100	33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	100	21	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	100	34	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	100	21	ug/l	
100-41-4	Ethylbenzene	ND	100	28	ug/l	
591-78-6	2-Hexanone	ND	1000	200	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	500	100	ug/l	
74-83-9	Methyl bromide	ND	200	54	ug/l	
74-87-3	Methyl chloride	ND	200	53	ug/l	
75-09-2	Methylene chloride [c]	329	500	200	ug/l	J
78-93-3	Methyl ethyl ketone	ND	500	150	ug/l	
100-42-5	Styrene	ND	100	23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	100	34	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	27	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	100	32	ug/l	
127-18-4	Tetrachloroethylene	6710	100	26	ug/l	
108-88-3	Toluene	ND	100	20	ug/l	
79-01-6	Trichloroethylene	86.5	100	30	ug/l	J

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-3		
Lab Sample ID:	FA13258-11	**Date Sampled:**	03/13/14
Matrix:	AQ - Ground Water	**Date Received:**	03/14/14
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	100	33	ug/l	
1330-20-7	Xylene (total)	ND	300	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	100%		79-125%
2037-26-5	Toluene-D8	96%		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.
(c) Suspected laboratory contaminant.

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-3
Lab Sample ID: FA13258-11 **Date Sampled:** 03/13/14
Matrix: AQ - Ground Water **Date Received:** 03/14/14
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	X033779.D	1	03/18/14	FS	03/17/14	OP50856	SX1587
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid [a]	ND	48	9.6	ug/l	
95-57-8	2-Chlorophenol	ND	4.8	0.50	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.8	0.48	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.8	0.55	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	0.48	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	5.2	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.6	1.9	ug/l	
95-48-7	2-Methylphenol	ND	4.8	0.48	ug/l	
	3&4-Methylphenol	ND	4.8	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	0.57	ug/l	
100-02-7	4-Nitrophenol	ND	24	4.8	ug/l	
87-86-5	Pentachlorophenol	ND	24	4.8	ug/l	
108-95-2	Phenol	ND	4.8	0.48	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.8	0.94	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	0.53	ug/l	
83-32-9	Acenaphthene	ND	4.8	0.48	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.48	ug/l	
120-12-7	Anthracene	ND	4.8	0.59	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.62	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.63	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.69	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.77	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.49	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	4.8	0.64	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.8	0.78	ug/l	
100-51-6	Benzyl Alcohol	ND	4.8	0.96	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.8	0.53	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	0.48	ug/l	
86-74-8	Carbazole	ND	4.8	0.59	ug/l	
218-01-9	Chrysene	ND	4.8	0.69	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.8	0.53	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.8	0.66	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-3
Lab Sample ID: FA13258-11 **Date Sampled:** 03/13/14
Matrix: AQ - Ground Water **Date Received:** 03/14/14
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	4.8	0.56	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.8	0.52	ug/l	
95-50-1	1,2-Dichlorobenzene	2.3	4.8	0.48	ug/l	J
541-73-1	1,3-Dichlorobenzene	ND	4.8	0.48	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.8	0.48	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	4.8	0.55	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.8	0.60	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	4.8	0.87	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.78	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.51	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.8	0.96	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.8	0.96	ug/l	
84-66-2	Diethyl phthalate	ND	4.8	0.96	ug/l	
131-11-3	Dimethyl phthalate	ND	4.8	0.61	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.8	1.5	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.67	ug/l	
86-73-7	Fluorene	ND	4.8	0.48	ug/l	
118-74-1	Hexachlorobenzene	ND	4.8	0.64	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.8	0.48	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	4.8	0.96	ug/l	
67-72-1	Hexachloroethane	ND	4.8	0.48	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.60	ug/l	
78-59-1	Isophorone	ND	4.8	0.48	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.51	ug/l	
88-74-4	2-Nitroaniline	ND	4.8	1.1	ug/l	
99-09-2	3-Nitroaniline	ND	4.8	0.58	ug/l	
100-01-6	4-Nitroaniline	ND	4.8	0.73	ug/l	
91-20-3	Naphthalene	ND	4.8	0.48	ug/l	
98-95-3	Nitrobenzene	ND	4.8	0.48	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.8	0.48	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	0.51	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.57	ug/l	
129-00-0	Pyrene	ND	4.8	0.78	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	29%		14-67%
4165-62-2	Phenol-d5	19%		10-50%
118-79-6	2,4,6-Tribromophenol	74%		33-118%

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:	IDW-3		
Lab Sample ID:	FA13258-11	**Date Sampled:**	03/13/14
Matrix:	AQ - Ground Water	**Date Received:**	03/14/14
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	69%		42-108%
321-60-8	2-Fluorobiphenyl	69%		40-106%
1718-51-0	Terphenyl-d14	69%		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-3
Lab Sample ID: FA13258-11
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/13/14
Date Received: 03/14/14
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	2.3 U	6.0	2.3	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Arsenic	2.4 U	10	2.4	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Beryllium	0.50 U	4.0	0.50	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Cadmium	0.50 U	5.0	0.50	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Chromium	3.6 J	10	2.0	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Copper	1.0 U	25	1.0	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Lead	1.1 U	5.0	1.1	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Mercury	0.030 U	0.50	0.030	ug/l	1	03/17/14	03/17/14	JL	SW846 7470A [1]	SW846 7470A [3]
Nickel	0.50 U	40	0.50	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Selenium	2.3 U	10	2.3	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Silver	0.77 U	5.0	0.77	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Thallium	2.0 U	10	2.0	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Zinc	11.4 J	20	3.0	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA11457
(2) Instrument QC Batch: MA11467
(3) Prep QC Batch: MP26956
(4) Prep QC Batch: MP26972

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:	IDW-4		
Lab Sample ID:	FA13258-12	**Date Sampled:**	03/13/14
Matrix:	AQ - Ground Water	**Date Received:**	03/14/14
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]	N0075060.D	1	03/20/14	RB	n/a	n/a	VN3278
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	0.58	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	23.2	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
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-4		
Lab Sample ID:	FA13258-12	**Date Sampled:**	03/13/14
Matrix:	AQ - Ground Water	**Date Received:**	03/14/14
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	94%		85-112%
460-00-4	4-Bromofluorobenzene	96%		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:	IDW-4		
Lab Sample ID:	FA13258-12	**Date Sampled:**	03/13/14
Matrix:	AQ - Ground Water	**Date Received:**	03/14/14
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	X033780.D	1	03/18/14	FS	03/17/14	OP50856	SX1587
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid [a]	ND	48	9.6	ug/l	
95-57-8	2-Chlorophenol	ND	4.8	0.50	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	4.8	0.48	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.8	0.55	ug/l	
105-67-9	2,4-Dimethylphenol	ND	4.8	0.48	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	5.2	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	9.6	1.9	ug/l	
95-48-7	2-Methylphenol	ND	4.8	0.48	ug/l	
	3&4-Methylphenol	ND	4.8	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	4.8	0.57	ug/l	
100-02-7	4-Nitrophenol	ND	24	4.8	ug/l	
87-86-5	Pentachlorophenol	ND	24	4.8	ug/l	
108-95-2	Phenol	ND	4.8	0.48	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.8	0.94	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	4.8	0.53	ug/l	
83-32-9	Acenaphthene	ND	4.8	0.48	ug/l	
208-96-8	Acenaphthylene	ND	4.8	0.48	ug/l	
120-12-7	Anthracene	ND	4.8	0.59	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.8	0.62	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.8	0.63	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	4.8	0.69	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.8	0.77	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.8	0.49	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	4.8	0.64	ug/l	
85-68-7	Butyl benzyl phthalate	ND	4.8	0.78	ug/l	
100-51-6	Benzyl Alcohol	ND	4.8	0.96	ug/l	
91-58-7	2-Chloronaphthalene	ND	4.8	0.53	ug/l	
106-47-8	4-Chloroaniline	ND	4.8	0.48	ug/l	
86-74-8	Carbazole	ND	4.8	0.59	ug/l	
218-01-9	Chrysene	ND	4.8	0.69	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	4.8	0.53	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	4.8	0.66	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-4		
Lab Sample ID:	FA13258-12	**Date Sampled:**	03/13/14
Matrix:	AQ - Ground Water	**Date Received:**	03/14/14
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	4.8	0.56	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	4.8	0.52	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	4.8	0.48	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	4.8	0.48	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	4.8	0.48	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	4.8	0.55	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	4.8	0.60	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	4.8	0.87	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.8	0.78	ug/l	
132-64-9	Dibenzofuran	ND	4.8	0.51	ug/l	
84-74-2	Di-n-butyl phthalate	ND	4.8	0.96	ug/l	
117-84-0	Di-n-octyl phthalate	ND	4.8	0.96	ug/l	
84-66-2	Diethyl phthalate	ND	4.8	0.96	ug/l	
131-11-3	Dimethyl phthalate	ND	4.8	0.61	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	4.8	1.5	ug/l	
206-44-0	Fluoranthene	ND	4.8	0.67	ug/l	
86-73-7	Fluorene	ND	4.8	0.48	ug/l	
118-74-1	Hexachlorobenzene	ND	4.8	0.64	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.8	0.48	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	4.8	0.96	ug/l	
67-72-1	Hexachloroethane	ND	4.8	0.48	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.8	0.60	ug/l	
78-59-1	Isophorone	ND	4.8	0.48	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.8	0.51	ug/l	
88-74-4	2-Nitroaniline	ND	4.8	1.1	ug/l	
99-09-2	3-Nitroaniline	ND	4.8	0.58	ug/l	
100-01-6	4-Nitroaniline	ND	4.8	0.73	ug/l	
91-20-3	Naphthalene	ND	4.8	0.48	ug/l	
98-95-3	Nitrobenzene	ND	4.8	0.48	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.8	0.48	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	4.8	0.51	ug/l	
85-01-8	Phenanthrene	ND	4.8	0.57	ug/l	
129-00-0	Pyrene	ND	4.8	0.78	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	34%		14-67%
4165-62-2	Phenol-d5	21%		10-50%
118-79-6	2,4,6-Tribromophenol	89%		33-118%

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:	IDW-4		
Lab Sample ID:	FA13258-12	**Date Sampled:**	03/13/14
Matrix:	AQ - Ground Water	**Date Received:**	03/14/14
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	71%		42-108%
321-60-8	2-Fluorobiphenyl	75%		40-106%
1718-51-0	Terphenyl-d14	97%		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-4
Lab Sample ID: FA13258-12
Matrix: AQ - Ground Water
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Date Sampled: 03/13/14
Date Received: 03/14/14
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	2.3 U	6.0	2.3	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Arsenic	2.4 U	10	2.4	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Beryllium	0.50 U	4.0	0.50	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Cadmium	0.50 U	5.0	0.50	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Chromium	12.5	10	2.0	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Copper	1.0 U	25	1.0	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Lead	1.1 U	5.0	1.1	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Mercury	0.030 U	0.50	0.030	ug/l	1	03/17/14	03/17/14	JL	SW846 7470A [1]	SW846 7470A [3]
Nickel	0.50 U	40	0.50	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Selenium	2.3 U	10	2.3	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Silver	0.77 U	5.0	0.77	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Thallium	2.0 U	10	2.0	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]
Zinc	9.8 J	20	3.0	ug/l	1	03/19/14	03/19/14	LM	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA11457
(2) Instrument QC Batch: MA11467
(3) Prep QC Batch: MP26956
(4) Prep QC Batch: MP26972

RL = Reporting Limit
MDL = Method Detection Limit

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

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA13258

AECOM — Chain of Custody and Analytical Request

Page 1 of 1
Project Number: ~~60269713~~
Chain of Custody Number [1]: 60314764
LIMS Number:

Project Name / Location: UTC Delavan Spray Technologies Site RI
Client Name: UTC
Collected by: Randy Morgan
Project Manager: Walter Gerald

	Sample ID	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hh:mm)	See Comments: COMP	GRAB	Well	Sample Information (i.e., location, depth, filtered, etc.)	VOCs 8260B	TCLP VOCs 8260B	TCLP SVOCs 8270D	TCLP P/P metals 6010B/7470A	TCL VOCs 8260C	TCL SVOCs 8270D	P/P metals 6010B/7470A	COMMENTS (add preservative information) A = aqueous, S = solid, M = aqueous/solid mixture, W = waste	Cooler ID
1	MW-22D	12-Mar-2014	1637			X		X							A	
2	MW-22D-c	12-Mar-2014	1637			X		X							A	
3	MW-4	12-Mar-2014	1737			X		X							A	
4	IDW-5	12-Mar-2014	1840	X					X	X	X				S	
5	IDW-6	12-Mar-2014	1920	X					X	X	X				S	
6	IDW-7	12-Mar-2014	1940	X					X	X	X				S	
7	IDW-8	12-Mar-2014	2000	X					X	X	X				S	
8	IDW-9	13-Mar-2014	0830	X					X	X	X				M	
9	IDW-1	13-Mar-2014	0855		X							X	X	X	A	
10	IDW-2	13-Mar-2014	0915		X							X	X	X	A	
11	IDW-3	13-Mar-2014	0933		X							X	X	X	A	
12	IDW-4	13-Mar-2014	0948		X							X	X	X	A	

Sample Analysis Requested

Randy Morgan 3-13-14

Custody Transfers Prior to Receipt by Laboratory

	Relinquished By (Signed)	Date	Time	Received By (signed)	Date	Time
1.	Randy Morgan	3-13-14	1415	FX		09:30
2.	FX			Carrie (ADec)	3-14-14	
3.						

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab:
Method of Shipment: Fed EX
Analytical Lab: Accutest
Lab Recipient:

Shipped:
Airbill #: 8047 3475 9933
Location: Orlando FLA
Date: Time:

8047 3475 6316

(2 coolers)

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

VOCs are unpreserved 7 Day hold time

3.0 3.4

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

FA13258: Chain of Custody
Page 1 of 4

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA13258 CLIENT: AECOM PROJECT: LTC DELAVAN

DATE/TIME RECEIVED: 3-14-14 09:30 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 2

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

AIRBILL NUMBERS: 8047 3675 7933

COOLER INFORMATION

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

TRIP BLANK INFORMATION

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

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.1
- [ ] OBSERVED TEMPS: 3.1 3.8
- [ ] CORRECTED TEMPS: 3.0 3.4

SAMPLE INFORMATION

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

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS: _____

TECHNICIAN SIGNATURE/DATE JR 3-14-14 REVIEWER SIGNATURE/DATE 03.14.14

NF 12/10

receipt confirmation 122910.xls

5.1 5

FA13258: Chain of Custody

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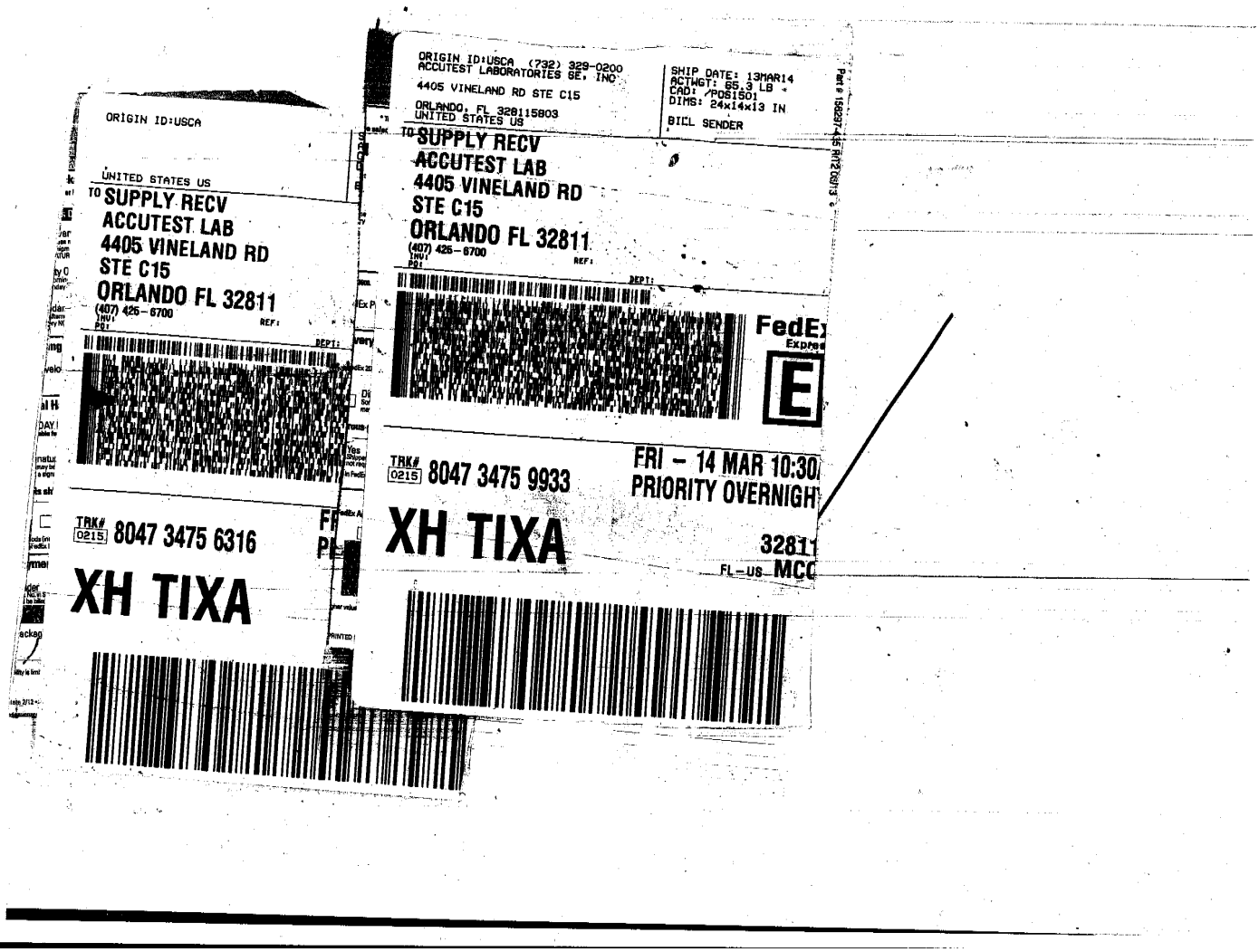

FA13258: Chain of Custody
Page 3 of 4

Job Change Order: FA13258_3/21/2014

Requested Date:	3/21/2014	**Received Date:**	3/14/2014
Account Name:	United Technologies Corporation	**Due Date:**	3/28/2014
Project Description:	AECOMSCG: Delavan Spray Technologies;	**Deliverable:**	COMMBN
CSR:	HW	**TAT (Days):**	14

Sample #: FA13258-1

Change: Per client sample ID should be MW-23D not MW-22D as listed on COC

MW-23D

Sample #: FA13258-2

Change: Per client sample ID should be MW-23D-c not MW-22D-c as listed on the COC

MW-23D-C

Above Changes Doria Cullom- AECOM **Date:** 3/21/2014

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.

Page 1 of 1

FA13258: Chain of Custody
Page 4 of 4

Southeast ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP875-MB	P23412.D	1	03/18/14	EG	n/a	n/a	VP875

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

FA13258-1, FA13258-2, FA13258-3

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: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP875-MB	P23412.D	1	03/18/14	EG	n/a	n/a	VP875

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

FA13258-1, FA13258-2, FA13258-3

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	96%	79-125%
2037-26-5	Toluene-D8	96%	85-112%
460-00-4	4-Bromofluorobenzene	102%	83-118%

Method Blank Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP877-MB	P23469.D	1	03/19/14	EG	n/a	n/a	VP877

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

FA13258-9

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: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP877-MB	P23469.D	1	03/19/14	EG	n/a	n/a	VP877

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

FA13258-9

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	96%	79-125%
2037-26-5	Toluene-D8	96%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

Method Blank Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3278-MB	N0075053.D	1	03/20/14	RB	n/a	n/a	VN3278

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

FA13258-10, FA13258-11, FA13258-12

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: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3278-MB	N0075053.D	1	03/20/14	RB	n/a	n/a	VN3278

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

FA13258-10, FA13258-11, FA13258-12

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	79-125%
2037-26-5	Toluene-D8	96%	85-112%
460-00-4	4-Bromofluorobenzene	96%	83-118%

Leachate Blank Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50903-LB	N0075109.D	10	03/23/14	RB	03/20/14	OP50903	VN3280

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

FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	10	2.4	ug/l	
108-90-7	Chlorobenzene	ND	10	2.4	ug/l	
67-66-3	Chloroform	ND	10	3.1	ug/l	
56-23-5	Carbon tetrachloride	ND	10	4.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	10	2.5	ug/l	
107-06-2	1,2-Dichloroethane	ND	10	2.4	ug/l	
106-46-7	p-Dichlorobenzene	ND	10	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	50	15	ug/l	
127-18-4	Tetrachloroethylene	ND	10	2.6	ug/l	
79-01-6	Trichloroethylene	ND	10	3.0	ug/l	
75-01-4	Vinyl chloride	ND	10	3.3	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	79-125%
2037-26-5	Toluene-D8	94%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

Blank Spike Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP875-BS	P23410.D	1	03/18/14	EG	n/a	n/a	VP875

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

FA13258-1, FA13258-2, FA13258-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	183	146	50-147
71-43-2	Benzene	25	28.4	114	81-122
75-27-4	Bromodichloromethane	25	26.9	108	79-123
75-25-2	Bromoform	25	23.8	95	66-123
108-90-7	Chlorobenzene	25	30.3	121	82-124
75-00-3	Chloroethane	25	28.7	115	62-144
67-66-3	Chloroform	25	27.4	110	80-124
75-15-0	Carbon disulfide	25	27.4	110	66-148
56-23-5	Carbon tetrachloride	25	28.8	115	76-136
75-34-3	1,1-Dichloroethane	25	27.8	111	81-122
75-35-4	1,1-Dichloroethylene	25	30.4	122	78-137
107-06-2	1,2-Dichloroethane	25	25.5	102	75-125
78-87-5	1,2-Dichloropropane	25	27.7	111	76-124
124-48-1	Dibromochloromethane	25	24.8	99	78-122
156-59-2	cis-1,2-Dichloroethylene	25	27.8	111	78-120
10061-01-5	cis-1,3-Dichloropropene	25	26.1	104	75-118
156-60-5	trans-1,2-Dichloroethylene	25	28.0	112	76-127
10061-02-6	trans-1,3-Dichloropropene	25	25.4	102	80-120
100-41-4	Ethylbenzene	25	28.0	112	81-121
591-78-6	2-Hexanone	125	115	92	61-129
108-10-1	4-Methyl-2-pentanone	125	103	82	66-122
74-83-9	Methyl bromide	25	28.9	116	59-143
74-87-3	Methyl chloride	25	27.1	108	50-159
75-09-2	Methylene chloride	25	27.0	108	69-135
78-93-3	Methyl ethyl ketone	125	132	106	56-143
100-42-5	Styrene	25	27.0	108	78-119
71-55-6	1,1,1-Trichloroethane	25	28.8	115	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	25.2	101	72-120
79-00-5	1,1,2-Trichloroethane	25	25.2	101	76-119
127-18-4	Tetrachloroethylene	25	27.3	109	76-135
108-88-3	Toluene	25	27.1	108	80-120
79-01-6	Trichloroethylene	25	29.1	116	81-126
75-01-4	Vinyl chloride	25	29.6	118	69-159
1330-20-7	Xylene (total)	75	84.9	113	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP875-BS	P23410.D	1	03/18/14	EG	n/a	n/a	VP875

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

FA13258-1, FA13258-2, FA13258-3

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	95%	79-125%
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP877-BS	P23467.D	1	03/19/14	EG	n/a	n/a	VP877

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

FA13258-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	165	132	50-147
71-43-2	Benzene	25	28.8	115	81-122
75-27-4	Bromodichloromethane	25	26.8	107	79-123
75-25-2	Bromoform	25	23.1	92	66-123
108-90-7	Chlorobenzene	25	29.9	120	82-124
75-00-3	Chloroethane	25	28.9	116	62-144
67-66-3	Chloroform	25	27.5	110	80-124
75-15-0	Carbon disulfide	25	27.2	109	66-148
56-23-5	Carbon tetrachloride	25	29.5	118	76-136
75-34-3	1,1-Dichloroethane	25	28.0	112	81-122
75-35-4	1,1-Dichloroethylene	25	30.3	121	78-137
107-06-2	1,2-Dichloroethane	25	25.1	100	75-125
78-87-5	1,2-Dichloropropane	25	27.8	111	76-124
124-48-1	Dibromochloromethane	25	25.2	101	78-122
156-59-2	cis-1,2-Dichloroethylene	25	28.6	114	78-120
10061-01-5	cis-1,3-Dichloropropene	25	26.3	105	75-118
156-60-5	trans-1,2-Dichloroethylene	25	27.7	111	76-127
10061-02-6	trans-1,3-Dichloropropene	25	25.1	100	80-120
100-41-4	Ethylbenzene	25	27.3	109	81-121
591-78-6	2-Hexanone	125	107	86	61-129
108-10-1	4-Methyl-2-pentanone	125	101	81	66-122
74-83-9	Methyl bromide	25	29.4	118	59-143
74-87-3	Methyl chloride	25	28.7	115	50-159
75-09-2	Methylene chloride	25	26.7	107	69-135
78-93-3	Methyl ethyl ketone	125	128	102	56-143
100-42-5	Styrene	25	26.4	106	78-119
71-55-6	1,1,1-Trichloroethane	25	28.8	115	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	24.7	99	72-120
79-00-5	1,1,2-Trichloroethane	25	24.4	98	76-119
127-18-4	Tetrachloroethylene	25	26.7	107	76-135
108-88-3	Toluene	25	26.7	107	80-120
79-01-6	Trichloroethylene	25	29.5	118	81-126
75-01-4	Vinyl chloride	25	30.0	120	69-159
1330-20-7	Xylene (total)	75	84.1	112	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP877-BS	P23467.D	1	03/19/14	EG	n/a	n/a	VP877

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

FA13258-9

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	94%	79-125%
2037-26-5	Toluene-D8	96%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3278-BS	N0075051.D	1	03/20/14	RB	n/a	n/a	VN3278

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

FA13258-10, FA13258-11, FA13258-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	217	174*	50-147
71-43-2	Benzene	25	25.5	102	81-122
75-27-4	Bromodichloromethane	25	24.8	99	79-123
75-25-2	Bromoform	25	23.6	94	66-123
108-90-7	Chlorobenzene	25	26.5	106	82-124
75-00-3	Chloroethane	25	30.6	122	62-144
67-66-3	Chloroform	25	25.6	102	80-124
75-15-0	Carbon disulfide	25	26.9	108	66-148
56-23-5	Carbon tetrachloride	25	27.7	111	76-136
75-34-3	1,1-Dichloroethane	25	25.3	101	81-122
75-35-4	1,1-Dichloroethylene	25	32.0	128	78-137
107-06-2	1,2-Dichloroethane	25	24.9	100	75-125
78-87-5	1,2-Dichloropropane	25	25.4	102	76-124
124-48-1	Dibromochloromethane	25	22.3	89	78-122
156-59-2	cis-1,2-Dichloroethylene	25	25.8	103	78-120
10061-01-5	cis-1,3-Dichloropropene	25	24.1	96	75-118
156-60-5	trans-1,2-Dichloroethylene	25	25.4	102	76-127
10061-02-6	trans-1,3-Dichloropropene	25	22.6	90	80-120
100-41-4	Ethylbenzene	25	24.0	96	81-121
591-78-6	2-Hexanone	125	112	90	61-129
108-10-1	4-Methyl-2-pentanone	125	103	82	66-122
74-83-9	Methyl bromide	25	26.5	106	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	129	103	56-143
100-42-5	Styrene	25	22.4	90	78-119
71-55-6	1,1,1-Trichloroethane	25	27.3	109	75-130
79-34-5	1,1,2,2-Tetrachloroethane	25	23.9	96	72-120
79-00-5	1,1,2-Trichloroethane	25	23.8	95	76-119
127-18-4	Tetrachloroethylene	25	26.3	105	76-135
108-88-3	Toluene	25	23.4	94	80-120
79-01-6	Trichloroethylene	25	26.1	104	81-126
75-01-4	Vinyl chloride	25	27.2	109	69-159
1330-20-7	Xylene (total)	75	74.9	100	80-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3278-BS	N0075051.D	1	03/20/14	RB	n/a	n/a	VN3278

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

FA13258-10, FA13258-11, FA13258-12

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	79-125%
2037-26-5	Toluene-D8	96%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN3280-BS	N0075105.D	10	03/23/14	RB	n/a	n/a	VN3280

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

FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	250	293	117	81-122
108-90-7	Chlorobenzene	250	301	120	82-124
67-66-3	Chloroform	250	291	116	80-124
56-23-5	Carbon tetrachloride	250	303	121	76-136
75-35-4	1,1-Dichloroethylene	250	362	145*	78-137
107-06-2	1,2-Dichloroethane	250	278	111	75-125
106-46-7	p-Dichlorobenzene	250	286	114	78-120
78-93-3	Methyl ethyl ketone	1250	1250	100	56-143
127-18-4	Tetrachloroethylene	250	297	119	76-135
79-01-6	Trichloroethylene	250	290	116	81-126
75-01-4	Vinyl chloride	250	284	114	69-159

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13180-22MS	P23434.D	5	03/18/14	EG	n/a	n/a	VP875
FA13180-22MSD	P23435.D	5	03/18/14	EG	n/a	n/a	VP875
FA13180-22	P23420.D	5	03/18/14	EG	n/a	n/a	VP875

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

FA13258-1, FA13258-2, FA13258-3

CAS No.	Compound	FA13180-22 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	130 U		625	1490	238*	1480	237*	1	50-147/21
71-43-2	Benzene	1.3	I	125	147	117	141	112	4	81-122/14
75-27-4	Bromodichloromethane	5.0 U		125	131	105	115	92	13	79-123/19
75-25-2	Bromoform	5.0 U		125	93.0	74	81.2	65*	14	66-123/21
108-90-7	Chlorobenzene	5.0 U		125	152	122	144	115	5	82-124/14
75-00-3	Chloroethane	10 U		125	137	110	136	109	1	62-144/20
67-66-3	Chloroform	5.0 U		125	140	112	135	108	4	80-124/15
75-15-0	Carbon disulfide	1.5	I	125	106	84	89.9	71	16	66-148/23
56-23-5	Carbon tetrachloride	5.0 U		125	141	113	120	96	16	76-136/23
75-34-3	1,1-Dichloroethane	22.0		125	161	111	151	103	6	81-122/15
75-35-4	1,1-Dichloroethylene	169		125	283	91	270	81	5	78-137/18
107-06-2	1,2-Dichloroethane	5.0 U		125	131	105	127	102	3	75-125/14
78-87-5	1,2-Dichloropropane	5.0 U		125	144	115	139	111	4	76-124/14
124-48-1	Dibromochloromethane	5.0 U		125	111	89	97.7	78	13	78-122/19
156-59-2	cis-1,2-Dichloroethylene	2.8	I	125	142	111	135	106	5	78-120/15
10061-01-5	cis-1,3-Dichloropropene	5.0 U		125	114	91	94.0	75	19	75-118/23
156-60-5	trans-1,2-Dichloroethylene	5.0 U		125	143	114	132	106	8	76-127/17
10061-02-6	trans-1,3-Dichloropropene	5.0 U		125	114	91	91.4	73*	22	80-120/22
100-41-4	Ethylbenzene	1.6	I	125	140	111	132	104	6	81-121/14
591-78-6	2-Hexanone	50 U		625	478	76	486	78	2	61-129/18
108-10-1	4-Methyl-2-pentanone	25 U		625	513	82	521	83	2	66-122/16
74-83-9	Methyl bromide	10 U		125	143	114	135	108	6	59-143/19
74-87-3	Methyl chloride	10 U		125	137	110	134	107	2	50-159/19
75-09-2	Methylene chloride	25 U		125	138	110	135	108	2	69-135/16
78-93-3	Methyl ethyl ketone	25 U		625	531	85	543	87	2	56-143/18
100-42-5	Styrene	5.0 U		125	126	101	115	92	9	78-119/23
71-55-6	1,1,1-Trichloroethane	5.0 U		125	147	118	141	113	4	75-130/16
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U		125	128	102	133	106	4	72-120/14
79-00-5	1,1,2-Trichloroethane	5.0 U		125	133	106	127	102	5	76-119/14
127-18-4	Tetrachloroethylene	5.0 U		125	135	108	124	99	8	76-135/16
108-88-3	Toluene	5.0 U		125	136	109	128	102	6	80-120/14
79-01-6	Trichloroethylene	5.0 U		125	154	123	150	120	3	81-126/15
75-01-4	Vinyl chloride	5.0 U		125	143	114	140	112	2	69-159/18
1330-20-7	Xylene (total)	6.4	I	375	432	113	405	106	6	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13180-22MS	P23434.D	5	03/18/14	EG	n/a	n/a	VP875
FA13180-22MSD	P23435.D	5	03/18/14	EG	n/a	n/a	VP875
FA13180-22	P23420.D	5	03/18/14	EG	n/a	n/a	VP875

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

FA13258-1, FA13258-2, FA13258-3

CAS No.	Surrogate Recoveries	MS	MSD	FA13180-22	Limits
1868-53-7	Dibromofluoromethane	101%	101%	106%	83-118%
17060-07-0	1,2-Dichloroethane-D4	96%	97%	101%	79-125%
2037-26-5	Toluene-D8	96%	95%	95%	85-112%
460-00-4	4-Bromofluorobenzene	100%	100%	102%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13237-6MS	P23491.D	5	03/19/14	EG	n/a	n/a	VP877
FA13237-6MSD	P23492.D	5	03/19/14	EG	n/a	n/a	VP877
FA13237-6	P23476.D	5	03/19/14	EG	n/a	n/a	VP877

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

FA13258-9

CAS No.	Compound	FA13237-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	130 U		625	508	81	517	83	2	50-147/21
71-43-2	Benzene	70.8		125	211	112	206	108	2	81-122/14
75-27-4	Bromodichloromethane	5.0 U		125	121	97	112	90	8	79-123/19
75-25-2	Bromoform	5.0 U		125	88.9	71	85.1	68	4	66-123/21
108-90-7	Chlorobenzene	5.0 U		125	144	115	140	112	3	82-124/14
75-00-3	Chloroethane	10 U		125	139	111	134	107	4	62-144/20
67-66-3	Chloroform	5.0 U		125	136	109	133	106	2	80-124/15
75-15-0	Carbon disulfide	40.8		125	143	82	130	71	10	66-148/23
56-23-5	Carbon tetrachloride	5.0 U		125	135	108	123	98	9	76-136/23
75-34-3	1,1-Dichloroethane	5.0 U		125	136	109	133	106	2	81-122/15
75-35-4	1,1-Dichloroethylene	5.0 U		125	141	113	140	112	1	78-137/18
107-06-2	1,2-Dichloroethane	5.0 U		125	119	95	121	97	2	75-125/14
78-87-5	1,2-Dichloropropane	5.0 U		125	136	109	135	108	1	76-124/14
124-48-1	Dibromochloromethane	5.0 U		125	103	82	98.6	79	4	78-122/19
156-59-2	cis-1,2-Dichloroethylene	5.0 U		125	131	105	129	103	2	78-120/15
10061-01-5	cis-1,3-Dichloropropene	5.0 U		125	105	84	96.3	77	9	75-118/23
156-60-5	trans-1,2-Dichloroethylene	5.0 U		125	129	103	124	99	4	76-127/17
10061-02-6	trans-1,3-Dichloropropene	5.0 U		125	103	82	94.3	75*	9	80-120/22
100-41-4	Ethylbenzene	11.9		125	142	104	140	102	1	81-121/14
591-78-6	2-Hexanone	50 U		625	424	68	456	73	7	61-129/18
108-10-1	4-Methyl-2-pentanone	25 U		625	455	73	486	78	7	66-122/16
74-83-9	Methyl bromide	10 U		125	139	111	133	106	4	59-143/19
74-87-3	Methyl chloride	10 U		125	140	112	137	110	2	50-159/19
75-09-2	Methylene chloride	25 U		125	131	105	127	102	3	69-135/16
78-93-3	Methyl ethyl ketone	25 U		625	505	81	542	87	7	56-143/18
100-42-5	Styrene	5.0 U		125	123	98	118	94	4	78-119/23
71-55-6	1,1,1-Trichloroethane	5.0 U		125	145	116	138	110	5	75-130/16
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U		125	115	92	120	96	4	72-120/14
79-00-5	1,1,2-Trichloroethane	5.0 U		125	118	94	119	95	1	76-119/14
127-18-4	Tetrachloroethylene	5.0 U		125	124	99	123	98	1	76-135/16
108-88-3	Toluene	5.0 U		125	127	102	125	100	2	80-120/14
79-01-6	Trichloroethylene	5.0 U		125	142	114	145	116	2	81-126/15
75-01-4	Vinyl chloride	5.0 U		125	141	113	139	111	1	69-159/18
1330-20-7	Xylene (total)	211		375	605	105	597	103	1	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13237-6MS	P23491.D	5	03/19/14	EG	n/a	n/a	VP877
FA13237-6MSD	P23492.D	5	03/19/14	EG	n/a	n/a	VP877
FA13237-6	P23476.D	5	03/19/14	EG	n/a	n/a	VP877

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

FA13258-9

CAS No.	Surrogate Recoveries	MS	MSD	FA13237-6	Limits
1868-53-7	Dibromofluoromethane	101%	101%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	95%	93%	97%	79-125%
2037-26-5	Toluene-D8	95%	95%	97%	85-112%
460-00-4	4-Bromofluorobenzene	99%	99%	102%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13044-17MS	N0075058.D	1	03/20/14	RB	n/a	n/a	VN3278
FA13044-17MSD	N0075059.D	1	03/20/14	RB	n/a	n/a	VN3278
FA13044-17 [a]	N0075057.D	1	03/20/14	RB	n/a	n/a	VN3278

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

FA13258-10, FA13258-11, FA13258-12

CAS No.	Compound	FA13044-17 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	164	131	156	125	5	50-147/21
71-43-2	Benzene	ND		25	28.8	115	27.2	109	6	81-122/14
75-27-4	Bromodichloromethane	ND		25	26.7	107	25.7	103	4	79-123/19
75-25-2	Bromoform	ND		25	23.8	95	24.1	96	1	66-123/21
108-90-7	Chlorobenzene	ND		25	29.9	120	28.3	113	5	82-124/14
75-00-3	Chloroethane	ND		25	30.9	124	29.1	116	6	62-144/20
67-66-3	Chloroform	ND		25	29.5	118	27.7	111	6	80-124/15
75-15-0	Carbon disulfide	ND		25	23.2	93	21.5	86	8	66-148/23
56-23-5	Carbon tetrachloride	ND		25	29.6	118	28.1	112	5	76-136/23
75-34-3	1,1-Dichloroethane	ND		25	28.8	115	27.0	108	6	81-122/15
75-35-4	1,1-Dichloroethylene	ND		25	35.4	142*	33.4	134	6	78-137/18
107-06-2	1,2-Dichloroethane	ND		25	29.0	116	27.6	110	5	75-125/14
78-87-5	1,2-Dichloropropane	ND		25	28.0	112	27.0	108	4	76-124/14
124-48-1	Dibromochloromethane	ND		25	23.1	92	22.9	92	1	78-122/19
156-59-2	cis-1,2-Dichloroethylene	ND		25	29.0	116	27.7	111	5	78-120/15
10061-01-5	cis-1,3-Dichloropropene	ND		25	22.8	91	22.3	89	2	75-118/23
156-60-5	trans-1,2-Dichloroethylene	ND		25	28.3	113	26.7	107	6	76-127/17
10061-02-6	trans-1,3-Dichloropropene	ND		25	23.2	93	22.8	91	2	80-120/22
100-41-4	Ethylbenzene	ND		25	26.8	107	25.1	100	7	81-121/14
591-78-6	2-Hexanone	ND		125	115	92	117	94	2	61-129/18
108-10-1	4-Methyl-2-pentanone	ND		125	122	98	119	95	2	66-122/16
74-83-9	Methyl bromide	ND		25	27.0	108	25.1	100	7	59-143/19
74-87-3	Methyl chloride	ND		25	27.6	110	26.1	104	6	50-159/19
75-09-2	Methylene chloride	ND		25	28.7	115	27.5	110	4	69-135/16
78-93-3	Methyl ethyl ketone	ND		125	128	102	127	102	1	56-143/18
100-42-5	Styrene	ND		25	24.5	98	23.3	93	5	78-119/23
71-55-6	1,1,1-Trichloroethane	ND		25	30.6	122	28.6	114	7	75-130/16
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	27.1	108	25.8	103	5	72-120/14
79-00-5	1,1,2-Trichloroethane	ND		25	26.8	107	25.4	102	5	76-119/14
127-18-4	Tetrachloroethylene	ND		25	29.3	117	27.2	109	7	76-135/16
108-88-3	Toluene	ND		25	26.0	104	24.4	98	6	80-120/14
79-01-6	Trichloroethylene	ND		25	29.4	118	27.4	110	7	81-126/15
75-01-4	Vinyl chloride	ND		25	27.4	110	25.7	103	6	69-159/18
1330-20-7	Xylene (total)	ND		75	83.9	112	79.0	105	6	80-126/15

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13044-17MS	N0075058.D	1	03/20/14	RB	n/a	n/a	VN3278
FA13044-17MSD	N0075059.D	1	03/20/14	RB	n/a	n/a	VN3278
FA13044-17 [a]	N0075057.D	1	03/20/14	RB	n/a	n/a	VN3278

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

FA13258-10, FA13258-11, FA13258-12

CAS No.	Surrogate Recoveries	MS	MSD	FA13044-17	Limits
1868-53-7	Dibromofluoromethane	105%	105%	106%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	103%	101%	79-125%
2037-26-5	Toluene-D8	96%	96%	94%	85-112%
460-00-4	4-Bromofluorobenzene	94%	94%	97%	83-118%

(a) Confirmation run.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13424-1MS	N0075124.D	10	03/24/14	RB	n/a	n/a	VN3280
FA13424-1MSD	N0075125.D	10	03/24/14	RB	n/a	n/a	VN3280
FA13424-1	N0075110.D	10	03/23/14	RB	03/21/14	OP50942	VN3280

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

FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

CAS No.	Compound	FA13424-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	10	U	250	283	113	265	106	7	81-122/14
108-90-7	Chlorobenzene	10	U	250	290	116	272	109	6	82-124/14
67-66-3	Chloroform	10	U	250	283	113	271	108	4	80-124/15
56-23-5	Carbon tetrachloride	10	U	250	289	116	270	108	7	76-136/23
75-35-4	1,1-Dichloroethylene	10	U	250	344	138*	323	129	6	78-137/18
107-06-2	1,2-Dichloroethane	10	U	250	273	109	265	106	3	75-125/14
106-46-7	p-Dichlorobenzene	10	U	250	270	108	258	103	5	78-120/15
78-93-3	Methyl ethyl ketone	50	U	1250	1230	98	1260	101	2	56-143/18
127-18-4	Tetrachloroethylene	10	U	250	286	114	263	105	8	76-135/16
79-01-6	Trichloroethylene	10	U	250	286	114	264	106	8	81-126/15
75-01-4	Vinyl chloride	10	U	250	273	109	243	97	12	69-159/18

CAS No.	Surrogate Recoveries	MS	MSD	FA13424-1	Limits
1868-53-7	Dibromofluoromethane	104%	104%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	102%	98%	79-125%
2037-26-5	Toluene-D8	97%	97%	94%	85-112%
460-00-4	4-Bromofluorobenzene	95%	95%	98%	83-118%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA13258-4DUP	N0075117.D	10	03/24/14	RB	n/a	n/a	VN3280
FA13258-4	N0075116.D	10	03/24/14	RB	03/20/14	OP50903	VN3280

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

FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

CAS No.	Compound	FA13258-4 ug/l	Q	DUP ug/l	Q	RPD	Limits
71-43-2	Benzene	ND		ND		nc	14
108-90-7	Chlorobenzene	ND		ND		nc	14
67-66-3	Chloroform	ND		ND		nc	15
56-23-5	Carbon tetrachloride	ND		ND		nc	23
75-35-4	1,1-Dichloroethylene	ND		ND		nc	18
107-06-2	1,2-Dichloroethane	ND		ND		nc	14
106-46-7	p-Dichlorobenzene	ND		ND		nc	15
78-93-3	Methyl ethyl ketone	ND		ND		nc	18
127-18-4	Tetrachloroethylene	ND		ND		nc	16
79-01-6	Trichloroethylene	ND		ND		nc	15
75-01-4	Vinyl chloride	ND		ND		nc	18

CAS No.	Surrogate Recoveries	DUP	FA13258-4	Limits
1868-53-7	Dibromofluoromethane	104%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	99%	79-125%
2037-26-5	Toluene-D8	96%	94%	85-112%
460-00-4	4-Bromofluorobenzene	96%	96%	83-118%

(a) Associated BS recovery outside control limits.

* = 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: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50856-MB	X033766.D	1	03/17/14	FS	03/17/14	OP50856	SX1587

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13258-9, FA13258-10, FA13258-11, FA13258-12

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: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50856-MB	X033766.D	1	03/17/14	FS	03/17/14	OP50856	SX1587

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13258-9, FA13258-10, FA13258-11, FA13258-12

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	26%	10-50%

Method Blank Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50856-MB	X033766.D	1	03/17/14	FS	03/17/14	OP50856	SX1587

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13258-9, FA13258-10, FA13258-11, FA13258-12

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	86%	33-118%
4165-60-0	Nitrobenzene-d5	75%	42-108%
321-60-8	2-Fluorobiphenyl	76%	40-106%
1718-51-0	Terphenyl-d14	105%	39-121%

Method Blank Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50856-MB	T012051.D	1	03/24/14	FS	03/17/14	OP50856	ST571

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13258-9, FA13258-10, FA13258-11, FA13258-12

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: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50856-MB	T012051.D	1	03/24/14	FS	03/17/14	OP50856	ST571

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13258-9, FA13258-10, FA13258-11, FA13258-12

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	0%*	14-67%
4165-62-2	Phenol-d5	0%*	10-50%

Method Blank Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50856-MB	T012051.D	1	03/24/14	FS	03/17/14	OP50856	ST571

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13258-9, FA13258-10, FA13258-11, FA13258-12

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	0%*	33-118%
4165-60-0	Nitrobenzene-d5	0%*	42-108%
321-60-8	2-Fluorobiphenyl	0%*	40-106%
1718-51-0	Terphenyl-d14	0%*	39-121%

Method Blank Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50856-MB	L0677299.D	1	03/25/14	FS	03/17/14	OP50856	SL3422

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13258-9, FA13258-10, FA13258-11, FA13258-12

CAS No.	Compound	Result	RL	MDL	Units	Q

Leachate Blank Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50926-LB	L0677277.D	1	03/24/14	NAF	03/21/14	OP50926	SL3421

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

CAS No.	Compound	Result	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	50	5.0	ug/l	
	3&4-Methylphenol	ND	50	12	ug/l	
87-86-5	Pentachlorophenol	ND	250	50	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	50	9.7	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	50	5.5	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	50	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	50	5.7	ug/l	
118-74-1	Hexachlorobenzene	ND	50	6.6	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	5.0	ug/l	
67-72-1	Hexachloroethane	ND	50	5.0	ug/l	
98-95-3	Nitrobenzene	ND	50	5.0	ug/l	
110-86-1	Pyridine	ND	100	20	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	52%	14-67%
4165-62-2	Phenol-d5	35%	10-50%
118-79-6	2,4,6-Tribromophenol	83%	33-118%
4165-60-0	Nitrobenzene-d5	78%	42-108%
321-60-8	2-Fluorobiphenyl	77%	40-106%
1718-51-0	Terphenyl-d14	88%	39-121%

Blank Spike Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50856-BS	X033765.D	1	03/17/14	FS	03/17/14	OP50856	SX1587

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13258-9, FA13258-10, FA13258-11, FA13258-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	100	7.1	7* [a]	10-69
95-57-8	2-Chlorophenol	50	29.1	58	52-98
59-50-7	4-Chloro-3-methyl phenol	50	31.5	63	54-103
120-83-2	2,4-Dichlorophenol	50	31.0	62	53-103
105-67-9	2,4-Dimethylphenol	50	29.6	59	43-90
51-28-5	2,4-Dinitrophenol	100	79.0	79	44-112
534-52-1	4,6-Dinitro-o-cresol	100	85.2	85	66-121
95-48-7	2-Methylphenol	50	25.4	51	43-90
	3&4-Methylphenol	100	45.9	46	36-88
88-75-5	2-Nitrophenol	50	32.6	65	53-102
100-02-7	4-Nitrophenol	100	26.3	26	18-62
87-86-5	Pentachlorophenol	100	91.0	91	61-115
108-95-2	Phenol	50	10.7	21	19-56
95-95-4	2,4,5-Trichlorophenol	50	37.3	75	62-109
88-06-2	2,4,6-Trichlorophenol	50	37.5	75	59-107
83-32-9	Acenaphthene	50	38.3	77	61-107
208-96-8	Acenaphthylene	50	38.6	77	60-104
120-12-7	Anthracene	50	39.8	80	65-108
56-55-3	Benzo(a)anthracene	50	40.2	80	66-111
50-32-8	Benzo(a)pyrene	50	39.4	79	62-107
205-99-2	Benzo(b)fluoranthene	50	39.6	79	65-114
191-24-2	Benzo(g,h,i)perylene	50	40.5	81	66-116
207-08-9	Benzo(k)fluoranthene	50	41.7	83	65-114
101-55-3	4-Bromophenyl phenyl ether	50	33.5	67	65-109
85-68-7	Butyl benzyl phthalate	50	36.4	73	65-112
100-51-6	Benzyl Alcohol	50	28.4	57	46-94
91-58-7	2-Chloronaphthalene	50	34.7	69	57-103
106-47-8	4-Chloroaniline	50	32.5	65	49-105
86-74-8	Carbazole	50	39.8	80	59-113
218-01-9	Chrysene	50	41.5	83	66-111
111-91-1	bis(2-Chloroethoxy)methane	50	30.6	61	51-102
111-44-4	bis(2-Chloroethyl)ether	50	30.6	61	53-100
108-60-1	bis(2-Chloroisopropyl)ether	50	29.8	60	45-106
7005-72-3	4-Chlorophenyl phenyl ether	50	36.2	72	62-105
95-50-1	1,2-Dichlorobenzene	50	27.4	55	48-97
541-73-1	1,3-Dichlorobenzene	50	26.3	53	45-95

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50856-BS	X033765.D	1	03/17/14	FS	03/17/14	OP50856	SX1587

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13258-9, FA13258-10, FA13258-11, FA13258-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
106-46-7	1,4-Dichlorobenzene	50	28.4	57	45-98
121-14-2	2,4-Dinitrotoluene	50	38.0	76	61-110
606-20-2	2,6-Dinitrotoluene	50	38.4	77	63-108
91-94-1	3,3'-Dichlorobenzidine	50	39.7	79	46-117
53-70-3	Dibenzo(a,h)anthracene	50	41.0	82	66-119
132-64-9	Dibenzofuran	50	38.0	76	61-106
84-74-2	Di-n-butyl phthalate	50	35.7	71	65-107
117-84-0	Di-n-octyl phthalate	50	36.6	73	62-118
84-66-2	Diethyl phthalate	50	34.9	70	64-108
131-11-3	Dimethyl phthalate	50	34.2	68	63-106
117-81-7	bis(2-Ethylhexyl)phthalate	50	36.6	73	61-117
206-44-0	Fluoranthene	50	39.4	79	63-106
86-73-7	Fluorene	50	40.2	80	62-108
118-74-1	Hexachlorobenzene	50	39.2	78	63-108
87-68-3	Hexachlorobutadiene	50	29.0	58	42-102
77-47-4	Hexachlorocyclopentadiene	50	22.9	46	39-102
67-72-1	Hexachloroethane	50	27.3	55	42-100
193-39-5	Indeno(1,2,3-cd)pyrene	50	35.8	72	64-119
78-59-1	Isophorone	50	31.5	63	43-87
91-57-6	2-Methylnaphthalene	50	31.8	64	51-102
88-74-4	2-Nitroaniline	50	39.1	78	54-128
99-09-2	3-Nitroaniline	50	38.9	78	56-106
100-01-6	4-Nitroaniline	50	40.9	82	55-120
91-20-3	Naphthalene	50	31.3	63	47-100
98-95-3	Nitrobenzene	50	29.8	60	50-104
621-64-7	N-Nitroso-di-n-propylamine	50	35.5	71	52-104
86-30-6	N-Nitrosodiphenylamine	50	41.2	82	64-108
85-01-8	Phenanthrene	50	40.7	81	66-110
129-00-0	Pyrene	50	39.9	80	64-113
120-82-1	1,2,4-Trichlorobenzene	50	27.9	56	45-97

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	33%	14-67%
4165-62-2	Phenol-d5	22%	10-50%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50856-BS	X033765.D	1	03/17/14	FS	03/17/14	OP50856	SX1587

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13258-9, FA13258-10, FA13258-11, FA13258-12

CAS No.	Surrogate Recoveries	BSP	Limits
118-79-6	2,4,6-Tribromophenol	82%	33-118%
4165-60-0	Nitrobenzene-d5	62%	42-108%
321-60-8	2-Fluorobiphenyl	71%	40-106%
1718-51-0	Terphenyl-d14	92%	39-121%

(a) Sporadic marginal failure.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50926-LBS	L0677276.D	1	03/24/14	NAF	03/21/14	OP50926	SL3421

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-48-7	2-Methylphenol	500	342	68	43-90
	3&4-Methylphenol	1000	613	61	36-88
87-86-5	Pentachlorophenol	1000	970	97	61-115
95-95-4	2,4,5-Trichlorophenol	500	413	83	62-109
88-06-2	2,4,6-Trichlorophenol	500	424	85	59-107
106-46-7	1,4-Dichlorobenzene	500	396	79	45-98
121-14-2	2,4-Dinitrotoluene	500	423	85	61-110
118-74-1	Hexachlorobenzene	500	416	83	63-108
87-68-3	Hexachlorobutadiene	500	373	75	42-102
67-72-1	Hexachloroethane	500	381	76	42-100
98-95-3	Nitrobenzene	500	386	77	50-104
110-86-1	Pyridine	500	311	62	23-74

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	55%	14-67%
4165-62-2	Phenol-d5	36%	10-50%
118-79-6	2,4,6-Tribromophenol	90%	33-118%
4165-60-0	Nitrobenzene-d5	79%	42-108%
321-60-8	2-Fluorobiphenyl	85%	40-106%
1718-51-0	Terphenyl-d14	92%	39-121%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50856-MS	X033769.D	1	03/17/14	FS	03/17/14	OP50856	SX1587
OP50856-MSD	X033770.D	1	03/17/14	FS	03/17/14	OP50856	SX1587
FA13237-28	X033768.D	1	03/17/14	FS	03/17/14	OP50856	SX1587

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13258-9, FA13258-10, FA13258-11, FA13258-12

CAS No.	Compound	FA13237-28 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	50 U		189	83.3	44	91.7	49	10	10-69/39
95-57-8	2-Chlorophenol	5.0 U		94.3	64.4	68	74.4	79	14	52-98/25
59-50-7	4-Chloro-3-methyl phenol	5.0 U		94.3	66.7	71	76.1	81	13	54-103/23
120-83-2	2,4-Dichlorophenol	5.0 U		94.3	63.7	68	72.0	76	12	53-103/26
105-67-9	2,4-Dimethylphenol	6.2		94.3	70.5	68	83.5	82	17	43-90/27
51-28-5	2,4-Dinitrophenol	25 U		189	201	107	202	107	0	44-112/25
534-52-1	4,6-Dinitro-o-cresol	10 U		189	192	102	207	110	8	66-121/23
95-48-7	2-Methylphenol	2.5	I	94.3	62.2	63	72.3	74	15	43-90/28
	3&4-Methylphenol	3.9	I	189	121	62	141	73	15	36-88/28
88-75-5	2-Nitrophenol	5.0 U		94.3	65.3	69	76.8	81	16	53-102/29
100-02-7	4-Nitrophenol	25 U		189	103	55	97.9	52	5	18-62/33
87-86-5	Pentachlorophenol	25 U		189	219	116*	245	130*	11	61-115/26
108-95-2	Phenol	5.0 U		94.3	37.6	40	41.0	43	9	19-56/35
95-95-4	2,4,5-Trichlorophenol	5.0 U		94.3	76.8	81	76.7	81	0	62-109/22
88-06-2	2,4,6-Trichlorophenol	5.0 U		94.3	77.6	82	77.8	82	0	59-107/23
83-32-9	Acenaphthene	5.0 U		94.3	74.6	79	76.0	81	2	61-107/22
208-96-8	Acenaphthylene	5.0 U		94.3	74.9	79	75.3	80	1	60-104/22
120-12-7	Anthracene	5.0 U		94.3	79.1	84	83.8	89	6	65-108/20
56-55-3	Benzo(a)anthracene	5.0 U		94.3	81.3	86	85.5	91	5	66-111/22
50-32-8	Benzo(a)pyrene	5.0 U		94.3	79.2	84	84.7	90	7	62-107/23
205-99-2	Benzo(b)fluoranthene	5.0 U		94.3	80.3	85	83.2	88	4	65-114/23
191-24-2	Benzo(g,h,i)perylene	5.0 U		94.3	81.0	86	85.4	91	5	66-116/23
207-08-9	Benzo(k)fluoranthene	5.0 U		94.3	81.5	86	85.6	91	5	65-114/24
101-55-3	4-Bromophenyl phenyl ether	5.0 U		94.3	66.1	70	71.7	76	8	65-109/23
85-68-7	Butyl benzyl phthalate	5.0 U		94.3	74.3	79	78.1	83	5	65-112/24
100-51-6	Benzyl Alcohol	5.0 U		94.3	63.1	67	73.9	78	16	46-94/27
91-58-7	2-Chloronaphthalene	5.0 U		94.3	67.9	72	69.9	74	3	57-103/23
106-47-8	4-Chloroaniline	5.0 U		94.3	60.8	64	63.0	67	4	49-105/27
86-74-8	Carbazole	5.0 U		94.3	78.6	83	85.7	91	9	59-113/21
218-01-9	Chrysene	5.0 U		94.3	81.8	87	86.5	92	6	66-111/22
111-91-1	bis(2-Chloroethoxy)methane	5.0 U		94.3	69.0	73	83.4	88	19	51-102/28
111-44-4	bis(2-Chloroethyl)ether	5.0 U		94.3	107	113*	134	142*	22	53-100/27
108-60-1	bis(2-Chloroisopropyl)ether	5.0 U		94.3	76.8	81	79.0	84	3	45-106/26
7005-72-3	4-Chlorophenyl phenyl ether	5.0 U		94.3	72.3	77	72.0	76	0	62-105/20
95-50-1	1,2-Dichlorobenzene	5.0 U		94.3	58.9	62	66.8	71	13	48-97/24
541-73-1	1,3-Dichlorobenzene	5.0 U		94.3	58.6	62	65.0	69	10	45-95/25

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50856-MS	X033769.D	1	03/17/14	FS	03/17/14	OP50856	SX1587
OP50856-MSD	X033770.D	1	03/17/14	FS	03/17/14	OP50856	SX1587
FA13237-28	X033768.D	1	03/17/14	FS	03/17/14	OP50856	SX1587

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13258-9, FA13258-10, FA13258-11, FA13258-12

CAS No.	Compound	FA13237-28 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
106-46-7	1,4-Dichlorobenzene	5.0 U		94.3	62.9	67	70.4	75	11	45-98/25
121-14-2	2,4-Dinitrotoluene	5.0 U		94.3	76.6	81	80.9	86	5	61-110/21
606-20-2	2,6-Dinitrotoluene	5.0 U		94.3	75.6	80	77.0	82	2	63-108/21
91-94-1	3,3'-Dichlorobenzidine	5.0 U		94.3	ND	0*	ND	0*	nc	46-117/29
53-70-3	Dibenzo(a,h)anthracene	5.0 U		94.3	82.5	87	87.6	93	6	66-119/24
132-64-9	Dibenzofuran	5.0 U		94.3	74.2	79	75.4	80	2	61-106/21
84-74-2	Di-n-butyl phthalate	5.0 U		94.3	70.8	75	76.8	81	8	65-107/21
117-84-0	Di-n-octyl phthalate	5.0 U		94.3	74.3	79	78.5	83	5	62-118/24
84-66-2	Diethyl phthalate	5.0 U		94.3	68.0	72	68.3	72	0	64-108/21
131-11-3	Dimethyl phthalate	5.0 U		94.3	66.3	70	65.8	70	1	63-106/22
117-81-7	bis(2-Ethylhexyl)phthalate	5.0 U		94.3	73.9	78	78.5	83	6	61-117/23
206-44-0	Fluoranthene	5.0 U		94.3	78.3	83	85.3	90	9	63-106/21
86-73-7	Fluorene	5.0 U		94.3	78.3	83	79.2	84	1	62-108/20
118-74-1	Hexachlorobenzene	5.0 U		94.3	79.3	84	84.3	89	6	63-108/22
87-68-3	Hexachlorobutadiene	5.0 U		94.3	64.3	68	73.0	77	13	42-102/28
77-47-4	Hexachlorocyclopentadiene	5.0 U		94.3	50.4	53	50.3	53	0	39-102/29
67-72-1	Hexachloroethane	5.0 U		94.3	65.5	69	74.9	79	13	42-100/29
193-39-5	Indeno(1,2,3-cd)pyrene	5.0 U		94.3	77.2	82	83.3	88	8	64-119/24
78-59-1	Isophorone	5.0 U		94.3	70.3	75	76.5	81	8	43-87/25
91-57-6	2-Methylnaphthalene	35.5		94.3	91.0	59	114	83	22	51-102/26
88-74-4	2-Nitroaniline	5.0 U		94.3	77.8	82	75.8	80	3	54-128/24
99-09-2	3-Nitroaniline	5.0 U		94.3	45.4	48*	27.6	29*	49*	56-106/27
100-01-6	4-Nitroaniline	5.0 U		94.3	15.5	16*	9.3	10*	50*	55-120/24
91-20-3	Naphthalene	101	L	94.3	141	42*	180	84	24	47-100/29
98-95-3	Nitrobenzene	5.0 U		94.3	62.1	66	75.1	80	19	50-104/28
621-64-7	N-Nitroso-di-n-propylamine	5.0 U		94.3	69.6	74	88.1	93	23	52-104/25
86-30-6	N-Nitrosodiphenylamine	5.0 U		94.3	82.6	88	86.8	92	5	64-108/23
85-01-8	Phenanthrene	5.0 U		94.3	81.3	86	86.1	91	6	66-110/21
129-00-0	Pyrene	5.0 U		94.3	80.0	85	82.8	88	3	64-113/23
120-82-1	1,2,4-Trichlorobenzene	5.0 U		94.3	58.9	62	66.7	71	12	45-97/28

CAS No.	Surrogate Recoveries	MS	MSD	FA13237-28	Limits
367-12-4	2-Fluorophenol	52%	57%	33%	14-67%
4165-62-2	Phenol-d5	41%	44%	19%	10-50%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50856-MS	X033769.D	1	03/17/14	FS	03/17/14	OP50856	SX1587
OP50856-MSD	X033770.D	1	03/17/14	FS	03/17/14	OP50856	SX1587
FA13237-28	X033768.D	1	03/17/14	FS	03/17/14	OP50856	SX1587

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13258-9, FA13258-10, FA13258-11, FA13258-12

CAS No.	Surrogate Recoveries	MS	MSD	FA13237-28	Limits
118-79-6	2,4,6-Tribromophenol	91%	100%	85%	33-118%
4165-60-0	Nitrobenzene-d5	64%	77%		42-108%
321-60-8	2-Fluorobiphenyl	73%	75%		40-106%
1718-51-0	Terphenyl-d14	97%	100%		39-121%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50926-MS	L0677279.D	1	03/24/14	NAF	03/21/14	OP50926	SL3421
OP50926-MSD	L0677280.D	1	03/24/14	NAF	03/21/14	OP50926	SL3421
FA13385-1	L0677278.D	1	03/24/14	NAF	03/21/14	OP50926	SL3421

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

CAS No.	Compound	FA13385-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-48-7	2-Methylphenol	50 U		500	315	63	333	67	6	43-90/28
	3&4-Methylphenol	50 U		1000	555	56	605	61	9	36-88/28
87-86-5	Pentachlorophenol	250 U		1000	934	93	972	97	4	61-115/26
95-95-4	2,4,5-Trichlorophenol	50 U		500	397	79	414	83	4	62-109/22
88-06-2	2,4,6-Trichlorophenol	50 U		500	408	82	414	83	1	59-107/23
106-46-7	1,4-Dichlorobenzene	50 U		500	355	71	367	73	3	45-98/25
121-14-2	2,4-Dinitrotoluene	50 U		500	397	79	416	83	5	61-110/21
118-74-1	Hexachlorobenzene	50 U		500	406	81	417	83	3	63-108/22
87-68-3	Hexachlorobutadiene	50 U		500	340	68	355	71	4	42-102/28
67-72-1	Hexachloroethane	50 U		500	321	64	362	72	12	42-100/29
98-95-3	Nitrobenzene	50 U		500	351	70	369	74	5	50-104/28
110-86-1	Pyridine	100 U		500	346	69	328	66	5	23-74/34

CAS No.	Surrogate Recoveries	MS	MSD	FA13385-1	Limits
367-12-4	2-Fluorophenol	56%	55%	60%	14-67%
4165-62-2	Phenol-d5	36%	38%	39%	10-50%
118-79-6	2,4,6-Tribromophenol	86%	90%	94%	33-118%
4165-60-0	Nitrobenzene-d5	73%	74%	89%	42-108%
321-60-8	2-Fluorobiphenyl	79%	84%	86%	40-106%
1718-51-0	Terphenyl-d14	88%	94%	90%	39-121%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA13258
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP50926-DUP	L0677282.D	1	03/24/14	NAF	03/21/14	OP50926	SL3421
FA13258-4	L0677281.D	1	03/24/14	NAF	03/21/14	OP50926	SL3421

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

CAS No.	Compound	FA13258-4 ug/l	Q	DUP ug/l	Q	RPD	Limits
95-48-7	2-Methylphenol	ND		ND		nc	28
	3&4-Methylphenol	ND		ND		nc	28
87-86-5	Pentachlorophenol	ND		ND		nc	26
95-95-4	2,4,5-Trichlorophenol	ND		ND		nc	22
88-06-2	2,4,6-Trichlorophenol	ND		ND		nc	23
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	25
121-14-2	2,4-Dinitrotoluene	ND		ND		nc	21
118-74-1	Hexachlorobenzene	ND		ND		nc	22
87-68-3	Hexachlorobutadiene	ND		ND		nc	28
67-72-1	Hexachloroethane	ND		ND		nc	29
98-95-3	Nitrobenzene	ND		ND		nc	28
110-86-1	Pyridine	ND		ND		nc	34

CAS No.	Surrogate Recoveries	DUP	FA13258-4	Limits
367-12-4	2-Fluorophenol	46%	51%	14-67%
4165-62-2	Phenol-d5	30%	33%	10-50%
118-79-6	2,4,6-Tribromophenol	78%	84%	33-118%
4165-60-0	Nitrobenzene-d5	73%	81%	42-108%
321-60-8	2-Fluorobiphenyl	73%	78%	40-106%
1718-51-0	Terphenyl-d14	87%	89%	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: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26956 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/17/14

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	-0.025	<0.50

Associated samples MP26956: FA13258-9, FA13258-10, FA13258-11, FA13258-12

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: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26956
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/17/14 03/17/14

Metal	FA13258-9 Original	DUP	RPD	QC Limits	FA13258-9 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-20	0.0	2.9	3	96.7	80-120

Associated samples MP26956: FA13258-9, FA13258-10, FA13258-11, FA13258-12

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: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26956 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/17/14

Metal	FA13258-9 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.0	3	100.0	3.4	20

Associated samples MP26956: FA13258-9, FA13258-10, FA13258-11, FA13258-12

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
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SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26956
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/17/14

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	2.9	3	96.7	80-120

Associated samples MP26956: FA13258-9, FA13258-10, FA13258-11, FA13258-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26956 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/17/14

Metal	FA13258-9 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP26956: FA13258-9, FA13258-10, FA13258-11, FA13258-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26972
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/19/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	15	15		
Antimony	6.0	2	2.3	-0.70	<6.0
Arsenic	10	2	2.4	0.10	<10
Barium	200	1	1		
Beryllium	4.0	.5	.5	-0.10	<4.0
Cadmium	5.0	.5	.5	-0.10	<5.0
Calcium	1000	50	50		
Chromium	10	1	2	0.30	<10
Cobalt	50	.5	.5		
Copper	25	1	1	-0.60	<25
Iron	300	17	17		
Lead	5.0	1.1	1.1	-0.80	<5.0
Magnesium	5000	50	56		
Manganese	15	.5	1		
Molybdenum	50	.5	.5		
Nickel	40	.5	.5	-0.20	<40
Potassium	10000	200	200		
Selenium	10	2.3	2.3	0.30	<10
Silver	10	.65	.77	0.0	<10
Sodium	10000	500	500		
Strontium	10	.4	.4		
Thallium	10	1.5	2	-1.6	<10
Tin	50	.7	1		
Titanium	10	.9	1		
Vanadium	50	.5	.5		
Zinc	20	3	3	1.2	<20

Associated samples MP26972: FA13258-9, FA13258-10, FA13258-11, FA13258-12

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: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26972
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:			03/19/14					03/19/14	
Metal	FA13288-1 Original	DUP	RPD	QC Limits	FA13288-1 Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr								
Antimony	3.8	4.0	5.1	0-20	3.8	504	500	100.0	80-120
Arsenic	371	369	4.8	0-20	371	2340	2000	97.7	80-120
Barium	anr								
Beryllium	8.9	8.9	2.2	0-20	8.9	58.2	50	98.2	80-120
Cadmium	1100	1050	4.7	0-20	1100	1050	50	-100.0(c	80-120
Calcium									
Chromium	53.5	51.7	3.4	0-20	53.5	231	200	88.8	80-120
Cobalt									
Copper	26.4	29.7	3.6	0-20	26.4	302	250	108.5	80-120
Iron	anr								
Lead	0.0	0.0 (a)	NC	0-20	0.0	436	500	87.2	80-120
Magnesium									
Manganese	anr								
Molybdenum									
Nickel	2040	1970	3.5	0-20	2040	2340	500	60.0 (c)	80-120
Potassium									
Selenium	9.9	10.3	4.0	0-20	9.9	2090	2000	104.0	80-120
Silver	4.6	3.9	16.5	0-20	4.6	55.8	50	102.4	80-120
Sodium									
Strontium									
Thallium	0.0	2.6	59.5 (b)	0-20	0.0	1740	2000	86.8	80-120
Tin									
Titanium									
Vanadium									
Zinc	9850	9500	3.6	0-20	9850	9440	500	-82.0(c)	80-120

Associated samples MP26972: FA13258-9, FA13258-10, FA13258-11, FA13258-12

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) Elevated reporting limit(s) due to matrix interference. Manually elevated.
(b) RPD acceptable due to low duplicate and sample concentrations.
(c) 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: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26972 Methods: SW846 6010C
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/19/14

Metal	FA13288-1 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	3.8	480	500	95.2	4.9	20
Arsenic	371	2240	2000	92.7	4.4	20
Barium	anr					
Beryllium	8.9	55.8	50	93.4	4.2	20
Cadmium	1100	1000	50	-200.0(a	4.9	20
Calcium						
Chromium	53.5	222	200	84.3	4.0	20
Cobalt						
Copper	26.4	286	250	102.1	5.4	20
Iron	anr					
Lead	0.0	428	500	85.6	1.9	20
Magnesium						
Manganese	anr					
Molybdenum						
Nickel	2040	2260	500	44.0 (a)	3.5	20
Potassium						
Selenium	9.9	2020	2000	100.5	3.4	20
Silver	4.6	54.0	50	98.8	3.3	20
Sodium						
Strontium						
Thallium	0.0	1710	2000	85.3	1.7	20
Tin						
Titanium						
Vanadium						
Zinc	9850	9140	500	-142.0(a	3.2	20

Associated samples MP26972: FA13258-9, FA13258-10, FA13258-11, FA13258-12

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) 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: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26972
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/19/14

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	anr			
Antimony	486	500	97.2	80-120
Arsenic	1920	2000	96.0	80-120
Barium	anr			
Beryllium	51.4	50	102.8	80-120
Cadmium	48.2	50	96.4	80-120
Calcium				
Chromium	202	200	101.0	80-120
Cobalt				
Copper	255	250	102.0	80-120
Iron	anr			
Lead	473	500	94.6	80-120
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	512	500	102.4	80-120
Potassium				
Selenium	1910	2000	95.5	80-120
Silver	49.0	50	98.0	80-120
Sodium				
Strontium				
Thallium	1900	2000	95.0	80-120
Tin				
Titanium				
Vanadium				
Zinc	499	500	99.8	80-120

Associated samples MP26972: FA13258-9, FA13258-10, FA13258-11, FA13258-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26972
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/19/14

Metal	FA13288-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	3.80	0.00	100.0(a)	0-10
Arsenic	371	361	6.7	0-10
Barium	anr			
Beryllium	8.90	9.00	1.1	0-10
Cadmium	1100	1150	5.3	0-10
Calcium				
Chromium	53.5	54.4	1.7	0-10
Cobalt				
Copper	26.4	29.5	4.2	0-10
Iron	anr			
Lead	0.00	0.00	NC	0-10
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	2040	2180	6.9	0-10
Potassium				
Selenium	9.90	0.00	100.0(a)	0-10
Silver	4.60	0.00	100.0(a)	0-10
Sodium				
Strontium				
Thallium	0.00	0.00	NC (a)	0-10
Tin				
Titanium				
Vanadium				
Zinc	9850	10700	8.2	0-10

Associated samples MP26972: FA13258-9, FA13258-10, FA13258-11, FA13258-12

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: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26972
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/19/14

Metal	Sample ml	Final ml	FA13288-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10	3.8	3.724	108.5	0.2	5	100	104.8	80-120
Arsenic	9.8	10	370.7	379.064	484.6	0.2	5	100	105.5	80-120
Barium										
Beryllium	9.8	10	8.9	8.918	59.6	0.2	2.5	50	101.4	80-120
Cadmium	9.8	10	1096	1074.08	1107	0.2	2.5	50	65.8*(a)	80-120
Calcium										
Chromium	9.8	10	53.5	52.43	99.1	0.2	2.5	50	93.3	80-120
Cobalt										
Copper	9.8	10	26.4	30.184	140.6	0.2	5	100	110.4	80-120
Iron										
Lead	9.8	10			31.9	0.2	2.5	50	63.8*(a)	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel	9.8	10	2040	1999.2	2093	0.2	5	100	93.8	80-120
Potassium										
Selenium	9.8	10	9.9	9.702	114.7	0.2	5	100	105.0	80-120
Silver	9.8	10	4.6	4.508	58.2	0.2	2.5	50	107.4	80-120
Sodium										
Strontium										
Thallium	9.8	10		4.704	91.8	0.2	5	100	87.1	80-120
Tin										
Titanium										
Vanadium										
Zinc	9.8	10	9849	9652.02	9764	0.2	12.5	250	44.8*(a)	80-120

Associated samples MP26972: FA13258-9, FA13258-10, FA13258-11, FA13258-12

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.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26987
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date:					03/21/14		03/21/14		03/21/14
Metal	RL	IDL	MDL	MB raw	final	MB raw	final	MB raw	final
Aluminum	0.20	.015	.015						
Antimony	0.0060	.002	.0023	-0.0011	<0.0060	-0.016	<0.060	-0.011	<0.060
Arsenic	0.010	.002	.0024	-0.00080	<0.010	-0.0050	<0.10	-0.0060	<0.10
Barium	0.20	.001	.005						
Beryllium	0.0040	.0005	.0005	0.0	<0.0040	0.0	<0.040	0.0	<0.040
Cadmium	0.0050	.0005	.0005	-0.00010	<0.0050	-0.0010	<0.050	-0.0010	<0.050
Calcium	1.0	.05	.05						
Chromium	0.010	.001	.002	0.00030	<0.010	0.0	<0.10	0.0010	<0.10
Cobalt	0.050	.0005	.0005						
Copper	0.025	.001	.001	-0.00050	<0.025	0.0010	<0.25	0.0	<0.25
Iron	0.30	.017	.017						
Lead	0.0050	.0011	.0011	-0.00070	<0.0050	0.0060	<0.050	-0.0030	<0.050
Magnesium	5.0	.05	.056						
Manganese	0.015	.0005	.001						
Molybdenum	0.050	.0005	.0005						
Nickel	0.040	.0005	.0005	0.00010	<0.040	0.0010	<0.40	-0.0010	<0.40
Potassium	10	.2	.2						
Selenium	0.010	.0023	.0023	0.0028	<0.010	0.028	<0.10	0.039	<0.10
Silver	0.010	.00065	.00077	0.00020	<0.010	0.0050	<0.10	0.0	<0.10
Sodium	10	.5	.5						
Strontium	0.010	.0004	.0004						
Thallium	0.010	.0015	.002	0.00010	<0.010	0.0020	<0.10	-0.0020	<0.10
Tin	0.050	.0007	.001						
Titanium	0.010	.0009	.001						
Vanadium	0.050	.0005	.0005						
Zinc	0.020	.003	.01	0.0015	<0.020	0.021	<0.20	0.020	<0.20

Associated samples MP26987: FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

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: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26987
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 03/21/14

Metal	FA13385-1 Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum					
Antimony	0.0	5.5	5.0	110.0	80-120
Arsenic	0.0	21.3	20.0	106.5	80-120
Barium	anr				
Beryllium	0.0	0.54	0.50	108.0	80-120
Cadmium	0.0	0.53	0.50	106.0	80-120
Calcium					
Chromium	0.0	2.1	2.0	105.0	80-120
Cobalt					
Copper	0.0	2.8	2.5	112.0	80-120
Iron					
Lead	0.012	5.0	5.0	99.8	80-120
Magnesium					
Manganese					
Molybdenum					
Nickel	0.010	5.3	5.0	105.8	80-120
Potassium					
Selenium	0.035	22.2	20.0	110.8	80-120
Silver	0.0	0.51	0.50	102.0	80-120
Sodium					
Strontium					
Thallium	0.0	20.0	20.0	100.0	80-120
Tin					
Titanium					
Vanadium					
Zinc	0.46	5.6	5.0	102.8	80-120

Associated samples MP26987: FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

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: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26987
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date:					03/21/14				03/21/14	
Metal	FA13385-1 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit	FA13258-4 Original	DUP	RPD	QC Limits
Aluminum										
Antimony	0.0	5.8	5.0	116.0	5.3	20	0.0	0.0	NC	0-20
Arsenic	0.0	22.2	20.0	111.0	4.1	20	0.0	0.0	NC	0-20
Barium	anr									
Beryllium	0.0	0.56	0.50	112.0	3.6	20	0.0	0.0	NC	0-20
Cadmium	0.0	0.55	0.50	110.0	3.7	20	0.0	0.0	NC	0-20
Calcium										
Chromium	0.0	2.2	2.0	110.0	4.7	20	0.0	0.0	NC	0-20
Cobalt										
Copper	0.0	2.8	2.5	112.0	0.0	20	0.020	0.022	9.5	0-20
Iron										
Lead	0.012	5.2	5.0	103.8	3.9	20	0.0	0.0	NC	0-20
Magnesium										
Manganese										
Molybdenum										
Nickel	0.010	5.5	5.0	109.8	3.7	20	0.0	0.0	NC	0-20
Potassium										
Selenium	0.035	23.5	20.0	117.3	5.7	20	0.035	0.024	37.3 (a)	0-20
Silver	0.0	0.54	0.50	108.0	5.7	20	0.0	0.0	NC	0-20
Sodium										
Strontium										
Thallium	0.0	20.7	20.0	103.5	3.4	20	0.0	0.0	NC	0-20
Tin										
Titanium										
Vanadium										
Zinc	0.46	5.7	5.0	104.8	1.8	20	0.088	0.088	0.0	0-20

Associated samples MP26987: FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26987
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date:		03/21/14				03/21/14	
Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum								
Antimony	0.56	0.50	112.0	80-120	5.8	5.0	116.0	80-120
Arsenic	2.1	2.0	105.0	80-120	22.4	20.0	112.0	80-120
Barium	anr							
Beryllium	0.055	0.050	110.0	80-120	0.57	0.50	114.0	80-120
Cadmium	0.054	0.050	108.0	80-120	0.55	0.50	110.0	80-120
Calcium								
Chromium	0.22	0.20	110.0	80-120	2.2	2.0	110.0	80-120
Cobalt								
Copper	0.28	0.25	112.0	80-120	2.8	2.5	112.0	80-120
Iron								
Lead	0.50	0.50	100.0	80-120	5.2	5.0	104.0	80-120
Magnesium								
Manganese								
Molybdenum								
Nickel	0.55	0.50	110.0	80-120	5.5	5.0	110.0	80-120
Potassium								
Selenium	2.2	2.0	110.0	80-120	24.1	20.0	120.0	80-120
Silver	0.052	0.050	104.0	80-120	0.54	0.50	108.0	80-120
Sodium								
Strontium								
Thallium	2.0	2.0	100.0	80-120	21.1	20.0	105.5	80-120
Tin								
Titanium								
Vanadium								
Zinc	0.53	0.50	106.0	80-120	5.4	5.0	108.0	80-120

Associated samples MP26987: FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26987
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 03/21/14

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum				
Antimony	5.7	5.0	114.0	80-120
Arsenic	21.3	20.0	106.5	80-120
Barium	anr			
Beryllium	0.56	0.50	112.0	80-120
Cadmium	0.55	0.50	110.0	80-120
Calcium				
Chromium	2.2	2.0	110.0	80-120
Cobalt				
Copper	2.8	2.5	112.0	80-120
Iron				
Lead	5.1	5.0	102.0	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel	5.5	5.0	110.0	80-120
Potassium				
Selenium	22.3	20.0	111.5	80-120
Silver	0.53	0.50	106.0	80-120
Sodium				
Strontium				
Thallium	20.6	20.0	103.0	80-120
Tin				
Titanium				
Vanadium				
Zinc	5.3	5.0	106.0	80-120

Associated samples MP26987: FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26987
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/21/14

Metal	FA13385-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	0.00	0.00	NC	0-10
Arsenic	0.00	0.00	NC	0-10
Barium	anr			
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	0.00	0.00	NC	0-10
Cobalt				
Copper	0.00	0.00	NC	0-10
Iron				
Lead	1.20	0.00	100.0(a)	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	1.00	0.00	100.0(a)	0-10
Potassium				
Selenium	3.50	0.00	100.0(a)	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium				
Zinc	46.3	44.1	4.8	0-10

Associated samples MP26987: FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

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).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26991
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date:				03/24/14		03/24/14		03/24/14	
Metal	RL	IDL	MDL	MB raw	final	MB raw	final	MB raw	final
Mercury	0.00050	.00003	.00005	0.000026	<0.00050	0.00031	<0.0050	0.00029	<0.0050

Associated samples MP26991: FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

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: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26991 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 03/24/14

Metal	FA13385-1 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.00040	0.030	0.030	98.7	80-120

Associated samples MP26991: FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

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: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26991
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date:					03/24/14				03/24/14	
Metal	FA13385-1 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit	FA13258-4 Original	DUP	RPD	QC Limits
Mercury	0.00040	0.031	0.030	102.0	3.3	20	0.0	0.00056	200.0(a)	0-20

Associated samples MP26991: FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.

8.4.2
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26991
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date:	03/24/14				03/24/14			
Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0030	0.0030	100.0	80-120	0.031	0.030	103.3	80-120

Associated samples MP26991: FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26991 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 03/24/14

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.030	0.030	100.0	80-120

Associated samples MP26991: FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA13258
Account: UTC - United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

QC Batch ID: MP26991 Methods: SW846 7470A
Matrix Type: LEACHATE Units: ug/l

Prep Date: 03/24/14

Metal	FA13385-1 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.0402	0.00	100.0(a)	0-10

Associated samples MP26991: FA13258-4, FA13258-5, FA13258-6, FA13258-7, FA13258-8

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).

New Jersey
ACCUTEST LABORATORIES

Reissue #1
04/10/14

Technical Report for

United Technologies Corporation

AECOMSCG: Delavan Spray Technologies; Bamberg, SC

60314964

Accutest Job Number: JB61406

Sampling Date: 03/07/14

Report to:

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

ATTN: Doria Cullom

Total number of pages in report: **101**

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.

Nancy Cole
Laboratory Director

Client Service contact: Marie Meidhof 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), PA, RI, SC, TN, VA, WV, DoD ELAP (L-A-B L2248)

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ACCUTEST LABORATORIES

April 10, 2014

Ms. Doria Cullom
AECOM
10 Patewood Drive
Bldg VI, Suite 500
Greenville, SC 29615

RE: Accutest job JB61406 Reissue

Dear Ms. Cullom,

The final report for Accutest job number JB61406 has been edited to reflect changes to the final report. This edit has been incorporated into the attached report.

The sample receipt summary has been revised to more accurately report information relative to the sample conditions. Trip blanks are not relevant for this project, and so the information regarding trip blanks has been revised to "NA", or not applicable.

Our apologies for any inconvenience the above issue may have caused you. Please contact me at 732-355-4552 if I may be of further assistance in this matter, or if you have any further questions regarding this data report.

Sincerely,

Accutest Laboratories

Marie Meidhof
Project Manager

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Sample Summary

United Technologies Corporation

Job No: JB61406

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JB61406-1	03/07/14	11:41	LA	03/10/14	AIR	Soil Vapor Comp.	SSV-1
JB61406-2	03/07/14	12:25	LA	03/10/14	AIR	Soil Vapor Comp.	SSV-4
JB61406-3	03/07/14	12:25	LA	03/10/14	AIR	Soil Vapor Comp.	SSV-4-A
JB61406-4	03/07/14	13:15	LA	03/10/14	AIR	Soil Vapor Comp.	SSV-2
JB61406-5	03/07/14	14:10	LA	03/10/14	AIR	Soil Vapor Comp.	SSV-3

Summary of Hits

Job Number: JB61406
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 03/07/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB61406-1	**SSV-1**					
1,1,1-Trichloroethane		318	120	9.7	ppbv	TO-15
Tetrachloroethylene		43100	95	68	ppbv	TO-15
1,1,1-Trichloroethane		1740	650	53	ug/m3	TO-15
Tetrachloroethylene		292000	640	460	ug/m3	TO-15
JB61406-2	**SSV-4**					
Acetone		19.2	0.80	0.14	ppbv	TO-15
Benzene		0.56 J	0.80	0.084	ppbv	TO-15
Chloromethane		0.43 J	0.80	0.13	ppbv	TO-15
Dichlorodifluoromethane		0.47 J	0.80	0.062	ppbv	TO-15
Ethanol		8.4	2.0	0.74	ppbv	TO-15
Ethylbenzene		0.85	0.80	0.081	ppbv	TO-15
Ethyl Acetate		1.2	0.80	0.23	ppbv	TO-15
4-Ethyltoluene		0.91	0.80	0.060	ppbv	TO-15
Heptane		1.2	0.80	0.078	ppbv	TO-15
Hexane		1.2	0.80	0.064	ppbv	TO-15
Isopropyl Alcohol		143	4.0	0.77	ppbv	TO-15
Methylene chloride		2.1	0.80	0.19	ppbv	TO-15
Methyl ethyl ketone		0.82	0.80	0.23	ppbv	TO-15
1,1,1-Trichloroethane		26.1	0.80	0.066	ppbv	TO-15
1,2,4-Trimethylbenzene		3.1	0.80	0.066	ppbv	TO-15
1,3,5-Trimethylbenzene		0.90	0.80	0.060	ppbv	TO-15
Tertiary Butyl Alcohol		0.59 J	0.80	0.18	ppbv	TO-15
Tetrachloroethylene		315	0.80	0.58	ppbv	TO-15
Toluene		6.5	0.80	0.081	ppbv	TO-15
Trichloroethylene		0.24	0.16	0.078	ppbv	TO-15
Trichlorofluoromethane		1.1	0.80	0.055	ppbv	TO-15
m,p-Xylene		6.1	0.80	0.13	ppbv	TO-15
o-Xylene		2.4	0.80	0.077	ppbv	TO-15
Xylenes (total)		8.6	0.80	0.077	ppbv	TO-15
Acetone		45.6	1.9	0.33	ug/m3	TO-15
Benzene		1.8 J	2.6	0.27	ug/m3	TO-15
Chloromethane		0.89 J	1.7	0.27	ug/m3	TO-15
Dichlorodifluoromethane		2.3 J	4.0	0.31	ug/m3	TO-15
Ethanol		16	3.8	1.4	ug/m3	TO-15
Ethylbenzene		3.7	3.5	0.35	ug/m3	TO-15
Ethyl Acetate		4.3	2.9	0.83	ug/m3	TO-15
4-Ethyltoluene		4.5	3.9	0.29	ug/m3	TO-15
Heptane		4.9	3.3	0.32	ug/m3	TO-15
Hexane		4.2	2.8	0.23	ug/m3	TO-15
Isopropyl Alcohol		352	9.8	1.9	ug/m3	TO-15
Methylene chloride		7.3	2.8	0.66	ug/m3	TO-15

Summary of Hits

Job Number: JB61406
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 03/07/14

Lab Sample ID / Client Sample ID / Analyte	Result/ Qual	RL	MDL	Units	Method
Methyl ethyl ketone	2.4	2.4	0.68	ug/m3	TO-15
1,1,1-Trichloroethane	142	4.4	0.36	ug/m3	TO-15
1,2,4-Trimethylbenzene	15	3.9	0.32	ug/m3	TO-15
1,3,5-Trimethylbenzene	4.4	3.9	0.29	ug/m3	TO-15
Tertiary Butyl Alcohol	1.8 J	2.4	0.55	ug/m3	TO-15
Tetrachloroethylene	2140	5.4	3.9	ug/m3	TO-15
Toluene	24	3.0	0.31	ug/m3	TO-15
Trichloroethylene	1.3	0.86	0.42	ug/m3	TO-15
Trichlorofluoromethane	6.2	4.5	0.31	ug/m3	TO-15
m,p-Xylene	26	3.5	0.56	ug/m3	TO-15
o-Xylene	10	3.5	0.33	ug/m3	TO-15
Xylenes (total)	37	3.5	0.33	ug/m3	TO-15
JB61406-3 SSV-4-A					
Acetone	39.5	0.80	0.14	ppbv	TO-15
Benzene	0.55 J	0.80	0.084	ppbv	TO-15
Carbon disulfide	0.53 J	0.80	0.069	ppbv	TO-15
Chloromethane	0.74 J	0.80	0.13	ppbv	TO-15
Dichlorodifluoromethane	0.49 J	0.80	0.062	ppbv	TO-15
m-Dichlorobenzene	0.49 J	0.80	0.099	ppbv	TO-15
Ethanol	9.8	2.0	0.74	ppbv	TO-15
Ethylbenzene	0.56 J	0.80	0.081	ppbv	TO-15
Ethyl Acetate	4.4	0.80	0.23	ppbv	TO-15
Freon 113	1.3	0.80	0.082	ppbv	TO-15
Heptane	1.3	0.80	0.078	ppbv	TO-15
Hexane	2.0	0.80	0.064	ppbv	TO-15
Isopropyl Alcohol	353	4.0	0.77	ppbv	TO-15
Methylene chloride	5.2	0.80	0.19	ppbv	TO-15
Methyl ethyl ketone	0.98	0.80	0.23	ppbv	TO-15
1,1,1-Trichloroethane	25.4	0.80	0.066	ppbv	TO-15
1,2,4-Trimethylbenzene	0.88	0.80	0.066	ppbv	TO-15
Tertiary Butyl Alcohol	0.79 J	0.80	0.18	ppbv	TO-15
Tetrachloroethylene	368	0.80	0.58	ppbv	TO-15
Toluene	5.6	0.80	0.081	ppbv	TO-15
Trichlorofluoromethane	1.1	0.80	0.055	ppbv	TO-15
m,p-Xylene	1.8	0.80	0.13	ppbv	TO-15
o-Xylene	0.56 J	0.80	0.077	ppbv	TO-15
Xylenes (total)	2.3	0.80	0.077	ppbv	TO-15
Acetone	93.8	1.9	0.33	ug/m3	TO-15
Benzene	1.8 J	2.6	0.27	ug/m3	TO-15
Carbon disulfide	1.7 J	2.5	0.21	ug/m3	TO-15
Chloromethane	1.5 J	1.7	0.27	ug/m3	TO-15
Dichlorodifluoromethane	2.4 J	4.0	0.31	ug/m3	TO-15
m-Dichlorobenzene	2.9 J	4.8	0.60	ug/m3	TO-15

Summary of Hits

Job Number: JB61406
Account: United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Collected: 03/07/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Ethanol		18	3.8	1.4	ug/m3	TO-15
Ethylbenzene		2.4 J	3.5	0.35	ug/m3	TO-15
Ethyl Acetate		16	2.9	0.83	ug/m3	TO-15
Freon 113		10	6.1	0.63	ug/m3	TO-15
Heptane		5.3	3.3	0.32	ug/m3	TO-15
Hexane		7.0	2.8	0.23	ug/m3	TO-15
Isopropyl Alcohol		868	9.8	1.9	ug/m3	TO-15
Methylene chloride		18	2.8	0.66	ug/m3	TO-15
Methyl ethyl ketone		2.9	2.4	0.68	ug/m3	TO-15
1,1,1-Trichloroethane		139	4.4	0.36	ug/m3	TO-15
1,2,4-Trimethylbenzene		4.3	3.9	0.32	ug/m3	TO-15
Tertiary Butyl Alcohol		2.4 J	2.4	0.55	ug/m3	TO-15
Tetrachloroethylene		2500	5.4	3.9	ug/m3	TO-15
Toluene		21	3.0	0.31	ug/m3	TO-15
Trichlorofluoromethane		6.2	4.5	0.31	ug/m3	TO-15
m,p-Xylene		7.8	3.5	0.56	ug/m3	TO-15
o-Xylene		2.4 J	3.5	0.33	ug/m3	TO-15
Xylenes (total)		10	3.5	0.33	ug/m3	TO-15
JB61406-4	**SSV-2**					
1,1,1-Trichloroethane		814	380	31	ppbv	TO-15
Tetrachloroethylene		121000	300	220	ppbv	TO-15
Trichloroethylene		223	76	37	ppbv	TO-15
1,1,1-Trichloroethane		4440	2100	170	ug/m3	TO-15
Tetrachloroethylene		821000	2000	1500	ug/m3	TO-15
Trichloroethylene		1200	410	200	ug/m3	TO-15
JB61406-5	**SSV-3**					
Tetrachloroethylene		32400	83	60	ppbv	TO-15
Tetrachloroethylene		220000	560	410	ug/m3	TO-15

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	SSV-1		
Lab Sample ID:	JB61406-1	**Date Sampled:**	03/07/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A793,A806,806	**Date Received:**	03/10/14
Method:	TO-15	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3W39740.D	296	03/20/14	YMH	n/a	n/a	V3W1509
Run #2	3W39766.D	296	03/20/14	YMH	n/a	n/a	V3W1510

	Initial Volume
Run #1	200 ml
Run #2	50.0 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	ND	120	20	ppbv		ND	290	48	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	120	12	ppbv		ND	270	27	ug/m3
71-43-2	78.11	Benzene	ND	120	12	ppbv		ND	380	38	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	120	15	ppbv		ND	800	100	ug/m3
75-25-2	252.8	Bromoform	ND	120	13	ppbv		ND	1200	130	ug/m3
74-83-9	94.94	Bromomethane	ND	120	10	ppbv		ND	470	39	ug/m3
593-60-2	106.9	Bromoethene	ND	120	8.5	ppbv		ND	520	37	ug/m3
100-44-7	126	Benzyl Chloride	ND	120	15	ppbv		ND	620	77	ug/m3
75-15-0	76.14	Carbon disulfide	ND	120	10	ppbv		ND	370	31	ug/m3
108-90-7	112.6	Chlorobenzene	ND	120	15	ppbv		ND	550	69	ug/m3
75-00-3	64.52	Chloroethane	ND	120	12	ppbv		ND	320	32	ug/m3
67-66-3	119.4	Chloroform	ND	120	11	ppbv		ND	590	54	ug/m3
74-87-3	50.49	Chloromethane	ND	120	20	ppbv		ND	250	41	ug/m3
107-05-1	76.53	3-Chloropropene	ND	120	16	ppbv		ND	380	50	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	120	12	ppbv		ND	620	62	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	120	6.7	ppbv		ND	750	42	ug/m3
110-82-7	84.16	Cyclohexane	ND	120	35	ppbv		ND	410	120	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	120	9.7	ppbv		ND	490	39	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	120	12	ppbv		ND	480	48	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	120	16	ppbv		ND	920	120	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	120	9.7	ppbv		ND	490	39	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	120	24	ppbv		ND	550	110	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	120	36	ppbv		ND	430	130	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	ND	120	9.1	ppbv		ND	590	45	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	120	17	ppbv		ND	1000	140	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	120	8.8	ppbv		ND	480	35	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	120	16	ppbv		ND	480	63	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	120	11	ppbv		ND	540	50	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	120	15	ppbv		ND	720	90	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	120	17	ppbv		ND	720	100	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	120	13	ppbv		ND	720	78	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	120	12	ppbv		ND	540	54	ug/m3

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:	SSV-1		
Lab Sample ID:	JB61406-1	**Date Sampled:**	03/07/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A793,A806,806	**Date Received:**	03/10/14
Method:	TO-15	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	ND	300	110	ppbv		ND	570	210	ug/m3
100-41-4	106.2	Ethylbenzene	ND	120	12	ppbv		ND	520	52	ug/m3
141-78-6	88	Ethyl Acetate	ND	120	34	ppbv		ND	430	120	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	120	8.9	ppbv		ND	590	44	ug/m3
76-13-1	187.4	Freon 113	ND	120	12	ppbv		ND	920	92	ug/m3
76-14-2	170.9	Freon 114	ND	120	13	ppbv		ND	840	91	ug/m3
142-82-5	100.2	Heptane	ND	120	12	ppbv		ND	490	49	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	120	37	ppbv		ND	1300	390	ug/m3
110-54-3	86.17	Hexane	ND	120	9.4	ppbv		ND	420	33	ug/m3
591-78-6	100	2-Hexanone	ND	120	15	ppbv		ND	490	61	ug/m3
67-63-0	60.1	Isopropyl Alcohol	ND	120	23	ppbv		ND	290	57	ug/m3
75-09-2	84.94	Methylene chloride	ND	120	28	ppbv		ND	420	97	ug/m3
78-93-3	72.11	Methyl ethyl ketone	ND	120	35	ppbv		ND	350	100	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	120	17	ppbv		ND	490	70	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	120	10	ppbv		ND	430	36	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	120	24	ppbv		ND	490	98	ug/m3
115-07-1	42	Propylene	ND	300	19	ppbv		ND	520	33	ug/m3
100-42-5	104.1	Styrene	ND	120	12	ppbv		ND	510	51	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	318	120	9.7	ppbv		1740	650	53	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	120	18	ppbv		ND	820	120	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	120	18	ppbv		ND	650	98	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	120	47	ppbv		ND	890	350	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	120	9.8	ppbv		ND	590	48	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	120	8.9	ppbv		ND	590	44	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	120	12	ppbv		ND	560	56	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	120	26	ppbv		ND	360	79	ug/m3
127-18-4	165.8	Tetrachloroethylene	43100 [a]	95	68	ppbv		292000 [a]	640	460	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	120	27	ppbv		ND	350	80	ug/m3
108-88-3	92.14	Toluene	ND	120	12	ppbv		ND	450	45	ug/m3
79-01-6	131.4	Trichloroethylene	ND	24	11	ppbv		ND	130	59	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	120	8.1	ppbv		ND	670	46	ug/m3
75-01-4	62.5	Vinyl chloride	ND	120	10	ppbv		ND	310	26	ug/m3
108-05-4	86	Vinyl Acetate	ND	120	35	ppbv		ND	420	120	ug/m3
	106.2	m,p-Xylene	ND	120	19	ppbv		ND	520	83	ug/m3
95-47-6	106.2	o-Xylene	ND	120	11	ppbv		ND	520	48	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	120	11	ppbv		ND	520	48	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	83%	82%	65-128%

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:	SSV-1		
Lab Sample ID:	JB61406-1	**Date Sampled:**	03/07/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A793,A806,806	**Date Received:**	03/10/14
Method:	TO-15	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units

(a) Result is from Run# 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:	SSV-4		
Lab Sample ID:	JB61406-2	**Date Sampled:**	03/07/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A588	**Date Received:**	03/10/14
Method:	TO-15	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3W39742.D	1	03/20/14	YMH	n/a	n/a	V3W1509
Run #2	3W39767.D	1	03/20/14	YMH	n/a	n/a	V3W1510

	Initial Volume
Run #1	100 ml
Run #2	20.0 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	19.2	0.80	0.14	ppbv		45.6	1.9	0.33	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.80	0.078	ppbv		ND	1.8	0.17	ug/m3
71-43-2	78.11	Benzene	0.56	0.80	0.084	ppbv	J	1.8	2.6	0.27	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.80	0.099	ppbv		ND	5.4	0.66	ug/m3
75-25-2	252.8	Bromoform	ND	0.80	0.086	ppbv		ND	8.3	0.89	ug/m3
74-83-9	94.94	Bromomethane	ND	0.80	0.069	ppbv		ND	3.1	0.27	ug/m3
593-60-2	106.9	Bromoethene	ND	0.80	0.057	ppbv		ND	3.5	0.25	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.80	0.099	ppbv		ND	4.1	0.51	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.80	0.069	ppbv		ND	2.5	0.21	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.80	0.10	ppbv		ND	3.7	0.46	ug/m3
75-00-3	64.52	Chloroethane	ND	0.80	0.082	ppbv		ND	2.1	0.22	ug/m3
67-66-3	119.4	Chloroform	ND	0.80	0.074	ppbv		ND	3.9	0.36	ug/m3
74-87-3	50.49	Chloromethane	0.43	0.80	0.13	ppbv	J	0.89	1.7	0.27	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.80	0.11	ppbv		ND	2.5	0.34	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.80	0.080	ppbv		ND	4.1	0.41	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.80	0.045	ppbv		ND	5.0	0.28	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.80	0.23	ppbv		ND	2.8	0.79	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.80	0.066	ppbv		ND	3.2	0.27	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.80	0.084	ppbv		ND	3.2	0.33	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.80	0.11	ppbv		ND	6.1	0.85	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.80	0.066	ppbv		ND	3.2	0.27	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.80	0.16	ppbv		ND	3.7	0.74	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.80	0.24	ppbv		ND	2.9	0.86	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.47	0.80	0.062	ppbv	J	2.3	4.0	0.31	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.80	0.12	ppbv		ND	6.8	1.0	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.80	0.059	ppbv		ND	3.2	0.23	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.80	0.11	ppbv		ND	3.2	0.44	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.80	0.074	ppbv		ND	3.6	0.34	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.80	0.099	ppbv		ND	4.8	0.60	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.80	0.12	ppbv		ND	4.8	0.72	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.80	0.086	ppbv		ND	4.8	0.52	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.80	0.084	ppbv		ND	3.6	0.38	ug/m3

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: SSV-4
Lab Sample ID: JB61406-2 **Date Sampled:** 03/07/14
Matrix: AIR - Soil Vapor Comp. Summa ID: A588 **Date Received:** 03/10/14
Method: TO-15 **Percent Solids:** n/a
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	8.4	2.0	0.74	ppbv		16	3.8	1.4	ug/m3
100-41-4	106.2	Ethylbenzene	0.85	0.80	0.081	ppbv		3.7	3.5	0.35	ug/m3
141-78-6	88	Ethyl Acetate	1.2	0.80	0.23	ppbv		4.3	2.9	0.83	ug/m3
622-96-8	120.2	4-Ethyltoluene	0.91	0.80	0.060	ppbv		4.5	3.9	0.29	ug/m3
76-13-1	187.4	Freon 113	ND	0.80	0.082	ppbv		ND	6.1	0.63	ug/m3
76-14-2	170.9	Freon 114	ND	0.80	0.085	ppbv		ND	5.6	0.59	ug/m3
142-82-5	100.2	Heptane	1.2	0.80	0.078	ppbv		4.9	3.3	0.32	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.80	0.25	ppbv		ND	8.5	2.7	ug/m3
110-54-3	86.17	Hexane	1.2	0.80	0.064	ppbv		4.2	2.8	0.23	ug/m3
591-78-6	100	2-Hexanone	ND	0.80	0.098	ppbv		ND	3.3	0.40	ug/m3
67-63-0	60.1	Isopropyl Alcohol	143 [a]	4.0	0.77	ppbv		352 [a]	9.8	1.9	ug/m3
75-09-2	84.94	Methylene chloride	2.1	0.80	0.19	ppbv		7.3	2.8	0.66	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.82	0.80	0.23	ppbv		2.4	2.4	0.68	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.80	0.12	ppbv		ND	3.3	0.49	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.80	0.068	ppbv		ND	2.9	0.25	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.80	0.16	ppbv		ND	3.3	0.66	ug/m3
115-07-1	42	Propylene	ND	2.0	0.13	ppbv		ND	3.4	0.22	ug/m3
100-42-5	104.1	Styrene	ND	0.80	0.079	ppbv		ND	3.4	0.34	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	26.1	0.80	0.066	ppbv		142	4.4	0.36	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.80	0.12	ppbv		ND	5.5	0.82	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.80	0.12	ppbv		ND	4.4	0.65	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.80	0.32	ppbv		ND	5.9	2.4	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	3.1	0.80	0.066	ppbv		15	3.9	0.32	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	0.90	0.80	0.060	ppbv		4.4	3.9	0.29	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.80	0.084	ppbv		ND	3.7	0.39	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	0.59	0.80	0.18	ppbv	J	1.8	2.4	0.55	ug/m3
127-18-4	165.8	Tetrachloroethylene	315 [a]	0.80	0.58	ppbv		2140 [a]	5.4	3.9	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.80	0.18	ppbv		ND	2.4	0.53	ug/m3
108-88-3	92.14	Toluene	6.5	0.80	0.081	ppbv		24	3.0	0.31	ug/m3
79-01-6	131.4	Trichloroethylene	0.24	0.16	0.078	ppbv		1.3	0.86	0.42	ug/m3
75-69-4	137.4	Trichlorofluoromethane	1.1	0.80	0.055	ppbv		6.2	4.5	0.31	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.80	0.068	ppbv		ND	2.0	0.17	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.80	0.23	ppbv		ND	2.8	0.81	ug/m3
	106.2	m,p-Xylene	6.1	0.80	0.13	ppbv		26	3.5	0.56	ug/m3
95-47-6	106.2	o-Xylene	2.4	0.80	0.077	ppbv		10	3.5	0.33	ug/m3
1330-20-7	106.2	Xylenes (total)	8.6	0.80	0.077	ppbv		37	3.5	0.33	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	89%	85%	65-128%

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:	SSV-4		
Lab Sample ID:	JB61406-2	**Date Sampled:**	03/07/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A588	**Date Received:**	03/10/14
Method:	TO-15	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units

(a) Result is from Run# 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:	SSV-4-A		
Lab Sample ID:	JB61406-3	**Date Sampled:**	03/07/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A607	**Date Received:**	03/10/14
Method:	TO-15	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3W39743.D	1	03/20/14	YMH	n/a	n/a	V3W1509
Run #2	3W39768.D	1	03/21/14	YMH	n/a	n/a	V3W1510

	Initial Volume
Run #1	100 ml
Run #2	20.0 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	39.5	0.80	0.14	ppbv		93.8	1.9	0.33	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.80	0.078	ppbv		ND	1.8	0.17	ug/m3
71-43-2	78.11	Benzene	0.55	0.80	0.084	ppbv	J	1.8	2.6	0.27	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.80	0.099	ppbv		ND	5.4	0.66	ug/m3
75-25-2	252.8	Bromoform	ND	0.80	0.086	ppbv		ND	8.3	0.89	ug/m3
74-83-9	94.94	Bromomethane	ND	0.80	0.069	ppbv		ND	3.1	0.27	ug/m3
593-60-2	106.9	Bromoethene	ND	0.80	0.057	ppbv		ND	3.5	0.25	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.80	0.099	ppbv		ND	4.1	0.51	ug/m3
75-15-0	76.14	Carbon disulfide	0.53	0.80	0.069	ppbv	J	1.7	2.5	0.21	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.80	0.10	ppbv		ND	3.7	0.46	ug/m3
75-00-3	64.52	Chloroethane	ND	0.80	0.082	ppbv		ND	2.1	0.22	ug/m3
67-66-3	119.4	Chloroform	ND	0.80	0.074	ppbv		ND	3.9	0.36	ug/m3
74-87-3	50.49	Chloromethane	0.74	0.80	0.13	ppbv	J	1.5	1.7	0.27	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.80	0.11	ppbv		ND	2.5	0.34	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.80	0.080	ppbv		ND	4.1	0.41	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.80	0.045	ppbv		ND	5.0	0.28	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.80	0.23	ppbv		ND	2.8	0.79	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.80	0.066	ppbv		ND	3.2	0.27	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.80	0.084	ppbv		ND	3.2	0.33	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.80	0.11	ppbv		ND	6.1	0.85	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.80	0.066	ppbv		ND	3.2	0.27	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.80	0.16	ppbv		ND	3.7	0.74	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.80	0.24	ppbv		ND	2.9	0.86	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.49	0.80	0.062	ppbv	J	2.4	4.0	0.31	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.80	0.12	ppbv		ND	6.8	1.0	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.80	0.059	ppbv		ND	3.2	0.23	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.80	0.11	ppbv		ND	3.2	0.44	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.80	0.074	ppbv		ND	3.6	0.34	ug/m3
541-73-1	147	m-Dichlorobenzene	0.49	0.80	0.099	ppbv	J	2.9	4.8	0.60	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.80	0.12	ppbv		ND	4.8	0.72	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.80	0.086	ppbv		ND	4.8	0.52	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.80	0.084	ppbv		ND	3.6	0.38	ug/m3

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: SSV-4-A
Lab Sample ID: JB61406-3 **Date Sampled:** 03/07/14
Matrix: AIR - Soil Vapor Comp. Summa ID: A607 **Date Received:** 03/10/14
Method: TO-15 **Percent Solids:** n/a
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	9.8	2.0	0.74	ppbv		18	3.8	1.4	ug/m3
100-41-4	106.2	Ethylbenzene	0.56	0.80	0.081	ppbv	J	2.4	3.5	0.35	ug/m3
141-78-6	88	Ethyl Acetate	4.4	0.80	0.23	ppbv		16	2.9	0.83	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.80	0.060	ppbv		ND	3.9	0.29	ug/m3
76-13-1	187.4	Freon 113	1.3	0.80	0.082	ppbv		10	6.1	0.63	ug/m3
76-14-2	170.9	Freon 114	ND	0.80	0.085	ppbv		ND	5.6	0.59	ug/m3
142-82-5	100.2	Heptane	1.3	0.80	0.078	ppbv		5.3	3.3	0.32	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.80	0.25	ppbv		ND	8.5	2.7	ug/m3
110-54-3	86.17	Hexane	2.0	0.80	0.064	ppbv		7.0	2.8	0.23	ug/m3
591-78-6	100	2-Hexanone	ND	0.80	0.098	ppbv		ND	3.3	0.40	ug/m3
67-63-0	60.1	Isopropyl Alcohol	353 [a]	4.0	0.77	ppbv		868 [a]	9.8	1.9	ug/m3
75-09-2	84.94	Methylene chloride	5.2	0.80	0.19	ppbv		18	2.8	0.66	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.98	0.80	0.23	ppbv		2.9	2.4	0.68	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.80	0.12	ppbv		ND	3.3	0.49	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.80	0.068	ppbv		ND	2.9	0.25	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.80	0.16	ppbv		ND	3.3	0.66	ug/m3
115-07-1	42	Propylene	ND	2.0	0.13	ppbv		ND	3.4	0.22	ug/m3
100-42-5	104.1	Styrene	ND	0.80	0.079	ppbv		ND	3.4	0.34	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	25.4	0.80	0.066	ppbv		139	4.4	0.36	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.80	0.12	ppbv		ND	5.5	0.82	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.80	0.12	ppbv		ND	4.4	0.65	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.80	0.32	ppbv		ND	5.9	2.4	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.88	0.80	0.066	ppbv		4.3	3.9	0.32	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.80	0.060	ppbv		ND	3.9	0.29	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.80	0.084	ppbv		ND	3.7	0.39	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	0.79	0.80	0.18	ppbv	J	2.4	2.4	0.55	ug/m3
127-18-4	165.8	Tetrachloroethylene	368 [a]	0.80	0.58	ppbv		2500 [a]	5.4	3.9	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.80	0.18	ppbv		ND	2.4	0.53	ug/m3
108-88-3	92.14	Toluene	5.6	0.80	0.081	ppbv		21	3.0	0.31	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.16	0.078	ppbv		ND	0.86	0.42	ug/m3
75-69-4	137.4	Trichlorofluoromethane	1.1	0.80	0.055	ppbv		6.2	4.5	0.31	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.80	0.068	ppbv		ND	2.0	0.17	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.80	0.23	ppbv		ND	2.8	0.81	ug/m3
	106.2	m,p-Xylene	1.8	0.80	0.13	ppbv		7.8	3.5	0.56	ug/m3
95-47-6	106.2	o-Xylene	0.56	0.80	0.077	ppbv	J	2.4	3.5	0.33	ug/m3
1330-20-7	106.2	Xylenes (total)	2.3	0.80	0.077	ppbv		10	3.5	0.33	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	88%	84%	65-128%

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:	SSV-4-A		
Lab Sample ID:	JB61406-3	**Date Sampled:**	03/07/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A607	**Date Received:**	03/10/14
Method:	TO-15	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units

(a) Result is from Run# 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:	SSV-2		
Lab Sample ID:	JB61406-4	**Date Sampled:**	03/07/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A513,A934	**Date Received:**	03/10/14
Method:	TO-15	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3W39744.D	947.2	03/20/14	YMH	n/a	n/a	V3W1509
Run #2	3W39770.D	947.2	03/21/14	YMH	n/a	n/a	V3W1510

	Initial Volume
Run #1	200 ml
Run #2	50.0 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	ND	380	65	ppbv		ND	900	150	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	380	37	ppbv		ND	840	82	ug/m3
71-43-2	78.11	Benzene	ND	380	40	ppbv		ND	1200	130	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	380	47	ppbv		ND	2500	310	ug/m3
75-25-2	252.8	Bromoform	ND	380	41	ppbv		ND	3900	420	ug/m3
74-83-9	94.94	Bromomethane	ND	380	33	ppbv		ND	1500	130	ug/m3
593-60-2	106.9	Bromoethene	ND	380	27	ppbv		ND	1700	120	ug/m3
100-44-7	126	Benzyl Chloride	ND	380	47	ppbv		ND	2000	240	ug/m3
75-15-0	76.14	Carbon disulfide	ND	380	33	ppbv		ND	1200	100	ug/m3
108-90-7	112.6	Chlorobenzene	ND	380	48	ppbv		ND	1800	220	ug/m3
75-00-3	64.52	Chloroethane	ND	380	39	ppbv		ND	1000	100	ug/m3
67-66-3	119.4	Chloroform	ND	380	35	ppbv		ND	1900	170	ug/m3
74-87-3	50.49	Chloromethane	ND	380	64	ppbv		ND	780	130	ug/m3
107-05-1	76.53	3-Chloropropene	ND	380	52	ppbv		ND	1200	160	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	380	38	ppbv		ND	2000	200	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	380	21	ppbv		ND	2400	130	ug/m3
110-82-7	84.16	Cyclohexane	ND	380	110	ppbv		ND	1300	380	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	380	31	ppbv		ND	1500	130	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	380	40	ppbv		ND	1500	160	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	380	52	ppbv		ND	2900	400	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	380	31	ppbv		ND	1500	130	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	380	75	ppbv		ND	1800	350	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	380	110	ppbv		ND	1400	400	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	ND	380	29	ppbv		ND	1900	140	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	380	55	ppbv		ND	3200	470	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	380	28	ppbv		ND	1500	110	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	380	52	ppbv		ND	1500	210	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	380	35	ppbv		ND	1700	160	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	380	47	ppbv		ND	2300	280	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	380	56	ppbv		ND	2300	340	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	380	41	ppbv		ND	2300	250	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	380	40	ppbv		ND	1700	180	ug/m3

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:	SSV-2		
Lab Sample ID:	JB61406-4	**Date Sampled:**	03/07/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A513,A934	**Date Received:**	03/10/14
Method:	TO-15	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	ND	950	350	ppbv		ND	1800	660	ug/m3
100-41-4	106.2	Ethylbenzene	ND	380	38	ppbv		ND	1700	170	ug/m3
141-78-6	88	Ethyl Acetate	ND	380	110	ppbv		ND	1400	400	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	380	29	ppbv		ND	1900	140	ug/m3
76-13-1	187.4	Freon 113	ND	380	39	ppbv		ND	2900	300	ug/m3
76-14-2	170.9	Freon 114	ND	380	40	ppbv		ND	2700	280	ug/m3
142-82-5	100.2	Heptane	ND	380	37	ppbv		ND	1600	150	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	380	120	ppbv		ND	4100	1300	ug/m3
110-54-3	86.17	Hexane	ND	380	30	ppbv		ND	1300	110	ug/m3
591-78-6	100	2-Hexanone	ND	380	47	ppbv		ND	1600	190	ug/m3
67-63-0	60.1	Isopropyl Alcohol	ND	380	73	ppbv		ND	930	180	ug/m3
75-09-2	84.94	Methylene chloride	ND	380	88	ppbv		ND	1300	310	ug/m3
78-93-3	72.11	Methyl ethyl ketone	ND	380	110	ppbv		ND	1100	320	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	380	56	ppbv		ND	1600	230	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	380	32	ppbv		ND	1400	120	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	380	77	ppbv		ND	1600	320	ug/m3
115-07-1	42	Propylene	ND	950	59	ppbv		ND	1600	100	ug/m3
100-42-5	104.1	Styrene	ND	380	38	ppbv		ND	1600	160	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	814	380	31	ppbv		4440	2100	170	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	380	57	ppbv		ND	2600	390	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	380	59	ppbv		ND	2100	320	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	380	150	ppbv		ND	2800	1100	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	380	31	ppbv		ND	1900	150	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	380	29	ppbv		ND	1900	140	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	380	40	ppbv		ND	1800	190	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	380	83	ppbv		ND	1200	250	ug/m3
127-18-4	165.8	Tetrachloroethylene	121000 [a]	300	220	ppbv		821000 [a]	2000	1500	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	380	85	ppbv		ND	1100	250	ug/m3
108-88-3	92.14	Toluene	ND	380	38	ppbv		ND	1400	140	ug/m3
79-01-6	131.4	Trichloroethylene	223	76	37	ppbv		1200	410	200	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	380	26	ppbv		ND	2100	150	ug/m3
75-01-4	62.5	Vinyl chloride	ND	380	32	ppbv		ND	970	82	ug/m3
108-05-4	86	Vinyl Acetate	ND	380	110	ppbv		ND	1300	390	ug/m3
	106.2	m,p-Xylene	ND	380	61	ppbv		ND	1700	260	ug/m3
95-47-6	106.2	o-Xylene	ND	380	37	ppbv		ND	1700	160	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	380	37	ppbv		ND	1700	160	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	82%	82%	65-128%

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:	SSV-2		
Lab Sample ID:	JB61406-4	**Date Sampled:**	03/07/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A513,A934	**Date Received:**	03/10/14
Method:	TO-15	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units

(a) Result is from Run# 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:	SSV-3		
Lab Sample ID:	JB61406-5	**Date Sampled:**	03/07/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1118,A414	**Date Received:**	03/10/14
Method:	TO-15	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3W39745.D	260	03/20/14	YMH	n/a	n/a	V3W1509
Run #2	3W39771.D	260	03/21/14	YMH	n/a	n/a	V3W1510

	Initial Volume
Run #1	200 ml
Run #2	50.0 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	ND	100	18	ppbv		ND	240	43	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	100	10	ppbv		ND	220	22	ug/m3
71-43-2	78.11	Benzene	ND	100	11	ppbv		ND	320	35	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	100	13	ppbv		ND	670	87	ug/m3
75-25-2	252.8	Bromoform	ND	100	11	ppbv		ND	1000	110	ug/m3
74-83-9	94.94	Bromomethane	ND	100	8.9	ppbv		ND	390	35	ug/m3
593-60-2	106.9	Bromoethene	ND	100	7.4	ppbv		ND	440	32	ug/m3
100-44-7	126	Benzyl Chloride	ND	100	13	ppbv		ND	520	67	ug/m3
75-15-0	76.14	Carbon disulfide	ND	100	9.0	ppbv		ND	310	28	ug/m3
108-90-7	112.6	Chlorobenzene	ND	100	13	ppbv		ND	460	60	ug/m3
75-00-3	64.52	Chloroethane	ND	100	11	ppbv		ND	260	29	ug/m3
67-66-3	119.4	Chloroform	ND	100	9.6	ppbv		ND	490	47	ug/m3
74-87-3	50.49	Chloromethane	ND	100	17	ppbv		ND	210	35	ug/m3
107-05-1	76.53	3-Chloropropene	ND	100	14	ppbv		ND	310	44	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	100	10	ppbv		ND	520	52	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	100	5.9	ppbv		ND	630	37	ug/m3
110-82-7	84.16	Cyclohexane	ND	100	30	ppbv		ND	340	100	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	100	8.5	ppbv		ND	400	34	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	100	11	ppbv		ND	400	44	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	100	14	ppbv		ND	770	110	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	100	8.5	ppbv		ND	400	34	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	100	21	ppbv		ND	460	97	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	100	31	ppbv		ND	360	110	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	ND	100	8.0	ppbv		ND	490	40	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	100	15	ppbv		ND	850	130	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	100	7.7	ppbv		ND	400	31	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	100	14	ppbv		ND	400	56	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	100	9.7	ppbv		ND	450	44	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	100	13	ppbv		ND	600	78	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	100	15	ppbv		ND	600	90	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	100	11	ppbv		ND	600	66	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	100	11	ppbv		ND	450	50	ug/m3

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:	SSV-3		
Lab Sample ID:	JB61406-5	**Date Sampled:**	03/07/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1118,A414	**Date Received:**	03/10/14
Method:	TO-15	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	ND	260	97	ppbv		ND	490	180	ug/m3
100-41-4	106.2	Ethylbenzene	ND	100	11	ppbv		ND	430	48	ug/m3
141-78-6	88	Ethyl Acetate	ND	100	30	ppbv		ND	360	110	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	100	7.9	ppbv		ND	490	39	ug/m3
76-13-1	187.4	Freon 113	ND	100	11	ppbv		ND	770	84	ug/m3
76-14-2	170.9	Freon 114	ND	100	11	ppbv		ND	700	77	ug/m3
142-82-5	100.2	Heptane	ND	100	10	ppbv		ND	410	41	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	100	33	ppbv		ND	1100	350	ug/m3
110-54-3	86.17	Hexane	ND	100	8.3	ppbv		ND	350	29	ug/m3
591-78-6	100	2-Hexanone	ND	100	13	ppbv		ND	410	53	ug/m3
67-63-0	60.1	Isopropyl Alcohol	ND	100	20	ppbv		ND	250	49	ug/m3
75-09-2	84.94	Methylene chloride	ND	100	24	ppbv		ND	350	83	ug/m3
78-93-3	72.11	Methyl ethyl ketone	ND	100	30	ppbv		ND	290	88	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	100	15	ppbv		ND	410	61	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	100	8.9	ppbv		ND	360	32	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	100	21	ppbv		ND	410	86	ug/m3
115-07-1	42	Propylene	ND	260	16	ppbv		ND	450	27	ug/m3
100-42-5	104.1	Styrene	ND	100	10	ppbv		ND	430	43	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	100	8.5	ppbv		ND	550	46	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	100	16	ppbv		ND	690	110	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	100	16	ppbv		ND	550	87	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	100	41	ppbv		ND	740	300	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	100	8.6	ppbv		ND	490	42	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	100	7.9	ppbv		ND	490	39	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	100	11	ppbv		ND	470	51	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	100	23	ppbv		ND	300	70	ug/m3
127-18-4	165.8	Tetrachloroethylene	32400 [a]	83	60	ppbv		220000 [a]	560	410	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	100	23	ppbv		ND	290	68	ug/m3
108-88-3	92.14	Toluene	ND	100	11	ppbv		ND	380	41	ug/m3
79-01-6	131.4	Trichloroethylene	ND	21	10	ppbv		ND	110	54	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	100	7.1	ppbv		ND	560	40	ug/m3
75-01-4	62.5	Vinyl chloride	ND	100	8.9	ppbv		ND	260	23	ug/m3
108-05-4	86	Vinyl Acetate	ND	100	30	ppbv		ND	350	110	ug/m3
	106.2	m,p-Xylene	ND	100	17	ppbv		ND	430	74	ug/m3
95-47-6	106.2	o-Xylene	ND	100	10	ppbv		ND	430	43	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	100	10	ppbv		ND	430	43	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	81%	82%	65-128%

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:	SSV-3		
Lab Sample ID:	JB61406-5	**Date Sampled:**	03/07/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1118,A414	**Date Received:**	03/10/14
Method:	TO-15	**Percent Solids:**	n/a
Project:	AECOMSCG: Delavan Spray Technologies; Bamberg, SC		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units

(a) Result is from Run# 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

New Jersey ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Summa Canister and Flow Controller Log

AV

CHAIN OF CUSTODY

ACCUTEST LABORATORIES

Air Sampling Field Data Sheet

FED-EX Tracking # 5638 2208 4865 | Bottle Order Control # MJ-2/19/2014-2 | PAGE 1 OF 1

Lab Quote # | Lab Job # JB61406

Client / Reporting Information

Company Name: AECOM (10 Patewood Drive Bldg VI #500)
Address: 4334 Main Hwy BC 18
City: Bamberg State: SC Zip: 29615
Project Contact: Doria Cullom E-mail: doria.cullom@aecom.com
Phone #: 864-234-8928 Fax #: 864-234-3069
Sampler(s) Name(s): Leslee Alexander & Randy Morgan

Project Name: UTC Delavan Spray Technologies S.to RT
Street: 4334 Main Hwy
City: Bamberg State: SC
Project #: 60314964
Client Purchase Order #

Weather Parameters

Temperature (Fahrenheit) Start: Maximum: Stop: Minimum:
Atmoshpheric Pressure (inches of Hg) Start: Maximum: Stop: Minimum:
Other weather comment: raining & cold outside but warm inside

Requested Analysis

Standard TO-15 Reporting List

Lab Sample #	Field ID / Point of Collection	Air Type: Indoor(I) Soil Vap(SV) Ambient(A)	Sampling Equipment Info: Canister Serial #	Canister Size 6L or 1L	Flow Controller Serial #	Start Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.	Stop Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.	Standard TO-15 Reporting List		
A793	SSV-1	SV	1491	1L	06154	3/7/14	1041	30	~70°	LA/RM	3/7/14	1141	~8	~70°F	LA/RM	X		1
A588	SSV-4	SV	1299		06166	3/7/14	1125	28	~70	LA/RM	3/7/14	1225	~8	~70°F	LA/RM	X		2
A607	SSV-4-a	SV	1320		02073	3/7/14	1125	28	~70	LA/RM	3/7/14	1225	~6	~70°F	LA/RM	X		3
A513	SSV-2	SV	1166		02075	3/7/14	1215	30	~70	LA/RM	3/7/14	1315	~9	~70°F	LA/RM	X		4
A1118	SSV-3	SV	JB03	1L	02771	3/7/14	1310	30	~70	LA/RM	3/7/14	1410	~5"	~70°F	LA/RM	X		5

Turnaround Time (Business days)

Standard - 15 Days	X
10 Day	
5 Day	
3 Day	
2 Day	
1 Day	
Other	

Approved By: _____ Date: _____

Data Deliverable Information

All NJDEP TO-15 is mandatory Full T1

Comm A	
Comm B	
Reduced T2	
Full T1	
Other:	

Comments / Remarks

extra summa canister not used

SUMMA

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

	Relinquished by	Date Time	Received By	Relinquished By	Date Time	Received By
1	Ray Mariano	2/26/14 1445	Fed Ex	Fed Ex	2/28/14	X. Alexander
2	X. Alexander	3/7/14 1445	Fed Ex	PX	3/10/14 10:30	
3						
4						
5				Custody Seal # 890		

FA

TA/CA

JB61406: Chain of Custody
Page 1 of 4

Job# JB61406
(REQUIRED)

Unused Summa Return Form

Client AECOM Office SC
Project UTC Delcam Spray Tech

#Summas 1 #Flow Controllers 1

Summa#'s A383 - 6 FC#s FC670

Rec'd By _____ Rec'd Date/Time 3/10/14

Rec'd via Fedex 5638 2708 4865
(Attach any client paperwork, documentation, or airbills if available)

Notes _____

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: _____ **Client:** _____ **Project:** _____

Date / Time Received: _____ **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Initial/Adjusted):

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		
4. No, Coolers			

Quality Control Preservatio	Y	N	N/A
1. Trip Blank present / cooler:	☐	☐	☑
2. Trip Blank listed on COC:	☐	☐	☑
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:			

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JB61406: Chain of Custody
Page 3 of 4

Sample Receipt Summary - Problem Resolution

Accutest Job Number:

Initiator: _____

CSR: _____

Response Date: _____

Response:

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JB61406: Chain of Custody
Page 4 of 4

Summa Canister and Flow Controller Log

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC
Received: 03/10/14

SUMMA CANISTERS

Shipping							Receiving					
Summa ID	L	Vac " Hg	Date Out	By	SCC Batch	SCC FileID	Sample Number	Date In	By	Vac " Hg	Pres psig	Final psig	Dil Fact
A793	1	29.4	02/26/14	RC	CP6802	3W39159.D	JB61406-1	03/10/14	ML	6			1
A588	1	29.4	02/26/14	RC	CP6805	W46020.D	JB61406-2	03/10/14	ML	7			1
A607	1	29.4	02/26/14	RC	CP6802	3W39159.D	JB61406-3	03/10/14	ML	6.5			1
A513	1	29.4	02/26/14	RC	CP6805	W46020.D	JB61406-4	03/10/14	ML	6			1
A1118	1	29.4	02/26/14	RC	CP6802	3W39159.D	JB61406-5	03/10/14	ML	3			1

FLOW CONTROLLERS / OTHER

Shipping					Receiving			
Flow Crtl ID	Date Out	By	cc/ min	Time hrs.	Date In	By	cc/ min	Equipment Type
FC236	02/26/14	RC	12.5	1	03/10/14	ML	13.2	Flow Controller
FC244	02/26/14	RC	12.5	1	03/10/14	ML	13	Flow Controller
FC373	02/26/14	RC	12.5	1	03/10/14	ML	12.8	Flow Controller
FC527	02/26/14	RC	12.5	1	03/10/14	ML	12.3	Flow Controller
FC670	02/26/14	RC	12.5	1	03/10/14	ML	13.3	Flow Controller
FC681	02/26/14	RC	12.5	1	03/10/14	ML	13.3	Flow Controller

Accutest Bottle Order(s):
MJ-2/19/2014-2

Prep Date	Room Temp(F)	Bar Pres "Hg
02/26/14	70	29.92

New Jersey ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1509-MB	3W39723.D	1	03/19/14	YMH	n/a	n/a	V3W1509

The QC reported here applies to the following samples: **Method:** TO-15

JB61406-1, JB61406-2, JB61406-3, JB61406-4, JB61406-5

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	0.034	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.020	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.021	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.025	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.022	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.017	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.014	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.025	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.017	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.025	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.020	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.019	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.034	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.028	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.020	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.011	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.058	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.021	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.040	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.060	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.015	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.029	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.015	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.028	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.019	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.025	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.021	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.19	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.020	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.057	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3

Method Blank Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1509-MB	3W39723.D	1	03/19/14	YMH	n/a	n/a	V3W1509

The QC reported here applies to the following samples: **Method:** TO-15

JB61406-1, JB61406-2, JB61406-3, JB61406-4, JB61406-5

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	0.021	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.021	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.020	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.063	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.016	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.025	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.039	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.047	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.058	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.029	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.017	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.040	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	0.031	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.020	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.016	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.030	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.031	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.079	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.017	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.021	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.044	ppbv		ND	0.61	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.045	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.020	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.014	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.017	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.058	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.032	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.019	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.019	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	81%	65-128%

Method Blank Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1509-MB	3W39723.D	1	03/19/14	YMH	n/a	n/a	V3W1509

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

JB61406-1, JB61406-2, JB61406-3, JB61406-4, JB61406-5

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ppbv	

Method Blank Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1510-MB	3W39751.D	1	03/20/14	YMH	n/a	n/a	V3W1510

The QC reported here applies to the following samples: **Method:** TO-15

JB61406-1, JB61406-2, JB61406-3, JB61406-4, JB61406-5

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-63-0	Isopropyl Alcohol	ND	0.20	0.039	ppbv		ND	0.49	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.029	ppbv		ND	0.27	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	80%	65-128%

Method Blank Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW1835-MB	W46007.D	1	02/21/14	DFT	n/a	n/a	VW1835

The QC reported here applies to the following samples: **Method:** TO-15

VW1835-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	0.034	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.020	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.021	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.025	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.022	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.017	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.014	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.025	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.017	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.025	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.020	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.019	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.034	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.028	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.020	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.011	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.058	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.021	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.040	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.060	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.015	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.029	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.015	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.028	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.019	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.025	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.021	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.19	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.020	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.057	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3

Method Blank Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW1835-MB	W46007.D	1	02/21/14	DFT	n/a	n/a	VW1835

The QC reported here applies to the following samples: **Method:** TO-15

VW1835-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	0.021	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.021	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.020	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.063	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.016	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.025	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.039	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.047	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.058	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.029	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.017	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.040	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	0.031	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.020	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.016	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.030	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.031	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.079	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.017	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.021	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.044	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.029	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.045	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.020	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.014	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.017	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.058	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.032	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.019	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.019	ppbv		ND	0.87	ug/m3

Method Blank Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW1835-MB	W46007.D	1	02/21/14	DFT	n/a	n/a	VW1835

The QC reported here applies to the following samples: **Method:** TO-15

VW1835-SCC

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	97%	65-128%

Method Blank Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1490-MB	3W39158.D	1	02/25/14	YMH	n/a	n/a	V3W1490

The QC reported here applies to the following samples: **Method:** TO-15

V3W1490-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	0.034	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.020	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.021	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.025	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.022	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.017	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.014	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.025	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.017	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.025	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.020	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.019	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.034	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.028	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.020	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.011	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.058	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.021	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.040	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.060	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.015	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.029	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.015	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.028	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.019	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.025	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.021	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.19	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.020	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.057	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3

Method Blank Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1490-MB	3W39158.D	1	02/25/14	YMH	n/a	n/a	V3W1490

The QC reported here applies to the following samples: **Method:** TO-15

V3W1490-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	0.021	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.021	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.020	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.063	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.016	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.025	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.039	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.047	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.058	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.029	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.017	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.040	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	0.031	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.020	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.016	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.030	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.031	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.079	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.017	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.021	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.044	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.029	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.045	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.020	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.014	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.017	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.058	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.032	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.019	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.019	ppbv		ND	0.87	ug/m3

Method Blank Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1490-MB	3W39158.D	1	02/25/14	YMH	n/a	n/a	V3W1490

The QC reported here applies to the following samples: **Method:** TO-15

V3W1490-SCC

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	88%	65-128%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ppbv	

Method Blank Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1491-MB	3W39188.D	1	02/26/14	YMH	n/a	n/a	V3W1491

The QC reported here applies to the following samples: **Method:** TO-15

V3W1491-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	0.034	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.020	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.021	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.025	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.022	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.017	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.014	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.025	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.017	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.025	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.020	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.019	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.034	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.028	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.020	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.011	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.058	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.021	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.040	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.060	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.015	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.029	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.015	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.028	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.019	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.025	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.021	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.19	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.020	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.057	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3

Method Blank Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1491-MB	3W39188.D	1	02/26/14	YMH	n/a	n/a	V3W1491

The QC reported here applies to the following samples: **Method:** TO-15

V3W1491-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	0.021	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.021	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.020	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.063	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.016	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.025	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.039	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.047	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.058	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.029	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.017	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.040	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	0.031	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.020	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.016	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.030	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.031	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.079	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.017	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.021	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.044	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.029	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.045	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.020	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.014	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.017	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.058	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.032	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.019	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.019	ppbv		ND	0.87	ug/m3

Method Blank Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1491-MB	3W39188.D	1	02/26/14	YMH	n/a	n/a	V3W1491

The QC reported here applies to the following samples: **Method:** TO-15

V3W1491-SCC

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	88%	65-128%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ppbv	

Method Blank Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W121-MB	5W3062.D	1	03/05/14	ML	n/a	n/a	V5W121

The QC reported here applies to the following samples: **Method:** TO-15

V5W121-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	0.034	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.020	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.021	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.025	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.022	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.017	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.014	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.025	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.017	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.025	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.020	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.019	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.034	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.028	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.020	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.011	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.058	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.021	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.040	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.060	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.015	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.029	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.015	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.028	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.019	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.025	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.021	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.19	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.020	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.057	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3

Method Blank Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W121-MB	5W3062.D	1	03/05/14	ML	n/a	n/a	V5W121

The QC reported here applies to the following samples: **Method:** TO-15

V5W121-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	0.021	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.021	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.020	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.063	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.016	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.025	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.039	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.047	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.058	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.029	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.017	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.040	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	0.031	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.020	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.016	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.030	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.031	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.079	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.017	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.021	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.044	ppbv		ND	0.61	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.045	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.020	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.014	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.017	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.058	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.032	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.019	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.019	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	90%	65-128%

Method Blank Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W121-MB	5W3062.D	1	03/05/14	ML	n/a	n/a	V5W121

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

V5W121-SCC

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ppbv	

Method Blank Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1507-MB	3W39663.D	1	03/17/14	YMH	n/a	n/a	V3W1507

The QC reported here applies to the following samples: **Method:** TO-15

V3W1507-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	0.034	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.020	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.021	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.025	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.022	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.017	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.014	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.025	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.017	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.025	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.020	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.019	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.034	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.028	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.020	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.011	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.058	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.021	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.040	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.060	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.015	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.029	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.015	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.028	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.019	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.025	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.021	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.19	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.020	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.057	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3

Method Blank Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1507-MB	3W39663.D	1	03/17/14	YMH	n/a	n/a	V3W1507

The QC reported here applies to the following samples: **Method:** TO-15

V3W1507-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	0.021	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.021	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.020	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.063	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.016	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.025	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.039	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.047	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.058	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.029	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.017	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.040	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	0.031	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.020	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.016	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.030	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.031	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.079	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.017	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.021	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.044	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.029	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.045	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.020	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.014	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.017	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.058	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.032	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.019	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.019	ppbv		ND	0.87	ug/m3

Method Blank Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1507-MB	3W39663.D	1	03/17/14	YMH	n/a	n/a	V3W1507

The QC reported here applies to the following samples: **Method:** TO-15

V3W1507-SCC

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	82%	65-128%

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1509-BS	3W39720.D	1	03/19/14	YMH	n/a	n/a	V3W1509
V3W1509-BSD	3W39721.D	1	03/19/14	YMH	n/a	n/a	V3W1509

The QC reported here applies to the following samples: **Method:** TO-15

JB61406-1, JB61406-2, JB61406-3, JB61406-4, JB61406-5

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	10.5	105	9.9	99	6	70-130/30
106-99-0	1,3-Butadiene	10	10.1	101	9.8	98	3	70-130/30
71-43-2	Benzene	10	8.9	89	8.7	87	2	70-130/30
75-27-4	Bromodichloromethane	10	9.3	93	9.0	90	3	70-130/30
75-25-2	Bromoform	10	10.7	107	10.6	106	1	70-130/30
74-83-9	Bromomethane	10	10.0	100	9.8	98	2	70-130/30
593-60-2	Bromoethene	10	10.2	102	9.9	99	3	70-130/30
100-44-7	Benzyl Chloride	10	11.1	111	10.7	107	4	70-130/30
75-15-0	Carbon disulfide	10	9.6	96	9.5	95	1	70-130/30
108-90-7	Chlorobenzene	10	10.1	101	9.8	98	3	70-130/30
75-00-3	Chloroethane	10	10.2	102	9.9	99	3	70-130/30
67-66-3	Chloroform	10	10.0	100	9.8	98	2	70-130/30
74-87-3	Chloromethane	10	10.1	101	9.3	93	8	70-130/30
107-05-1	3-Chloropropene	10	10.1	101	9.9	99	2	70-130/30
95-49-8	2-Chlorotoluene	10	11.0	110	10.6	106	4	70-130/30
56-23-5	Carbon tetrachloride	10	10.5	105	10.1	101	4	70-130/30
110-82-7	Cyclohexane	10	8.6	86	8.4	84	2	70-130/30
75-34-3	1,1-Dichloroethane	10	9.7	97	9.5	95	2	70-130/30
75-35-4	1,1-Dichloroethylene	10	9.4	94	9.2	92	2	70-130/30
106-93-4	1,2-Dibromoethane	10	10.1	101	9.8	98	3	70-130/30
107-06-2	1,2-Dichloroethane	10	10.9	109	10.6	106	3	70-130/30
78-87-5	1,2-Dichloropropane	10	8.8	88	8.6	86	2	70-130/30
123-91-1	1,4-Dioxane	10	8.5	85	7.1	71	18	70-130/30
75-71-8	Dichlorodifluoromethane	10	9.8	98	9.3	93	5	70-130/30
124-48-1	Dibromochloromethane	10	10.0	100	9.8	98	2	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.0	100	9.9	99	1	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10	100	9.9	99	1	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	9.9	99	9.6	96	3	70-130/30
541-73-1	m-Dichlorobenzene	10	11.8	118	11.5	115	3	70-130/30
95-50-1	o-Dichlorobenzene	10	11.4	114	10.9	109	4	70-130/30
106-46-7	p-Dichlorobenzene	10	11.2	112	10.9	109	3	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	10.1	101	9.8	98	3	70-130/30
64-17-5	Ethanol	10	9.3	93	9.0	90	3	70-130/30
100-41-4	Ethylbenzene	10	10.0	100	9.8	98	2	70-130/30
141-78-6	Ethyl Acetate	10	9.8	98	9.7	97	1	70-130/30
622-96-8	4-Ethyltoluene	10	10.9	109	10.5	105	4	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1509-BS	3W39720.D	1	03/19/14	YMH	n/a	n/a	V3W1509
V3W1509-BSD	3W39721.D	1	03/19/14	YMH	n/a	n/a	V3W1509

The QC reported here applies to the following samples: **Method:** TO-15

JB61406-1, JB61406-2, JB61406-3, JB61406-4, JB61406-5

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	10.0	100	9.7	97	3	70-130/30
76-14-2	Freon 114	10	9.9	99	9.2	92	7	70-130/30
142-82-5	Heptane	10	8.3	83	8.0	80	4	70-130/30
87-68-3	Hexachlorobutadiene	10	13.1	131* [a]	11.9	119	10	70-130/30
110-54-3	Hexane	10	9.6	96	9.4	94	2	70-130/30
591-78-6	2-Hexanone	10	10.3	103	9.2	92	11	70-130/30
67-63-0	Isopropyl Alcohol	10	10	100	9.5	95	5	70-130/30
75-09-2	Methylene chloride	10	8.9	89	8.6	86	3	70-130/30
78-93-3	Methyl ethyl ketone	10	10	100	9.6	96	4	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	9.8	98	9.0	90	9	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	10.2	102	9.7	97	5	70-130/30
80-62-6	Methylmethacrylate	10	9.2	92	8.8	88	4	70-130/30
115-07-1	Propylene	10	9.7	97	9.2	92	5	70-130/30
100-42-5	Styrene	10	11.3	113	11.0	110	3	70-130/30
71-55-6	1,1,1-Trichloroethane	10	10.1	101	9.7	97	4	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.6	106	10.3	103	3	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.5	95	9.2	92	3	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	13.1	131* [a]	10.9	109	18	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	11.5	115	11.2	112	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	11.3	113	10.9	109	4	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	8.4	84	8.1	81	4	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	10.6	106	10.2	102	4	70-130/30
109-99-9	Tetrahydrofuran	10	10.5	105	10	100	5	70-130/30
108-88-3	Toluene	10	9.6	96	9.3	93	3	70-130/30
79-01-6	Trichloroethylene	10	8.9	89	8.6	86	3	70-130/30
75-69-4	Trichlorofluoromethane	10	10.1	101	9.7	97	4	70-130/30
75-01-4	Vinyl chloride	10	10.2	102	9.6	96	6	70-130/30
108-05-4	Vinyl Acetate	10	10.2	102	9.9	99	3	70-130/30
	m,p-Xylene	20	21.1	106	20.6	103	2	70-130/30
95-47-6	o-Xylene	10	10.8	108	10.6	106	2	70-130/30
1330-20-7	Xylenes (total)	30	31.9	106	31.1	104	3	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	98%	99%	65-128%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1509-BS	3W39720.D	1	03/19/14	YMH	n/a	n/a	V3W1509
V3W1509-BSD	3W39721.D	1	03/19/14	YMH	n/a	n/a	V3W1509

The QC reported here applies to the following samples: **Method:** TO-15

JB61406-1, JB61406-2, JB61406-3, JB61406-4, JB61406-5

(a) High percent recoveries and no associated positive found in the QC batch.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1510-BS	3W39748.D	1	03/20/14	YMH	n/a	n/a	V3W1510
V3W1510-BSD	3W39749.D	1	03/20/14	YMH	n/a	n/a	V3W1510

The QC reported here applies to the following samples: **Method:** TO-15

JB61406-1, JB61406-2, JB61406-3, JB61406-4, JB61406-5

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-63-0	Isopropyl Alcohol	10	9.7	97	9.4	94	3	70-130/30
127-18-4	Tetrachloroethylene	10	9.4	94	9.4	94	0	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	98%	98%	65-128%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW1835-BS	W46004.D	1	02/21/14	DFT	n/a	n/a	VW1835
VW1835-BSD	W46005.D	1	02/21/14	DFT	n/a	n/a	VW1835

The QC reported here applies to the following samples: **Method:** TO-15

VW1835-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	7.3	73	7.2	72	1	70-130/30
106-99-0	1,3-Butadiene	10	9.3	93	9.6	96	3	70-130/30
71-43-2	Benzene	10	9.6	96	9.2	92	4	70-130/30
75-27-4	Bromodichloromethane	10	9.9	99	9.5	95	4	70-130/30
75-25-2	Bromoform	10	10.7	107	10.2	102	5	70-130/30
74-83-9	Bromomethane	10	9.6	96	10.1	101	5	70-130/30
593-60-2	Bromoethene	10	9.2	92	9.6	96	4	70-130/30
100-44-7	Benzyl Chloride	10	11.2	112	10.1	101	10	70-130/30
75-15-0	Carbon disulfide	10	9.0	90	9.2	92	2	70-130/30
108-90-7	Chlorobenzene	10	9.8	98	9.4	94	4	70-130/30
75-00-3	Chloroethane	10	8.5	85	9.2	92	8	70-130/30
67-66-3	Chloroform	10	9.7	97	9.9	99	2	70-130/30
74-87-3	Chloromethane	10	9.3	93	10.3	103	10	70-130/30
107-05-1	3-Chloropropene	10	9.7	97	10.0	100	3	70-130/30
95-49-8	2-Chlorotoluene	10	10.8	108	10.1	101	7	70-130/30
56-23-5	Carbon tetrachloride	10	9.8	98	9.8	98	0	70-130/30
110-82-7	Cyclohexane	10	9.4	94	9.1	91	3	70-130/30
75-34-3	1,1-Dichloroethane	10	9.2	92	9.1	91	1	70-130/30
75-35-4	1,1-Dichloroethylene	10	8.3	83	8.6	86	4	70-130/30
106-93-4	1,2-Dibromoethane	10	9.9	99	9.5	95	4	70-130/30
107-06-2	1,2-Dichloroethane	10	9.5	95	9.4	94	1	70-130/30
78-87-5	1,2-Dichloropropane	10	10	100	9.4	94	6	70-130/30
123-91-1	1,4-Dioxane	10	10.6	106	9.4	94	12	70-130/30
75-71-8	Dichlorodifluoromethane	10	10.2	102	10.6	106	4	70-130/30
124-48-1	Dibromochloromethane	10	9.8	98	9.6	96	2	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	9.0	90	9.4	94	4	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	9.4	94	9.5	95	1	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	9.1	91	8.8	88	3	70-130/30
541-73-1	m-Dichlorobenzene	10	10.6	106	10.0	100	6	70-130/30
95-50-1	o-Dichlorobenzene	10	11.0	110	10.2	102	8	70-130/30
106-46-7	p-Dichlorobenzene	10	11.2	112	10.3	103	8	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	9.4	94	8.7	87	8	70-130/30
64-17-5	Ethanol	10	8.8	88	8.4	84	5	70-130/30
100-41-4	Ethylbenzene	10	10	100	9.3	93	7	70-130/30
141-78-6	Ethyl Acetate	10	8.6	86	8.4	84	2	70-130/30
622-96-8	4-Ethyltoluene	10	11.0	110	10.4	104	6	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW1835-BS	W46004.D	1	02/21/14	DFT	n/a	n/a	VW1835
VW1835-BSD	W46005.D	1	02/21/14	DFT	n/a	n/a	VW1835

The QC reported here applies to the following samples: **Method:** TO-15

VW1835-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	9.6	96	10	100	4	70-130/30
76-14-2	Freon 114	10	9.8	98	10.4	104	6	70-130/30
142-82-5	Heptane	10	9.7	97	9.3	93	4	70-130/30
87-68-3	Hexachlorobutadiene	10	10.8	108	10.4	104	4	70-130/30
110-54-3	Hexane	10	9.8	98	9.7	97	1	70-130/30
591-78-6	2-Hexanone	10	10.6	106	9.5	95	11	70-130/30
67-63-0	Isopropyl Alcohol	10	9.8	98	8.8	88	11	70-130/30
75-09-2	Methylene chloride	10	7.9	79	8.0	80	1	70-130/30
78-93-3	Methyl ethyl ketone	10	9.5	95	9.2	92	3	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	9.5	95	8.9	89	7	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	9.9	99	9.7	97	2	70-130/30
80-62-6	Methylmethacrylate	10	9.5	95	8.8	88	8	70-130/30
115-07-1	Propylene	10	9.5	95	9.8	98	3	70-130/30
100-42-5	Styrene	10	10.4	104	9.8	98	6	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.2	92	9.1	91	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	9.8	98	9.1	91	7	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.4	94	8.8	88	7	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	14.6	146* [a]	11.2	112	26	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	10.8	108	10.1	101	7	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	10.5	105	9.7	97	8	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	9.8	98	9.3	93	5	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	10.3	103	9.2	92	11	70-130/30
127-18-4	Tetrachloroethylene	10	9.8	98	9.7	97	1	70-130/30
109-99-9	Tetrahydrofuran	10	9.1	91	9.0	90	1	70-130/30
108-88-3	Toluene	10	9.5	95	8.9	89	7	70-130/30
79-01-6	Trichloroethylene	10	9.6	96	9.0	90	6	70-130/30
75-69-4	Trichlorofluoromethane	10	9.5	95	9.9	99	4	70-130/30
75-01-4	Vinyl chloride	10	9.4	94	9.6	96	2	70-130/30
108-05-4	Vinyl Acetate	10	8.9	89	9.5	95	7	70-130/30
	m,p-Xylene	20	20.6	103	19.6	98	5	70-130/30
95-47-6	o-Xylene	10	10.1	101	9.4	94	7	70-130/30
1330-20-7	Xylenes (total)	30	30.7	102	29.0	97	6	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW1835-BS	W46004.D	1	02/21/14	DFT	n/a	n/a	VW1835
VW1835-BSD	W46005.D	1	02/21/14	DFT	n/a	n/a	VW1835

The QC reported here applies to the following samples: **Method:** TO-15

VW1835-SCC

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	106%	106%	65-128%

(a) High percent recoveries and no associated positive found in the QC batch.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1490-BS	3W39155.D	1	02/25/14	YMH	n/a	n/a	V3W1490
V3W1490-BSD	3W39156.D	1	02/25/14	YMH	n/a	n/a	V3W1490

The QC reported here applies to the following samples: **Method:** TO-15

V3W1490-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	8.3	83	8.0	80	4	70-130/30
106-99-0	1,3-Butadiene	10	8.5	85	8.6	86	1	70-130/30
71-43-2	Benzene	10	9.5	95	9.5	95	0	70-130/30
75-27-4	Bromodichloromethane	10	11.9	119	11.8	118	1	70-130/30
75-25-2	Bromoform	10	11.1	111	11.1	111	0	70-130/30
74-83-9	Bromomethane	10	9.1	91	9.0	90	1	70-130/30
593-60-2	Bromoethene	10	9.6	96	9.5	95	1	70-130/30
100-44-7	Benzyl Chloride	10	10.2	102	10.1	101	1	70-130/30
75-15-0	Carbon disulfide	10	9.3	93	9.0	90	3	70-130/30
108-90-7	Chlorobenzene	10	9.2	92	9.2	92	0	70-130/30
75-00-3	Chloroethane	10	8.6	86	8.6	86	0	70-130/30
67-66-3	Chloroform	10	10.8	108	10.7	107	1	70-130/30
74-87-3	Chloromethane	10	9.3	93	9.8	98	5	70-130/30
107-05-1	3-Chloropropene	10	9.2	92	9.1	91	1	70-130/30
95-49-8	2-Chlorotoluene	10	9.3	93	9.3	93	0	70-130/30
56-23-5	Carbon tetrachloride	10	11.9	119	11.7	117	2	70-130/30
110-82-7	Cyclohexane	10	9.5	95	9.4	94	1	70-130/30
75-34-3	1,1-Dichloroethane	10	9.8	98	9.6	96	2	70-130/30
75-35-4	1,1-Dichloroethylene	10	9.3	93	9.2	92	1	70-130/30
106-93-4	1,2-Dibromoethane	10	9.6	96	9.7	97	1	70-130/30
107-06-2	1,2-Dichloroethane	10	12.3	123	12.2	122	1	70-130/30
78-87-5	1,2-Dichloropropane	10	9.6	96	9.5	95	1	70-130/30
123-91-1	1,4-Dioxane	10	7.7	77	8.1	81	5	70-130/30
75-71-8	Dichlorodifluoromethane	10	10.7	107	10.9	109	2	70-130/30
124-48-1	Dibromochloromethane	10	11.1	111	11.1	111	0	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	9.7	97	9.5	95	2	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	9.5	95	9.5	95	0	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	10.9	109	10.7	107	2	70-130/30
541-73-1	m-Dichlorobenzene	10	9.8	98	9.9	99	1	70-130/30
95-50-1	o-Dichlorobenzene	10	9.8	98	9.7	97	1	70-130/30
106-46-7	p-Dichlorobenzene	10	9.8	98	9.6	96	2	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	11.4	114	11.2	112	2	70-130/30
64-17-5	Ethanol	10	8.2	82	7.9	79	4	70-130/30
100-41-4	Ethylbenzene	10	9.8	98	9.8	98	0	70-130/30
141-78-6	Ethyl Acetate	10	8.9	89	8.9	89	0	70-130/30
622-96-8	4-Ethyltoluene	10	10.2	102	10.2	102	0	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1490-BS	3W39155.D	1	02/25/14	YMH	n/a	n/a	V3W1490
V3W1490-BSD	3W39156.D	1	02/25/14	YMH	n/a	n/a	V3W1490

The QC reported here applies to the following samples: **Method:** TO-15

V3W1490-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	10.0	100	10.1	101	1	70-130/30
76-14-2	Freon 114	10	9.5	95	9.7	97	2	70-130/30
142-82-5	Heptane	10	9.5	95	9.4	94	1	70-130/30
87-68-3	Hexachlorobutadiene	10	10.9	109	10.4	104	5	70-130/30
110-54-3	Hexane	10	9.3	93	9.2	92	1	70-130/30
591-78-6	2-Hexanone	10	8.4	84	8.5	85	1	70-130/30
67-63-0	Isopropyl Alcohol	10	8.6	86	8.4	84	2	70-130/30
75-09-2	Methylene chloride	10	8.5	85	8.4	84	1	70-130/30
78-93-3	Methyl ethyl ketone	10	8.5	85	8.4	84	1	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	9.7	97	9.5	95	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	9.9	99	9.6	96	3	70-130/30
80-62-6	Methylmethacrylate	10	9.9	99	9.7	97	2	70-130/30
115-07-1	Propylene	10	9.7	97	9.9	99	2	70-130/30
100-42-5	Styrene	10	9.8	98	9.8	98	0	70-130/30
71-55-6	1,1,1-Trichloroethane	10	11.6	116	11.4	114	2	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	9.5	95	9.4	94	1	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.9	99	9.8	98	1	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	9.0	90	8.7	87	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	10.7	107	10.5	105	2	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	10.4	104	10.2	102	2	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	9.3	93	9.3	93	0	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	9.9	99	9.7	97	2	70-130/30
127-18-4	Tetrachloroethylene	10	9.1	91	9.1	91	0	70-130/30
109-99-9	Tetrahydrofuran	10	8.9	89	8.9	89	0	70-130/30
108-88-3	Toluene	10	9.7	97	9.7	97	0	70-130/30
79-01-6	Trichloroethylene	10	9.9	99	9.8	98	1	70-130/30
75-69-4	Trichlorofluoromethane	10	11.6	116	11.5	115	1	70-130/30
75-01-4	Vinyl chloride	10	8.8	88	9.1	91	3	70-130/30
108-05-4	Vinyl Acetate	10	8.9	89	8.8	88	1	70-130/30
	m,p-Xylene	20	18.8	94	18.8	94	0	70-130/30
95-47-6	o-Xylene	10	9.4	94	9.3	93	1	70-130/30
1330-20-7	Xylenes (total)	30	28.3	94	28.2	94	0	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1490-BS	3W39155.D	1	02/25/14	YMH	n/a	n/a	V3W1490
V3W1490-BSD	3W39156.D	1	02/25/14	YMH	n/a	n/a	V3W1490

The QC reported here applies to the following samples: **Method:** TO-15

V3W1490-SCC

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	101%	101%	65-128%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1491-BS	3W39185.D	1	02/26/14	YMH	n/a	n/a	V3W1491
V3W1491-BSD	3W39186.D	1	02/26/14	YMH	n/a	n/a	V3W1491

The QC reported here applies to the following samples: **Method:** TO-15

V3W1491-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	7.7	77	7.9	79	3	70-130/30
106-99-0	1,3-Butadiene	10	8.7	87	8.6	86	1	70-130/30
71-43-2	Benzene	10	9.5	95	9.4	94	1	70-130/30
75-27-4	Bromodichloromethane	10	12.1	121	11.9	119	2	70-130/30
75-25-2	Bromoform	10	11.9	119	11.8	118	1	70-130/30
74-83-9	Bromomethane	10	9.0	90	9.0	90	0	70-130/30
593-60-2	Bromoethene	10	9.6	96	9.6	96	0	70-130/30
100-44-7	Benzyl Chloride	10	10.2	102	10.1	101	1	70-130/30
75-15-0	Carbon disulfide	10	9.2	92	9.1	91	1	70-130/30
108-90-7	Chlorobenzene	10	9.4	94	9.3	93	1	70-130/30
75-00-3	Chloroethane	10	8.5	85	8.5	85	0	70-130/30
67-66-3	Chloroform	10	10.7	107	10.7	107	0	70-130/30
74-87-3	Chloromethane	10	9.9	99	9.7	97	2	70-130/30
107-05-1	3-Chloropropene	10	9.1	91	9.1	91	0	70-130/30
95-49-8	2-Chlorotoluene	10	9.6	96	9.5	95	1	70-130/30
56-23-5	Carbon tetrachloride	10	12.2	122	12.1	121	1	70-130/30
110-82-7	Cyclohexane	10	9.7	97	9.7	97	0	70-130/30
75-34-3	1,1-Dichloroethane	10	9.6	96	9.6	96	0	70-130/30
75-35-4	1,1-Dichloroethylene	10	9.2	92	9.2	92	0	70-130/30
106-93-4	1,2-Dibromoethane	10	9.8	98	9.7	97	1	70-130/30
107-06-2	1,2-Dichloroethane	10	12.4	124	12.2	122	2	70-130/30
78-87-5	1,2-Dichloropropane	10	9.4	94	9.4	94	0	70-130/30
123-91-1	1,4-Dioxane	10	7.9	79	7.9	79	0	70-130/30
75-71-8	Dichlorodifluoromethane	10	11.2	112	11.1	111	1	70-130/30
124-48-1	Dibromochloromethane	10	11.7	117	11.5	115	2	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	9.6	96	9.5	95	1	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	9.4	94	9.4	94	0	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	10.6	106	10.5	105	1	70-130/30
541-73-1	m-Dichlorobenzene	10	10.2	102	10.2	102	0	70-130/30
95-50-1	o-Dichlorobenzene	10	10.2	102	10.1	101	1	70-130/30
106-46-7	p-Dichlorobenzene	10	10.0	100	10.0	100	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	11.1	111	10.9	109	2	70-130/30
64-17-5	Ethanol	10	7.9	79	7.7	77	3	70-130/30
100-41-4	Ethylbenzene	10	10	100	9.9	99	1	70-130/30
141-78-6	Ethyl Acetate	10	8.1	81	8.2	82	1	70-130/30
622-96-8	4-Ethyltoluene	10	10.5	105	10.4	104	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1491-BS	3W39185.D	1	02/26/14	YMH	n/a	n/a	V3W1491
V3W1491-BSD	3W39186.D	1	02/26/14	YMH	n/a	n/a	V3W1491

The QC reported here applies to the following samples: **Method:** TO-15

V3W1491-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	10.4	104	10.3	103	1	70-130/30
76-14-2	Freon 114	10	9.9	99	9.7	97	2	70-130/30
142-82-5	Heptane	10	9.6	96	9.5	95	1	70-130/30
87-68-3	Hexachlorobutadiene	10	11.2	112	11.1	111	1	70-130/30
110-54-3	Hexane	10	9.0	90	9.0	90	0	70-130/30
591-78-6	2-Hexanone	10	8.5	85	8.4	84	1	70-130/30
67-63-0	Isopropyl Alcohol	10	8.5	85	8.4	84	1	70-130/30
75-09-2	Methylene chloride	10	8.5	85	8.5	85	0	70-130/30
78-93-3	Methyl ethyl ketone	10	7.9	79	7.9	79	0	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	9.5	95	9.3	93	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	9.4	94	9.4	94	0	70-130/30
80-62-6	Methylmethacrylate	10	9.6	96	9.5	95	1	70-130/30
115-07-1	Propylene	10	10.1	101	10.0	100	1	70-130/30
100-42-5	Styrene	10	10	100	9.8	98	2	70-130/30
71-55-6	1,1,1-Trichloroethane	10	11.6	116	11.6	116	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	9.5	95	9.6	96	1	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.8	98	9.7	97	1	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	9.2	92	9.0	90	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	10.8	108	10.7	107	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	10.7	107	10.4	104	3	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	9.5	95	9.5	95	0	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	9.8	98	9.7	97	1	70-130/30
127-18-4	Tetrachloroethylene	10	9.8	98	9.7	97	1	70-130/30
109-99-9	Tetrahydrofuran	10	8.4	84	8.4	84	0	70-130/30
108-88-3	Toluene	10	9.8	98	9.6	96	2	70-130/30
79-01-6	Trichloroethylene	10	10	100	9.8	98	2	70-130/30
75-69-4	Trichlorofluoromethane	10	11.8	118	11.6	116	2	70-130/30
75-01-4	Vinyl chloride	10	9.0	90	8.6	86	5	70-130/30
108-05-4	Vinyl Acetate	10	8.5	85	8.1	81	5	70-130/30
	m,p-Xylene	20	19.2	96	19.2	96	0	70-130/30
95-47-6	o-Xylene	10	9.6	96	9.5	95	1	70-130/30
1330-20-7	Xylenes (total)	30	28.8	96	28.7	96	0	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1491-BS	3W39185.D	1	02/26/14	YMH	n/a	n/a	V3W1491
V3W1491-BSD	3W39186.D	1	02/26/14	YMH	n/a	n/a	V3W1491

The QC reported here applies to the following samples: **Method:** TO-15

V3W1491-SCC

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	101%	102%	65-128%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W121-BS	5W3057.D	1	03/05/14	ML	n/a	n/a	V5W121
V5W121-BSD	5W3058.D	1	03/05/14	ML	n/a	n/a	V5W121

The QC reported here applies to the following samples: **Method:** TO-15

V5W121-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	12.1	121	11.5	115	5	70-130/30
106-99-0	1,3-Butadiene	10	12.8	128	12.2	122	5	70-130/30
71-43-2	Benzene	10	11.5	115	11.1	111	4	70-130/30
75-27-4	Bromodichloromethane	10	11.9	119	11.4	114	4	70-130/30
75-25-2	Bromoform	10	11.8	118	11.8	118	0	70-130/30
74-83-9	Bromomethane	10	12.0	120	11.7	117	3	70-130/30
593-60-2	Bromoethene	10	12.1	121	11.9	119	2	70-130/30
100-44-7	Benzyl Chloride	10	13.3	133* [a]	13.0	130	2	70-130/30
75-15-0	Carbon disulfide	10	11.9	119	11.4	114	4	70-130/30
108-90-7	Chlorobenzene	10	11.3	113	11.1	111	2	70-130/30
75-00-3	Chloroethane	10	12.3	123	11.8	118	4	70-130/30
67-66-3	Chloroform	10	11.8	118	11.4	114	3	70-130/30
74-87-3	Chloromethane	10	12.6	126	12.0	120	5	70-130/30
107-05-1	3-Chloropropene	10	12.3	123	11.9	119	3	70-130/30
95-49-8	2-Chlorotoluene	10	11.9	119	11.8	118	1	70-130/30
56-23-5	Carbon tetrachloride	10	11.6	116	11.2	112	4	70-130/30
110-82-7	Cyclohexane	10	12.0	120	11.4	114	5	70-130/30
75-34-3	1,1-Dichloroethane	10	12.1	121	11.5	115	5	70-130/30
75-35-4	1,1-Dichloroethylene	10	12.1	121	11.6	116	4	70-130/30
106-93-4	1,2-Dibromoethane	10	11.8	118	11.4	114	3	70-130/30
107-06-2	1,2-Dichloroethane	10	12.2	122	11.7	117	4	70-130/30
78-87-5	1,2-Dichloropropane	10	12.4	124	11.8	118	5	70-130/30
123-91-1	1,4-Dioxane	10	12.0	120	11.6	116	3	70-130/30
75-71-8	Dichlorodifluoromethane	10	12.3	123	11.8	118	4	70-130/30
124-48-1	Dibromochloromethane	10	11.7	117	11.3	113	3	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	12.0	120	11.5	115	4	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	12.0	120	11.4	114	5	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	12.2	122	11.8	118	3	70-130/30
541-73-1	m-Dichlorobenzene	10	11.8	118	11.7	117	1	70-130/30
95-50-1	o-Dichlorobenzene	10	12.0	120	12.0	120	0	70-130/30
106-46-7	p-Dichlorobenzene	10	11.8	118	11.8	118	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	12.4	124	11.8	118	5	70-130/30
64-17-5	Ethanol	10	12.4	124	11.7	117	6	70-130/30
100-41-4	Ethylbenzene	10	11.6	116	11.6	116	0	70-130/30
141-78-6	Ethyl Acetate	10	12.3	123	11.8	118	4	70-130/30
622-96-8	4-Ethyltoluene	10	12.1	121	12.0	120	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W121-BS	5W3057.D	1	03/05/14	ML	n/a	n/a	V5W121
V5W121-BSD	5W3058.D	1	03/05/14	ML	n/a	n/a	V5W121

The QC reported here applies to the following samples: **Method:** TO-15

V5W121-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	11.5	115	11.1	111	4	70-130/30
76-14-2	Freon 114	10	11.9	119	11.5	115	3	70-130/30
142-82-5	Heptane	10	12.6	126	12.1	121	4	70-130/30
87-68-3	Hexachlorobutadiene	10	13.1	131* [a]	13.2	132* [a]	1	70-130/30
110-54-3	Hexane	10	12.0	120	11.6	116	3	70-130/30
591-78-6	2-Hexanone	10	12.7	127	12.1	121	5	70-130/30
67-63-0	Isopropyl Alcohol	10	11.2	112	10.7	107	5	70-130/30
75-09-2	Methylene chloride	10	10.8	108	10.4	104	4	70-130/30
78-93-3	Methyl ethyl ketone	10	12.1	121	11.8	118	3	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	12.9	129	12.0	120	7	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	11.8	118	11.4	114	3	70-130/30
80-62-6	Methylmethacrylate	10	12.8	128	12.3	123	4	70-130/30
115-07-1	Propylene	10	13.2	132* [a]	12.5	125	5	70-130/30
100-42-5	Styrene	10	11.9	119	11.7	117	2	70-130/30
71-55-6	1,1,1-Trichloroethane	10	11.6	116	11.1	111	4	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	12.4	124	12.1	121	2	70-130/30
79-00-5	1,1,2-Trichloroethane	10	12.1	121	11.7	117	3	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	13.1	131* [a]	13.0	130	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	12.5	125	12.3	123	2	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	12.1	121	11.9	119	2	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	12.1	121	11.6	116	4	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	12.2	122	11.8	118	3	70-130/30
109-99-9	Tetrahydrofuran	10	12.5	125	11.9	119	5	70-130/30
108-88-3	Toluene	10	11.5	115	11.2	112	3	70-130/30
79-01-6	Trichloroethylene	10	11.8	118	11.3	113	4	70-130/30
75-69-4	Trichlorofluoromethane	10	11.7	117	11.3	113	3	70-130/30
75-01-4	Vinyl chloride	10	12.6	126	12.1	121	4	70-130/30
108-05-4	Vinyl Acetate	10	12.7	127	11.9	119	7	70-130/30
	m,p-Xylene	20	23.2	116	22.9	115	1	70-130/30
95-47-6	o-Xylene	10	11.9	119	11.6	116	3	70-130/30
1330-20-7	Xylenes (total)	30	35.2	117	34.5	115	2	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	100%	100%	65-128%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W121-BS	5W3057.D	1	03/05/14	ML	n/a	n/a	V5W121
V5W121-BSD	5W3058.D	1	03/05/14	ML	n/a	n/a	V5W121

The QC reported here applies to the following samples: **Method:** TO-15

V5W121-SCC

(a) High percent recoveries and no associated positive found in the QC batch.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1507-BS	3W39660.D	1	03/17/14	YMH	n/a	n/a	V3W1507
V3W1507-BSD	3W39661.D	1	03/17/14	YMH	n/a	n/a	V3W1507

The QC reported here applies to the following samples: **Method:** TO-15

V3W1507-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	10.0	100	9.7	97	3	70-130/30
106-99-0	1,3-Butadiene	10	9.9	99	9.4	94	5	70-130/30
71-43-2	Benzene	10	9.0	90	8.9	89	1	70-130/30
75-27-4	Bromodichloromethane	10	9.1	91	9.0	90	1	70-130/30
75-25-2	Bromoform	10	10.7	107	10.7	107	0	70-130/30
74-83-9	Bromomethane	10	10.0	100	9.6	96	4	70-130/30
593-60-2	Bromoethene	10	10.1	101	9.8	98	3	70-130/30
100-44-7	Benzyl Chloride	10	10.8	108	10.8	108	0	70-130/30
75-15-0	Carbon disulfide	10	9.7	97	9.3	93	4	70-130/30
108-90-7	Chlorobenzene	10	10.0	100	10.1	101	1	70-130/30
75-00-3	Chloroethane	10	10.1	101	9.7	97	4	70-130/30
67-66-3	Chloroform	10	9.8	98	9.7	97	1	70-130/30
74-87-3	Chloromethane	10	9.4	94	9.1	91	3	70-130/30
107-05-1	3-Chloropropene	10	10.0	100	9.7	97	3	70-130/30
95-49-8	2-Chlorotoluene	10	10.8	108	10.9	109	1	70-130/30
56-23-5	Carbon tetrachloride	10	10.1	101	9.9	99	2	70-130/30
110-82-7	Cyclohexane	10	8.6	86	8.6	86	0	70-130/30
75-34-3	1,1-Dichloroethane	10	9.6	96	9.4	94	2	70-130/30
75-35-4	1,1-Dichloroethylene	10	9.5	95	9.1	91	4	70-130/30
106-93-4	1,2-Dibromoethane	10	10.1	101	10.1	101	0	70-130/30
107-06-2	1,2-Dichloroethane	10	10.6	106	10.1	101	5	70-130/30
78-87-5	1,2-Dichloropropane	10	8.7	87	8.7	87	0	70-130/30
123-91-1	1,4-Dioxane	10	8.3	83	8.5	85	2	70-130/30
75-71-8	Dichlorodifluoromethane	10	9.4	94	9.1	91	3	70-130/30
124-48-1	Dibromochloromethane	10	10.1	101	10.0	100	1	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.1	101	9.8	98	3	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10.0	100	9.7	97	3	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	9.7	97	9.6	96	1	70-130/30
541-73-1	m-Dichlorobenzene	10	11.7	117	11.5	115	2	70-130/30
95-50-1	o-Dichlorobenzene	10	11.1	111	11.1	111	0	70-130/30
106-46-7	p-Dichlorobenzene	10	11.1	111	11.2	112	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	9.7	97	9.8	98	1	70-130/30
64-17-5	Ethanol	10	8.8	88	8.6	86	2	70-130/30
100-41-4	Ethylbenzene	10	10.1	101	10.1	101	0	70-130/30
141-78-6	Ethyl Acetate	10	9.6	96	10.1	101	5	70-130/30
622-96-8	4-Ethyltoluene	10	10.7	107	10.6	106	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1507-BS	3W39660.D	1	03/17/14	YMH	n/a	n/a	V3W1507
V3W1507-BSD	3W39661.D	1	03/17/14	YMH	n/a	n/a	V3W1507

The QC reported here applies to the following samples: **Method:** TO-15

V3W1507-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	9.9	99	9.7	97	2	70-130/30
76-14-2	Freon 114	10	9.4	94	9.1	91	3	70-130/30
142-82-5	Heptane	10	8.1	81	8.0	80	1	70-130/30
87-68-3	Hexachlorobutadiene	10	12.3	123	12.3	123	0	70-130/30
110-54-3	Hexane	10	9.5	95	9.6	96	1	70-130/30
591-78-6	2-Hexanone	10	10.3	103	10.1	101	2	70-130/30
67-63-0	Isopropyl Alcohol	10	9.4	94	9.1	91	3	70-130/30
75-09-2	Methylene chloride	10	8.6	86	8.5	85	1	70-130/30
78-93-3	Methyl ethyl ketone	10	9.8	98	9.7	97	1	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	9.4	94	9.3	93	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	9.8	98	9.7	97	1	70-130/30
80-62-6	Methylmethacrylate	10	8.8	88	8.9	89	1	70-130/30
115-07-1	Propylene	10	9.3	93	9.0	90	3	70-130/30
100-42-5	Styrene	10	11.2	112	11.3	113	1	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.9	99	9.7	97	2	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.5	105	10.5	105	0	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.3	93	9.2	92	1	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	12.1	121	12.6	126	4	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	11.4	114	11.4	114	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	11.0	110	11.2	112	2	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	8.3	83	8.2	82	1	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	10.3	103	10.1	101	2	70-130/30
127-18-4	Tetrachloroethylene	10	9.7	97	9.6	96	1	70-130/30
109-99-9	Tetrahydrofuran	10	10.0	100	10.0	100	0	70-130/30
108-88-3	Toluene	10	9.5	95	9.4	94	1	70-130/30
79-01-6	Trichloroethylene	10	8.9	89	8.7	87	2	70-130/30
75-69-4	Trichlorofluoromethane	10	9.7	97	9.5	95	2	70-130/30
75-01-4	Vinyl chloride	10	9.9	99	9.2	92	7	70-130/30
108-05-4	Vinyl Acetate	10	10.3	103	10.1	101	2	70-130/30
	m,p-Xylene	20	21.3	107	21.4	107	0	70-130/30
95-47-6	o-Xylene	10	10.7	107	10.7	107	0	70-130/30
1330-20-7	Xylenes (total)	30	32.0	107	32.1	107	0	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1507-BS	3W39660.D	1	03/17/14	YMH	n/a	n/a	V3W1507
V3W1507-BSD	3W39661.D	1	03/17/14	YMH	n/a	n/a	V3W1507

The QC reported here applies to the following samples: **Method:** TO-15

V3W1507-SCC

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	98%	98%	65-128%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB62048-1DUP	3W39733.D	1.45	03/19/14	YMH	n/a	n/a	V3W1509
JB62048-1	3W39732.D	1.45	03/19/14	YMH	n/a	n/a	V3W1509

The QC reported here applies to the following samples: **Method:** TO-15

JB61406-1, JB61406-2, JB61406-3, JB61406-4, JB61406-5

CAS No.	Compound	JB62048-1 ppbv	Q	DUP ppbv	Q	RPD	Limits
67-64-1	Acetone	8.9		8.9		0	27
106-99-0	1,3-Butadiene	ND		ND		nc	20
71-43-2	Benzene	0.29		0.31		7	17
75-27-4	Bromodichloromethane	ND		ND		nc	20
75-25-2	Bromoform	ND		ND		nc	20
74-83-9	Bromomethane	ND		ND		nc	20
593-60-2	Bromoethene	ND		ND		nc	30
100-44-7	Benzyl Chloride	ND		ND		nc	20
75-15-0	Carbon disulfide	ND		ND		nc	11
108-90-7	Chlorobenzene	ND		ND		nc	20
75-00-3	Chloroethane	ND		ND		nc	20
67-66-3	Chloroform	0.15	J	0.15	J	0	12
74-87-3	Chloromethane	0.58		0.49		17	22
107-05-1	3-Chloropropene	ND		ND		nc	10
95-49-8	2-Chlorotoluene	ND		ND		nc	20
56-23-5	Carbon tetrachloride	0.10	J	0.098	J	2	10
110-82-7	Cyclohexane	ND		ND		nc	12
75-34-3	1,1-Dichloroethane	ND		ND		nc	20
75-35-4	1,1-Dichloroethylene	ND		ND		nc	20
106-93-4	1,2-Dibromoethane	ND		ND		nc	20
107-06-2	1,2-Dichloroethane	ND		ND		nc	20
78-87-5	1,2-Dichloropropane	ND		ND		nc	20
123-91-1	1,4-Dioxane	ND		ND		nc	20
75-71-8	Dichlorodifluoromethane	0.58		0.53		9	22
124-48-1	Dibromochloromethane	ND		ND		nc	20
156-60-5	trans-1,2-Dichloroethylene	ND		ND		nc	10
156-59-2	cis-1,2-Dichloroethylene	ND		ND		nc	10
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	20
541-73-1	m-Dichlorobenzene	ND		ND		nc	20
95-50-1	o-Dichlorobenzene	ND		ND		nc	10
106-46-7	p-Dichlorobenzene	1.6		1.7		6	20
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	20
64-17-5	Ethanol	8.5		9.3		9	33
100-41-4	Ethylbenzene	0.19	J	0.18	J	5	15
141-78-6	Ethyl Acetate	2.5		2.5		0	20
622-96-8	4-Ethyltoluene	ND		ND		nc	13

* = Outside of Control Limits.

Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB62048-1DUP	3W39733.D	1.45	03/19/14	YMH	n/a	n/a	V3W1509
JB62048-1	3W39732.D	1.45	03/19/14	YMH	n/a	n/a	V3W1509

The QC reported here applies to the following samples: **Method:** TO-15

JB61406-1, JB61406-2, JB61406-3, JB61406-4, JB61406-5

CAS No.	Compound	JB62048-1 ppbv	Q	DUP ppbv	Q	RPD	Limits
76-13-1	Freon 113	0.27		0.28		4	10
76-14-2	Freon 114	ND		ND		nc	20
142-82-5	Heptane	0.22		0.22		0	20
87-68-3	Hexachlorobutadiene	ND		ND		nc	20
110-54-3	Hexane	0.64		0.65		2	17
591-78-6	2-Hexanone	ND		ND		nc	20
67-63-0	Isopropyl Alcohol	1.5		1.7		13	26
75-09-2	Methylene chloride	4.7		4.8		2	26
78-93-3	Methyl ethyl ketone	1.9		1.9		0	21
108-10-1	Methyl Isobutyl Ketone	ND		ND		nc	20
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	20
80-62-6	Methylmethacrylate	ND		ND		nc	20
115-07-1	Propylene	ND		ND		nc	16
100-42-5	Styrene	ND		ND		nc	11
71-55-6	1,1,1-Trichloroethane	0.54		0.54		0	20
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	20
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	20
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	20
95-63-6	1,2,4-Trimethylbenzene	0.25		0.25		0	19
108-67-8	1,3,5-Trimethylbenzene	ND		ND		nc	13
540-84-1	2,2,4-Trimethylpentane	0.38		0.39		3	18
75-65-0	Tertiary Butyl Alcohol	ND		ND		nc	21
109-99-9	Tetrahydrofuran	7.0		7.2		3	20
108-88-3	Toluene	1.6		1.7		6	20
79-01-6	Trichloroethylene	ND		ND		nc	13
75-69-4	Trichlorofluoromethane	0.27		0.25		8	21
75-01-4	Vinyl chloride	ND		ND		nc	20
108-05-4	Vinyl Acetate	ND		ND		nc	20
	m,p-Xylene	0.71		0.72		1	26
95-47-6	o-Xylene	0.24		0.25		4	20
1330-20-7	Xylenes (total)	0.95		0.97		2	26

CAS No.	Surrogate Recoveries	DUP	JB62048-1	Limits
460-00-4	4-Bromofluorobenzene	89%	86%	65-128%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JB61340-4RDUP	3W39763.D	1	03/20/14	YMH	n/a	n/a	V3W1510
JB61340-4R	3W39762.D	1	03/20/14	YMH	n/a	n/a	V3W1510

The QC reported here applies to the following samples: **Method:** TO-15

JB61406-1, JB61406-2, JB61406-3, JB61406-4, JB61406-5

CAS No.	Compound	JB61340-4R ppbv	Q	DUP ppbv	Q	RPD	Limits
67-63-0	Isopropyl Alcohol	12.3		11.8		4	26
127-18-4	Tetrachloroethylene	12.8		12.2		5	17

CAS No.	Surrogate Recoveries	DUP	JB61340-4R	Limits
460-00-4	4-Bromofluorobenzene	85%	85%	65-128%

* = Outside of Control Limits.

Summa Cleaning Certification

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW1835-SCC	W46020.D	1	02/21/14	DFT	n/a	n/a	VW1835

The QC reported here (Summa A438) applies to the following samples: **Method:** TO-15

Batch CP6805 cleaned 02/19/14: JB61406-2(A588), JB61406-4(A513)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	0.034	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.020	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.021	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.025	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.022	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.017	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.014	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.025	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.017	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.025	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.020	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.019	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.034	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.028	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.020	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.011	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.058	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.021	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.040	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.060	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.015	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.029	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.015	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.028	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.019	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.025	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.021	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.19	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.020	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.057	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3

Summa Cleaning Certification

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW1835-SCC	W46020.D	1	02/21/14	DFT	n/a	n/a	VW1835

The QC reported here (Summa A438) applies to the following samples: **Method:** TO-15

Batch CP6805 cleaned 02/19/14: JB61406-2(A588), JB61406-4(A513)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	0.021	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.021	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.020	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.063	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.016	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.025	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.039	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.047	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.058	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.029	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.017	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.040	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	0.031	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.020	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.016	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.030	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.031	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.079	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.017	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.021	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.044	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.029	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.045	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.020	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.014	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.017	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.058	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.032	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.019	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.019	ppbv		ND	0.87	ug/m3

Summa Cleaning Certification

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW1835-SCC	W46020.D	1	02/21/14	DFT	n/a	n/a	VW1835

The QC reported here (Summa A438) applies to the following samples: **Method:** TO-15

Batch CP6805 cleaned 02/19/14: JB61406-2(A588), JB61406-4(A513)

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	93%	65-128%

Summa Cleaning Certification

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1490-SCC	3W39159.D	1	02/25/14	YMH	n/a	n/a	V3W1490

The QC reported here (Summa A788) applies to the following samples: **Method:** TO-15

Batch CP6802 cleaned 02/19/14: JB61406-1(A793), JB61406-3(A607), JB61406-5(A1118)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	0.034	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.020	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.021	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.025	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.022	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.017	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.014	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.025	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.017	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.025	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.020	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.019	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.034	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.028	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.020	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.011	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.058	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.021	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.040	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.060	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.015	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.029	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.015	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.028	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.019	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.025	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.021	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.19	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.020	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.057	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3

Summa Cleaning Certification

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1490-SCC	3W39159.D	1	02/25/14	YMH	n/a	n/a	V3W1490

The QC reported here (Summa A788) applies to the following samples: **Method:** TO-15

Batch CP6802 cleaned 02/19/14: JB61406-1(A793), JB61406-3(A607), JB61406-5(A1118)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	0.021	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.021	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.020	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.063	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.016	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.025	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.039	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.047	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.058	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.029	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.017	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.040	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	0.031	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.020	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.016	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.030	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.031	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.079	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.017	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.021	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.044	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.029	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.045	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.020	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.014	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.017	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.058	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.032	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.019	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.019	ppbv		ND	0.87	ug/m3

Summa Cleaning Certification

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1490-SCC	3W39159.D	1	02/25/14	YMH	n/a	n/a	V3W1490

The QC reported here (Summa A788) applies to the following samples: **Method:** TO-15

Batch CP6802 cleaned 02/19/14: JB61406-1(A793), JB61406-3(A607), JB61406-5(A1118)

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	87%	65-128%

Summa Cleaning Certification

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1491-SCC	3W39206.D	1	02/27/14	YMH	n/a	n/a	V3W1491

The QC reported here (Summa A908) applies to the following samples: **Method:** TO-15

Batch CP6822 cleaned 02/21/14: JB61406-4(A934)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	0.034	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.020	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.021	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.025	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.022	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.017	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.014	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.025	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.017	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.025	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.020	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.019	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.034	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.028	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.020	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.011	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.058	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.021	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.040	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.060	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.015	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.029	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.015	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.028	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.019	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.025	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.021	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.19	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.020	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.057	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3

Summa Cleaning Certification

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1491-SCC	3W39206.D	1	02/27/14	YMH	n/a	n/a	V3W1491

The QC reported here (Summa A908) applies to the following samples: **Method:** TO-15

Batch CP6822 cleaned 02/21/14: JB61406-4(A934)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	0.021	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.021	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.020	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.063	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.016	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.025	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.039	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.047	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.058	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.029	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.017	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.040	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	0.031	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.020	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.016	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.030	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.031	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.079	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.017	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.021	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.044	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.029	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.045	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.020	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.014	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.017	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.058	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.032	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.019	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.019	ppbv		ND	0.87	ug/m3

Summa Cleaning Certification

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1491-SCC	3W39206.D	1	02/27/14	YMH	n/a	n/a	V3W1491

The QC reported here (Summa A908) applies to the following samples: **Method:** TO-15

Batch CP6822 cleaned 02/21/14: JB61406-4(A934)

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	88%	65-128%

Summa Cleaning Certification

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W121-SCC	5W3076.D	1	03/06/14	ML	n/a	n/a	V5W121

The QC reported here (Summa A806) applies to the following samples: **Method:** TO-15

Batch CP6852 cleaned 03/02/14: JB61406-1(A806)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	0.034	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.020	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.021	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.025	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.022	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.017	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.014	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.025	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.017	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.025	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.020	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.019	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.034	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.028	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.020	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.011	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.058	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.021	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.040	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.060	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.015	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.029	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.015	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.028	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.019	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.025	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.021	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.19	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.020	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.057	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3

Summa Cleaning Certification

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W121-SCC	5W3076.D	1	03/06/14	ML	n/a	n/a	V5W121

The QC reported here (Summa A806) applies to the following samples: **Method:** TO-15

Batch CP6852 cleaned 03/02/14: JB61406-1(A806)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	0.021	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.021	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.020	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.063	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.016	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.025	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.039	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.047	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.058	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.029	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.017	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.040	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	0.031	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.020	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.016	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.030	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.031	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.079	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.017	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.021	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.044	ppbv		ND	0.61	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.045	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.020	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.014	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.017	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.058	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.032	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.019	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.019	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	93%	65-128%

Summa Cleaning Certification

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1507-SCC	3W39665.D	1	03/17/14	YMH	n/a	n/a	V3W1507

The QC reported here (Summa A414) applies to the following samples: **Method:** TO-15

Batch CP6871 cleaned 03/11/14: JB61406-5(A414)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	0.034	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.020	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.021	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.025	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.022	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.017	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.014	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.025	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.017	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.025	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.020	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.019	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.034	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.028	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.020	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.011	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.058	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.021	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.040	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.060	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.015	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.029	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.015	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.028	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.019	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.025	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.021	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.19	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.020	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.057	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3

Summa Cleaning Certification

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1507-SCC	3W39665.D	1	03/17/14	YMH	n/a	n/a	V3W1507

The QC reported here (Summa A414) applies to the following samples: **Method:** TO-15

Batch CP6871 cleaned 03/11/14: JB61406-5(A414)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	0.021	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.021	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.020	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.063	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.016	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.025	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.039	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.047	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.058	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.029	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.017	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.040	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	0.031	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.020	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.016	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.030	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.031	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.079	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.017	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.015	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.021	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.044	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.029	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.045	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.020	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.014	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.017	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.058	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.032	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.019	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.019	ppbv		ND	0.87	ug/m3

Summa Cleaning Certification

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3W1507-SCC	3W39665.D	1	03/17/14	YMH	n/a	n/a	V3W1507

The QC reported here (Summa A414) applies to the following samples: **Method:** TO-15

Batch CP6871 cleaned 03/11/14: JB61406-5(A414)

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	80%	65-128%

Instrument Performance Check (BFB)

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample: V3W1462-BFB
Lab File ID: 3W38286.D
Instrument ID: GCMS3W
Injection Date: 01/15/14
Injection Time: 19:08

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	27701	17.6		Pass
75	30.0 - 66.0% of mass 95	69674	44.3		Pass
95	Base peak, 100% relative abundance	157248	100.0		Pass
96	5.0 - 9.0% of mass 95	10911	6.94		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	134797	85.7		Pass
175	4.0 - 9.01% of mass 174	9738	6.19	(7.22) [a]	Pass
176	93.0 - 101.0% of mass 174	133541	84.9	(99.1) [a]	Pass
177	5.0 - 9.0% of mass 176	8721	5.55	(6.53) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W1462-IC1462	3W38287.D	01/15/14	19:47	00:39	Initial cal 0.5
V3W1462-IC1462	3W38288.D	01/15/14	20:27	01:19	Initial cal 0.2
V3W1462-IC1462	3W38289.D	01/15/14	21:07	01:59	Initial cal 20
V3W1462-IC1462	3W38290.D	01/15/14	21:48	02:40	Initial cal 15
V3W1462-ICC1462	3W38291.D	01/15/14	22:28	03:20	Initial cal 10
V3W1462-IC1462	3W38292.D	01/15/14	23:08	04:00	Initial cal 5
V3W1462-IC1462	3W38294.D	01/16/14	00:28	05:20	Initial cal 0.1
V3W1462-IC1462	3W38295.D	01/16/14	01:08	06:00	Initial cal 0.04
V3W1462-IC1462	3W38296.D	01/16/14	01:49	06:41	Initial cal 30
V3W1462-IC1462	3W38299.D	01/16/14	03:51	08:43	Initial cal 40
V3W1462-ICV1462	3W38302.D	01/16/14	09:41	14:33	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample: V3W1490-BFB
Lab File ID: 3W39152.D
Instrument ID: GCMS3W
Injection Date: 02/25/14
Injection Time: 09:30

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	37688	22.6		Pass
75	30.0 - 66.0% of mass 95	88760	53.2		Pass
95	Base peak, 100% relative abundance	166698	100.0		Pass
96	5.0 - 9.0% of mass 95	11147	6.69		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	134050	80.4		Pass
175	4.0 - 9.01% of mass 174	9829	5.90	(7.33) [a]	Pass
176	93.0 - 101.0% of mass 174	131506	78.9	(98.1) [a]	Pass
177	5.0 - 9.0% of mass 176	8745	5.25	(6.65) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W1490-CC1462	3W39154.D	02/25/14	11:06	01:36	Continuing cal 10
V3W1490-BS	3W39155.D	02/25/14	11:48	02:18	Blank Spike
V3W1490-BSD	3W39156.D	02/25/14	12:59	03:29	Blank Spike Duplicate
V3W1490-MB	3W39158.D	02/25/14	14:27	04:57	Method Blank
V3W1490-SCC	3W39159.D	02/25/14	15:07	05:37	Summa Cleaning Certification
ZZZZZZ	3W39160.D	02/25/14	15:45	06:15	(unrelated sample)
ZZZZZZ	3W39161.D	02/25/14	16:23	06:53	(unrelated sample)
ZZZZZZ	3W39162.D	02/25/14	17:01	07:31	(unrelated sample)
ZZZZZZ	3W39163.D	02/25/14	17:41	08:11	(unrelated sample)
V3W1490-SCC	3W39164.D	02/25/14	18:22	08:52	Summa Cleaning Certification
ZZZZZZ	3W39165.D	02/25/14	19:00	09:30	(unrelated sample)
JB60175-5	3W39166.D	02/25/14	19:40	10:10	(used for QC only; not part of job JB61406)
JB60175-5DUP	3W39167.D	02/25/14	20:20	10:50	Duplicate
ZZZZZZ	3W39168.D	02/25/14	21:00	11:30	(unrelated sample)
ZZZZZZ	3W39169.D	02/25/14	21:39	12:09	(unrelated sample)
ZZZZZZ	3W39170.D	02/25/14	22:19	12:49	(unrelated sample)
ZZZZZZ	3W39171.D	02/25/14	22:58	13:28	(unrelated sample)
ZZZZZZ	3W39172.D	02/25/14	23:38	14:08	(unrelated sample)
ZZZZZZ	3W39173.D	02/26/14	00:18	14:48	(unrelated sample)
ZZZZZZ	3W39174.D	02/26/14	00:58	15:28	(unrelated sample)
ZZZZZZ	3W39175.D	02/26/14	01:39	16:09	(unrelated sample)
V3W1490-SCC	3W39176.D	02/26/14	02:21	16:51	Summa Cleaning Certification
ZZZZZZ	3W39177.D	02/26/14	03:03	17:33	(unrelated sample)
ZZZZZZ	3W39178.D	02/26/14	03:46	18:16	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample:	V3W1490-BFB	**Injection Date:**	02/25/14
Lab File ID:	3W39152.D	**Injection Time:**	09:30
Instrument ID:	GCMS3W		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	3W39179.D	02/26/14	04:28	18:58	(unrelated sample)
ZZZZZZ	3W39180.D	02/26/14	05:10	19:40	(unrelated sample)
ZZZZZZ	3W39181.D	02/26/14	05:53	20:23	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample: V3W1491-BFB
Lab File ID: 3W39182.D
Instrument ID: GCMS3W
Injection Date: 02/26/14
Injection Time: 08:40

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	33258	24.9		Pass
75	30.0 - 66.0% of mass 95	75069	56.2		Pass
95	Base peak, 100% relative abundance	133592	100.0		Pass
96	5.0 - 9.0% of mass 95	8879	6.65		Pass
173	Less than 2.0% of mass 174	220	0.16	(0.21) [a]	Pass
174	50.0 - 120.0% of mass 95	106776	79.9		Pass
175	4.0 - 9.01% of mass 174	7790	5.83	(7.30) [a]	Pass
176	93.0 - 101.0% of mass 174	104781	78.4	(98.1) [a]	Pass
177	5.0 - 9.0% of mass 176	6922	5.18	(6.61) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W1491-CC1462	3W39184.D	02/26/14	10:59	02:19	Continuing cal 10
V3W1491-BS	3W39185.D	02/26/14	12:22	03:42	Blank Spike
V3W1491-BSD	3W39186.D	02/26/14	13:02	04:22	Blank Spike Duplicate
V3W1491-MB	3W39188.D	02/26/14	15:00	06:20	Method Blank
V3W1491-SCC	3W39189.D	02/26/14	15:41	07:01	Summa Cleaning Certification
ZZZZZZ	3W39190.D	02/26/14	16:20	07:40	(unrelated sample)
ZZZZZZ	3W39191.D	02/26/14	17:00	08:20	(unrelated sample)
ZZZZZZ	3W39192.D	02/26/14	17:41	09:01	(unrelated sample)
ZZZZZZ	3W39193.D	02/26/14	18:20	09:40	(unrelated sample)
ZZZZZZ	3W39194.D	02/26/14	19:00	10:20	(unrelated sample)
JB60432-5	3W39196.D	02/26/14	20:23	11:43	(used for QC only; not part of job JB61406)
JB60432-5DUP	3W39197.D	02/26/14	21:04	12:24	Duplicate
ZZZZZZ	3W39198.D	02/26/14	21:46	13:06	(unrelated sample)
ZZZZZZ	3W39199.D	02/26/14	22:27	13:47	(unrelated sample)
ZZZZZZ	3W39200.D	02/26/14	23:10	14:30	(unrelated sample)
ZZZZZZ	3W39201.D	02/26/14	23:52	15:12	(unrelated sample)
ZZZZZZ	3W39202.D	02/27/14	00:35	15:55	(unrelated sample)
ZZZZZZ	3W39203.D	02/27/14	01:16	16:36	(unrelated sample)
ZZZZZZ	3W39204.D	02/27/14	01:57	17:17	(unrelated sample)
ZZZZZZ	3W39205.D	02/27/14	02:39	17:59	(unrelated sample)
V3W1491-SCC	3W39206.D	02/27/14	03:20	18:40	Summa Cleaning Certification
ZZZZZZ	3W39207.D	02/27/14	04:01	19:21	(unrelated sample)
ZZZZZZ	3W39209.D	02/27/14	05:18	20:38	(unrelated sample)
ZZZZZZ	3W39210.D	02/27/14	05:58	21:18	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample: V3W1497-BFB
Lab File ID: 3W39380.D
Instrument ID: GCMS3W
Injection Date: 03/07/14
Injection Time: 12:46

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	12022	19.2		Pass
75	30.0 - 66.0% of mass 95	29709	47.5		Pass
95	Base peak, 100% relative abundance	62565	100.0		Pass
96	5.0 - 9.0% of mass 95	4172	6.67		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	62448	99.8		Pass
175	4.0 - 9.01% of mass 174	5034	8.05	(8.06) [a]	Pass
176	93.0 - 101.0% of mass 174	60301	96.4	(96.6) [a]	Pass
177	5.0 - 9.0% of mass 176	4157	6.64	(6.89) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W1497-IC1497	3W39381.D	03/07/14	13:25	00:39	Initial cal 15
V3W1497-ICC1497	3W39382.D	03/07/14	14:04	01:18	Initial cal 10
V3W1497-IC1497	3W39383.D	03/07/14	14:43	01:57	Initial cal 0.5
V3W1497-IC1497	3W39384.D	03/07/14	15:22	02:36	Initial cal 0.2
V3W1497-IC1497	3W39385.D	03/07/14	16:01	03:15	Initial cal 5
V3W1497-IC1497	3W39386.D	03/07/14	16:40	03:54	Initial cal 0.1
V3W1497-IC1497	3W39387.D	03/07/14	17:18	04:32	Initial cal 0.04
V3W1497-IC1497	3W39388.D	03/07/14	18:47	06:01	Initial cal 20
V3W1497-IC1497	3W39390.D	03/07/14	20:06	07:20	Initial cal 30
V3W1497-IC1497	3W39392.D	03/07/14	21:26	08:40	Initial cal 40
V3W1497-ICV1497	3W39395.D	03/07/14	23:23	10:37	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample: V3W1507-BFB
Lab File ID: 3W39658.D
Instrument ID: GCMS3W
Injection Date: 03/17/14
Injection Time: 08:44

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	12165	17.6		Pass
75	30.0 - 66.0% of mass 95	32384	47.0		Pass
95	Base peak, 100% relative abundance	68952	100.0		Pass
96	5.0 - 9.0% of mass 95	4514	6.55		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	70424	102.1		Pass
175	4.0 - 9.01% of mass 174	5381	7.80	(7.64) [a]	Pass
176	93.0 - 101.0% of mass 174	68789	99.8	(97.7) [a]	Pass
177	5.0 - 9.0% of mass 176	4682	6.79	(6.81) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W1507-CC1497	3W39659.D	03/17/14	09:24	00:40	Continuing cal 10
V3W1507-BS	3W39660.D	03/17/14	10:17	01:33	Blank Spike
V3W1507-BSD	3W39661.D	03/17/14	10:56	02:12	Blank Spike Duplicate
V3W1507-MB	3W39663.D	03/17/14	12:20	03:36	Method Blank
ZZZZZZ	3W39664.D	03/17/14	13:01	04:17	(unrelated sample)
V3W1507-SCC	3W39665.D	03/17/14	13:42	04:58	Summa Cleaning Certification
ZZZZZZ	3W39666.D	03/17/14	14:20	05:36	(unrelated sample)
ZZZZZZ	3W39667.D	03/17/14	14:59	06:15	(unrelated sample)
ZZZZZZ	3W39668.D	03/17/14	15:48	07:04	(unrelated sample)
ZZZZZZ	3W39669.D	03/17/14	16:27	07:43	(unrelated sample)
V3W1507-SCC	3W39670.D	03/17/14	17:07	08:23	Summa Cleaning Certification
JB61101-1	3W39671.D	03/17/14	17:46	09:02	(used for QC only; not part of job JB61406)

Instrument Performance Check (BFB)

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample:	V3W1509-BFB	**Injection Date:**	03/19/14
Lab File ID:	3W39718.D	**Injection Time:**	08:59
Instrument ID:	GCMS3W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	9206	18.6		Pass
75	30.0 - 66.0% of mass 95	23018	46.4		Pass
95	Base peak, 100% relative abundance	49624	100.0		Pass
96	5.0 - 9.0% of mass 95	3301	6.65		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	50949	102.7		Pass
175	4.0 - 9.01% of mass 174	4369	8.80	(8.58) [a]	Pass
176	93.0 - 101.0% of mass 174	50962	102.7	(100.0) [a]	Pass
177	5.0 - 9.0% of mass 176	3359	6.77	(6.59) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W1509-CC1497	3W39719.D	03/19/14	11:00	02:01	Continuing cal 10
V3W1509-BS	3W39720.D	03/19/14	11:41	02:42	Blank Spike
V3W1509-BSD	3W39721.D	03/19/14	12:27	03:28	Blank Spike Duplicate
V3W1509-MB	3W39723.D	03/19/14	14:58	05:59	Method Blank
V3W1509-SCC	3W39724.D	03/19/14	15:39	06:40	Summa Cleaning Certification
ZZZZZZ	3W39725.D	03/19/14	16:18	07:19	(unrelated sample)
ZZZZZZ	3W39726.D	03/19/14	16:56	07:57	(unrelated sample)
ZZZZZZ	3W39727.D	03/19/14	17:34	08:35	(unrelated sample)
ZZZZZZ	3W39728.D	03/19/14	18:14	09:15	(unrelated sample)
ZZZZZZ	3W39729.D	03/19/14	18:56	09:57	(unrelated sample)
ZZZZZZ	3W39730.D	03/19/14	19:37	10:38	(unrelated sample)
V3W1509-SCC	3W39731.D	03/19/14	20:18	11:19	Summa Cleaning Certification
JB62048-1	3W39732.D	03/19/14	20:59	12:00	(used for QC only; not part of job JB61406)
JB62048-1DUP	3W39733.D	03/19/14	21:41	12:42	Duplicate
ZZZZZZ	3W39734.D	03/19/14	22:22	13:23	(unrelated sample)
ZZZZZZ	3W39735.D	03/19/14	23:00	14:01	(unrelated sample)
ZZZZZZ	3W39736.D	03/19/14	23:41	14:42	(unrelated sample)
ZZZZZZ	3W39737.D	03/20/14	00:21	15:22	(unrelated sample)
ZZZZZZ	3W39738.D	03/20/14	01:00	16:01	(unrelated sample)
ZZZZZZ	3W39739.D	03/20/14	01:42	16:43	(unrelated sample)
JB61406-1	3W39740.D	03/20/14	02:21	17:22	SSV-1
JB61406-2	3W39742.D	03/20/14	03:43	18:44	SSV-4
JB61406-3	3W39743.D	03/20/14	04:22	19:23	SSV-4-A
JB61406-4	3W39744.D	03/20/14	05:01	20:02	SSV-2

Instrument Performance Check (BFB)

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample:	V3W1509-BFB	**Injection Date:**	03/19/14
Lab File ID:	3W39718.D	**Injection Time:**	08:59
Instrument ID:	GCMS3W		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
JB61406-5	3W39745.D	03/20/14	05:40	20:41	SSV-3

Instrument Performance Check (BFB)

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample: V3W1510-BFB
Lab File ID: 3W39746.D
Instrument ID: GCMS3W
Injection Date: 03/20/14
Injection Time: 08:58

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	10279	19.0		Pass
75	30.0 - 66.0% of mass 95	25602	47.3		Pass
95	Base peak, 100% relative abundance	54133	100.0		Pass
96	5.0 - 9.0% of mass 95	3670	6.78		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	54245	100.2		Pass
175	4.0 - 9.01% of mass 174	4362	8.06	(8.04) [a]	Pass
176	93.0 - 101.0% of mass 174	53272	98.4	(98.2) [a]	Pass
177	5.0 - 9.0% of mass 176	3698	6.83	(6.94) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3W1510-CC1497	3W39747.D	03/20/14	09:37	00:39	Continuing cal 10
V3W1510-BS	3W39748.D	03/20/14	10:20	01:22	Blank Spike
V3W1510-BSD	3W39749.D	03/20/14	10:59	02:01	Blank Spike Duplicate
V3W1510-MB	3W39751.D	03/20/14	12:28	03:30	Method Blank
V3W1510-SCC	3W39752.D	03/20/14	13:09	04:11	Summa Cleaning Certification
ZZZZZZ	3W39753.D	03/20/14	14:16	05:18	(unrelated sample)
ZZZZZZ	3W39754.D	03/20/14	14:57	05:59	(unrelated sample)
ZZZZZZ	3W39755.D	03/20/14	15:37	06:39	(unrelated sample)
ZZZZZZ	3W39756.D	03/20/14	16:18	07:20	(unrelated sample)
ZZZZZZ	3W39757.D	03/20/14	16:58	08:00	(unrelated sample)
V3W1510-SCC	3W39758.D	03/20/14	17:40	08:42	Summa Cleaning Certification
ZZZZZZ	3W39759.D	03/20/14	18:19	09:21	(unrelated sample)
ZZZZZZ	3W39760.D	03/20/14	18:58	10:00	(unrelated sample)
ZZZZZZ	3W39761.D	03/20/14	19:38	10:40	(unrelated sample)
JB61340-4R	3W39762.D	03/20/14	20:19	11:21	(used for QC only; not part of job JB61406)
JB61340-4RDUP	3W39763.D	03/20/14	20:59	12:01	Duplicate
ZZZZZZ	3W39764.D	03/20/14	21:40	12:42	(unrelated sample)
ZZZZZZ	3W39765.D	03/20/14	22:18	13:20	(unrelated sample)
JB61406-1	3W39766.D	03/20/14	22:56	13:58	SSV-1
JB61406-2	3W39767.D	03/20/14	23:34	14:36	SSV-4
JB61406-3	3W39768.D	03/21/14	00:12	15:14	SSV-4-A
V3W1510-SCC	3W39769.D	03/21/14	00:52	15:54	Summa Cleaning Certification
JB61406-4	3W39770.D	03/21/14	01:30	16:32	SSV-2
JB61406-5	3W39771.D	03/21/14	02:08	17:10	SSV-3

Instrument Performance Check (BFB)

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample:	V3W1510-BFB	**Injection Date:**	03/20/14
Lab File ID:	3W39746.D	**Injection Time:**	08:58
Instrument ID:	GCMS3W		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	3W39772.D	03/21/14	02:47	17:49	(unrelated sample)
ZZZZZZ	3W39773.D	03/21/14	03:26	18:28	(unrelated sample)
ZZZZZZ	3W39774.D	03/21/14	04:04	19:06	(unrelated sample)
ZZZZZZ	3W39775.D	03/21/14	04:42	19:44	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample: V5W100-BFB
Lab File ID: 5W2504.D
Instrument ID: GCMS5W
Injection Date: 01/29/14
Injection Time: 15:35

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	19323	16.2		Pass
75	30.0 - 66.0% of mass 95	52936	44.5		Pass
95	Base peak, 100% relative abundance	119027	100.0		Pass
96	5.0 - 9.0% of mass 95	7861	6.60		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	96709	81.2		Pass
175	4.0 - 9.0% of mass 174	7123	5.98	(7.37) [a]	Pass
176	93.0 - 101.0% of mass 174	93965	78.9	(97.2) [a]	Pass
177	5.0 - 9.0% of mass 176	6190	5.20	(6.59) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V5W100-IC100	5W2506.D	01/29/14	17:08	01:33	Initial cal 0.2
V5W100-IC100	5W2507.D	01/29/14	17:53	02:18	Initial cal 0.5
V5W100-IC100	5W2508.D	01/29/14	18:37	03:02	Initial cal 15
V5W100-ICC100	5W2509.D	01/29/14	19:21	03:46	Initial cal 10
V5W100-IC100	5W2510.D	01/29/14	20:06	04:31	Initial cal 5
V5W100-IC100	5W2512.D	01/29/14	21:35	06:00	Initial cal 0.1
V5W100-IC100	5W2513.D	01/29/14	22:18	06:43	Initial cal 0.04
V5W100-IC100	5W2514.D	01/29/14	23:05	07:30	Initial cal 30
V5W100-IC100	5W2516.D	01/30/14	00:33	08:58	Initial cal 20
V5W100-IC100	5W2517.D	01/30/14	01:21	09:46	Initial cal 40
V5W100-ICV100	5W2520.D	01/30/14	03:32	11:57	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample: V5W121-BFB
Lab File ID: 5W3055.D
Instrument ID: GCMS5W
Injection Date: 03/05/14
Injection Time: 10:53

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	17173	18.4		Pass
75	30.0 - 66.0% of mass 95	43925	47.1		Pass
95	Base peak, 100% relative abundance	93181	100.0		Pass
96	5.0 - 9.0% of mass 95	6108	6.55		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	73834	79.2		Pass
175	4.0 - 9.01% of mass 174	5542	5.95	(7.51) [a]	Pass
176	93.0 - 101.0% of mass 174	71504	76.7	(96.8) [a]	Pass
177	5.0 - 9.0% of mass 176	4725	5.07	(6.61) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V5W121-CC100	5W3056.D	03/05/14	11:37	00:44	Continuing cal 10
V5W121-BS	5W3057.D	03/05/14	12:27	01:34	Blank Spike
V5W121-BSD	5W3058.D	03/05/14	13:12	02:19	Blank Spike Duplicate
V5W121-MB	5W3062.D	03/05/14	16:37	05:44	Method Blank
V5W121-SCC	5W3063.D	03/05/14	17:26	06:33	Summa Cleaning Certification
ZZZZZZ	5W3064.D	03/05/14	18:12	07:19	(unrelated sample)
JB60620-2R	5W3066.D	03/05/14	19:44	08:51	(used for QC only; not part of job JB61406)
JB60620-2RDUP	5W3067.D	03/05/14	20:32	09:39	Duplicate
ZZZZZZ	5W3068.D	03/05/14	21:16	10:23	(unrelated sample)
ZZZZZZ	5W3071.D	03/05/14	23:39	12:46	(unrelated sample)
ZZZZZZ	5W3072.D	03/06/14	00:28	13:35	(unrelated sample)
ZZZZZZ	5W3073.D	03/06/14	01:16	14:23	(unrelated sample)
ZZZZZZ	5W3074.D	03/06/14	02:05	15:12	(unrelated sample)
ZZZZZZ	5W3075.D	03/06/14	02:53	16:00	(unrelated sample)
V5W121-SCC	5W3076.D	03/06/14	03:41	16:48	Summa Cleaning Certification
ZZZZZZ	5W3077.D	03/06/14	04:29	17:36	(unrelated sample)
V5W121-SCC	5W3079.D	03/06/14	06:04	19:11	Summa Cleaning Certification
V5W121-SCC	5W3080.D	03/06/14	06:50	19:57	Summa Cleaning Certification

Instrument Performance Check (BFB)

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample: VW1834-BFB
Lab File ID: W45990.D
Instrument ID: GCMSW
Injection Date: 02/20/14
Injection Time: 16:43

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	13890	15.0		Pass
75	30.0 - 66.0% of mass 95	40145	43.4		Pass
95	Base peak, 100% relative abundance	92477	100.0		Pass
96	5.0 - 9.0% of mass 95	5610	6.07		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	88170	95.3		Pass
175	4.0 - 9.01% of mass 174	6925	7.49	(7.85) [a]	Pass
176	93.0 - 101.0% of mass 174	84837	91.7	(96.2) [a]	Pass
177	5.0 - 9.0% of mass 176	5333	5.77	(6.29) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VW1834-IC1834	W45991.D	02/20/14	18:45	02:02	Initial cal 0.04
VW1834-IC1834	W45992.D	02/20/14	19:25	02:42	Initial cal 0.1
VW1834-IC1834	W45993.D	02/20/14	20:05	03:22	Initial cal 0.2
VW1834-IC1834	W45994.D	02/20/14	20:45	04:02	Initial cal 0.5
VW1834-IC1834	W45995.D	02/20/14	21:25	04:42	Initial cal 5
VW1834-ICC1834	W45996.D	02/20/14	22:05	05:22	Initial cal 10
VW1834-IC1834	W45997.D	02/20/14	22:45	06:02	Initial cal 20
VW1834-IC1834	W45998.D	02/20/14	23:26	06:43	Initial cal 40
VW1834-ICV1834	W46001.D	02/21/14	09:14	16:31	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Sample: VW1835-BFB
Lab File ID: W46002.D
Instrument ID: GCMSW
Injection Date: 02/21/14
Injection Time: 09:54

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	13717	15.0		Pass
75	30.0 - 66.0% of mass 95	40435	44.3		Pass
95	Base peak, 100% relative abundance	91312	100.0		Pass
96	5.0 - 9.0% of mass 95	6495	7.11		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	94322	103.3		Pass
175	4.0 - 9.01% of mass 174	7235	7.92	(7.67) [a]	Pass
176	93.0 - 101.0% of mass 174	93314	102.2	(98.9) [a]	Pass
177	5.0 - 9.0% of mass 176	6070	6.65	(6.50) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VW1835-CC1834	W46003.D	02/21/14	10:42	00:48	Continuing cal 10
VW1835-BS	W46004.D	02/21/14	11:22	01:28	Blank Spike
VW1835-BSD	W46005.D	02/21/14	12:02	02:08	Blank Spike Duplicate
VW1835-MB	W46007.D	02/21/14	13:22	03:28	Method Blank
VW1835-SCC	W46008.D	02/21/14	14:15	04:21	Summa Cleaning Certification
VW1835-SCC	W46010.D	02/21/14	15:35	05:41	Summa Cleaning Certification
JB59868-1	W46011.D	02/21/14	16:14	06:20	(used for QC only; not part of job JB61406)
JB59868-1DUP	W46012.D	02/21/14	16:54	07:00	Duplicate
ZZZZZZ	W46013.D	02/21/14	17:34	07:40	(unrelated sample)
ZZZZZZ	W46014.D	02/21/14	18:14	08:20	(unrelated sample)
ZZZZZZ	W46015.D	02/21/14	18:53	08:59	(unrelated sample)
ZZZZZZ	W46016.D	02/21/14	19:33	09:39	(unrelated sample)
ZZZZZZ	W46017.D	02/21/14	20:13	10:19	(unrelated sample)
ZZZZZZ	W46018.D	02/21/14	20:54	11:00	(unrelated sample)
ZZZZZZ	W46019.D	02/21/14	21:34	11:40	(unrelated sample)
VW1835-SCC	W46020.D	02/21/14	22:14	12:20	Summa Cleaning Certification
VW1835-SCC	W46021.D	02/21/14	22:54	13:00	Summa Cleaning Certification
VW1835-SCC	W46022.D	02/21/14	23:34	13:40	Summa Cleaning Certification
ZZZZZZ	W46023.D	02/22/14	00:14	14:20	(unrelated sample)
ZZZZZZ	W46024.D	02/22/14	00:54	15:00	(unrelated sample)
ZZZZZZ	W46025.D	02/22/14	01:34	15:40	(unrelated sample)
ZZZZZZ	W46026.D	02/22/14	02:14	16:20	(unrelated sample)
ZZZZZZ	W46027.D	02/22/14	02:54	17:00	(unrelated sample)
ZZZZZZ	W46028.D	02/22/14	03:35	17:41	(unrelated sample)

Volatile Surrogate Recovery Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Method: TO-15 **Matrix:** AIR

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1
JB61406-1	3W39766.D	82
JB61406-1	3W39740.D	83
JB61406-2	3W39767.D	85
JB61406-2	3W39742.D	89
JB61406-3	3W39768.D	84
JB61406-3	3W39743.D	88
JB61406-4	3W39770.D	82
JB61406-4	3W39744.D	82
JB61406-5	3W39771.D	82
JB61406-5	3W39745.D	81
JB61340-4RDUP	3W39763.D	85
JB62048-1DUP	3W39733.D	89
V3W1490-SCC	3W39159.D	87
V3W1491-SCC	3W39206.D	88
V3W1507-SCC	3W39665.D	80
V3W1509-BS	3W39720.D	98
V3W1509-BSD	3W39721.D	99
V3W1509-MB	3W39723.D	81
V3W1510-BS	3W39748.D	98
V3W1510-BSD	3W39749.D	98
V3W1510-MB	3W39751.D	80
V5W121-SCC	5W3076.D	93
VW1835-SCC	W46020.D	93
V3W1490-BS	3W39155.D	101
V3W1490-BSD	3W39156.D	101
V3W1490-MB	3W39158.D	88
V3W1491-BS	3W39185.D	101
V3W1491-BSD	3W39186.D	102
V3W1491-MB	3W39188.D	88
V3W1507-BS	3W39660.D	98
V3W1507-BSD	3W39661.D	98
V3W1507-MB	3W39663.D	82
V5W121-BS	5W3057.D	100
V5W121-BSD	5W3058.D	100
V5W121-MB	5W3062.D	90
VW1835-BS	W46004.D	106
VW1835-BSD	W46005.D	106
VW1835-MB	W46007.D	97

Volatile Surrogate Recovery Summary

Job Number: JB61406
Account: UTC United Technologies Corporation
Project: AECOMSCG: Delavan Spray Technologies; Bamberg, SC

Method: TO-15	**Matrix:** AIR

Samples and QC shown here apply to the above method

Surrogate Compounds	**Recovery Limits**

Surrogate Compounds	**Recovery Limits**
S1 = 4-Bromofluorobenzene	65-128%

Data Assessment Reports

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 FA12814 were collected on February 25-26, 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 trichloroethene in sample DPT-52 (8-10) were qualified "/J/A" due to the relative percent difference between the primary and field duplicate samples exceeding the established criteria of 40% (44.3%). These qualifiers indicate imprecision with field sampling techniques, laboratory methodology, or instrumentation and should be considered estimated.

Results of tetrachloroethene in sample DPT-54 (8-10) were qualified "/M/m" due to low recovery in the associated matrix spike sample below the established criteria of 35-165% (-6%). These qualifiers indicate the results should be considered biased low.

Semivolatile Organic Compounds by Method 8270D

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.

Priority Pollutant Metals by Methods 6010C/7470B/7471B

Detections of copper and zinc in soil samples collected on February 26, 2014 were qualified "/B/V" due to the presence of the analytes in the associate equipment rinsate blank samples.

Results of arsenic in sample DPT-52 (8-10) were qualified "/J/A" due to the relative percent difference between the primary and field duplicate samples exceeding the established criteria of 35% (45.1%). These qualifiers indicate imprecision with field sampling techniques, laboratory methodology, or instrumentation and should be considered estimated.

Results of antimony and chromium in sample DPT-54 (8-10) were qualified "/M/m" due to low recovery in the associated matrix spike sample below the established criteria of 65-165% (28.6 and 59.4%, respectively). These qualifiers indicate the results should be considered biased low.

Hexavalent Chromium by Method 7196A

Detections of hexavalent chromium in soil samples collected on February 26, 2014 were qualified "/B/V" due to the presence of the analytes in the associate equipment rinsate blank samples.

Data Summary and Usability

The QC excursions encountered during the validation of this data set did not result in the rejection of any data. 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 FA12815 were collected on February 25-26, 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 cis-1,2-dichloroethene and tetrachloroethene in sample MW-1 were qualified "/J/A" due to the relative percent difference between the primary and field duplicate samples exceeding the established criteria of 35% (162.7 and 174.1%, respectively). These qualifiers indicate imprecision with field sampling techniques, laboratory methodology, or instrumentation and the results should be considered estimated.

Semivolatile Organic Compounds by Method 8270D

Non-detections of semivolatile organic compounds benzoic acid, 4-nitrophenol, and phenol in samples associated with preparatory batch OP50659 were qualified "/R/c" due to recovery in the associated laboratory control sample below the established criteria of 25-150% (11, 18, and 23%, respectively). These qualifiers indicate the results are biased low and should be rejected.

Non-detections of semivolatile organic compound benzoic acid in samples associated with preparatory batch OP50665 were qualified "/R/c" due to recovery in the associated laboratory control sample below the established criteria of 25-150% (14%). These qualifiers indicate the results are biased low and should be rejected.

Priority Pollutant 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.

Hexavalent Chromium by Method 7196A

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

Results of the sulfate in sample MW-1 were qualified "/J/A" due to the relative percent difference between the primary and field duplicate samples exceeding the established criteria of 30% (39.3%).

These qualifiers indicate imprecision with field sampling techniques, laboratory methodology, or instrumentation and the results should be considered estimated.

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

With the exception of the non-detected results of the semivolatile organic compounds benzoic acid, 4-nitrophenol, and phenol in samples associated with preparatory batch OP50659, and the non-detected results of semivolatile organic compound benzoic acid in samples associated with preparatory batch OP50665, 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.

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 FA12854 were collected on February 27, 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.

Semivolatile Organic Compounds by Method 8270D

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.

Priority Pollutant Metals by Methods 6010C/7470B/7471B

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.

Hexavalent Chromium by Method 7196A

Results of hexavalent chromium in sample BG-5 (16-17) were qualified "/M/M" due to high recovery in the associated matrix spike sample exceeding the established criteria of 65-165% (222.9%). These qualifiers indicate the results should be considered biased high.

Soil pH by Method 9045D

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

The QC excursions encountered during the validation of this data set did not result in the rejection of any data. 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 FA12855 were collected on February 27, 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.

Semivolatile Organic Compounds by Method 8270D

Non-detections of semivolatile organic compound benzoic acid in samples associated with preparatory batch OP50725 were qualified "/R/c" due to recovery in the associated laboratory control sample below the established criteria of 25-150% (7%). These qualifiers indicate the results are biased low and should be rejected.

Results of benzoic acid in sample DPT-29 (2-4)-d were qualified "/M/D" due to the relative percent difference between the associated matrix spike and matrix spike duplicate samples exceeding the established criteria of 35% (38%). These qualifiers indicate imprecision with laboratory methodology, instrumentation, or matrix interference.

Priority Pollutant Metals by Methods 6010C/7470B/7471B

Detections of zinc in soil samples collected on February 27, 2014 were qualified "/B/V" due to the presence of the anlayte in the associated equipment rinsate blank.

Hexavalent Chromium by Method 7196A

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

It should be noted that sample DPT-28 (3-5)-d was actually a trip blank sample and should have been designated DPT-28 (3-5)-c and analyzed for volatile organic compounds. The laboratory PM was notified of this discrepancy; however, the lab failed to properly log this sample and no results were provided. The lab was contacted and an adequate explanation was never provided.

With the exception of the non-detections of semivolatile organic compound benzoic acid in samples associated with preparatory batch OP50725, 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.

DATA ASSESSMENT REPORT

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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 FA12909 were collected on February 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 tetrachloroethene in sample DPT-46 (1.5-3.5) were qualified "/J/A" due to the relative percent difference between the primary and field duplicate samples exceeding the established criteria of 40% (58.8%). These qualifiers indicate imprecision with field sampling techniques, laboratory methodology, or instrumentation and the results should be considered estimated.

Semivolatile Organic Compounds by Method 8270D

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.

Priority Pollutant 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.

Hexavalent Chromium by Method 7196A

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

None of the QC excursions encountered during the validation of this data set resulted in the rejection of any data. 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

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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 FA12917 were collected on February 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.

Semivolatile Organic Compounds by Method 8270D

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.

Priority Pollutant Metals by Methods 6010C/7470B/7471B

Results of arsenic, copper, and zinc in sample BG-2 (12-14) were qualified "/J/A" due to the relative percent difference between the primary and field duplicate samples exceeding the established criteria of 35% (122.1, 38.7, and 37.9% respectively). These qualifiers indicate imprecision with field sampling techniques, laboratory methodology, or instrumentation and should be considered estimated.

Hexavalent Chromium by Method 7196A

Results of hexavalent chromium in sample DPT-48 (7.5-9.5) were qualified "/M/M" due to high recovery in the associated matrix spike sample exceeding the established criteria of 65-165% (221.8%). These qualifiers indicate the results should be considered biased high.

Data Summary and Usability

The QC excursions encountered during the validation of this data set did not result in the rejection of any data. 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 FA12959 were collected on March 1-3, 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 tetrachloroethene in sample DPT-36 (5-7) were qualified "/J/A" due to the relative percent difference between the primary and field duplicate samples exceeding the established criteria of 40% (112.4%). These qualifiers indicate imprecision with field sampling techniques, laboratory methodology, or instrumentation and should be considered estimated.

Results of trans-1,3-dichloropropene and 1,1,1-trichloroethane in sample DPT-35 (3-5) and results of tetrachloroethene in sample DPT-37 (6-8) were qualified "/M/m" due to low recovery in the associated matrix spike sample below the established criteria of 35-165% (26, 27, and 25%, respectively). These qualifiers indicate the results should be considered biased low.

Results of 1,1,2,2-tetrachloroethene in sample DPT-35 (3-5) were qualified "/M/M" due to high recovery in the associated matrix spike sample above the established criteria of 35-165% (4049%). These qualifiers indicate the results should be considered biased high.

Results of cis-1,2-dichloroethene, 1,1,1-trichloroethene, and 1,1,2,2-tetrachloroethene in sample DPT-35 (3-5) were qualified "/M/D" due to the relative percent difference between the associated matrix spike and matrix spike duplicate samples exceeding the established criteria of 40% (48, 52, and 105%, respectively). These qualifiers indicate imprecision with laboratory methodology, instrumentation, or matrix interference.

Semivolatile Organic Compounds by Method 8270D

Results of 3,3'-dichlorobenzidine in sample DPT-35 (3-5) were qualified "/M/D" due to the relative percent difference between the associated matrix spike and matrix spike duplicate samples exceeding the established criteria of 40% (113%). These qualifiers indicate imprecision with laboratory methodology, instrumentation, or matrix interference.

Non-detections of the semivolatile organic compound benzoic acid in samples associated with preparatory batch ST563 were qualified "/R/c" due to low recovery in the associated laboratory control sample below the established criteria of 20-155% (7%). These qualifiers indicate the non-detections are biased low and the results should be rejected.

Priority Pollutant Metals by Methods 6010C/7470B/7471B

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.

Hexavalent Chromium by Method 7196A

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.

Soil pH by Method 9045D

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 non-detections of the semivolatile organic compound benzoic acid in samples associated with preparatory batch ST563, 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.

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 FA13018 were collected on March 5, 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.

Semivolatile Organic Compounds by Method 8270D

Non-detections of semivolatile organic compounds benzoic acid and 4-nitrophenol in samples associated with preparatory batch SX1583 were qualified "/R/c" due to recovery in the associated laboratory control sample below the established criteria of 25-150% (14 and 22%, respectively). These qualifiers indicate the results are biased low and should be rejected.

Priority Pollutant 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.

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

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

With the exception of the non-detections of semivolatile organic compounds benzoic acid and 4-nitrophenol in samples associated with preparatory batch SX1583, 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.

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 FA13051 were collected on March 6, 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.

Semivolatile Organic Compounds by Method 8270D

Non-detections of semivolatile organic compounds benzoic acid and 4-nitrophenol in samples associated with preparatory batch SX1583 were qualified "/R/c" due to recovery in the associated laboratory control sample below the established criteria of 25-150% (14 and 22%, respectively). These qualifiers indicate the results are biased low and should be rejected.

Priority Pollutant 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.

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

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

With the exception of the non-detections of semivolatile organic compounds benzoic acid and 4-nitrophenol in samples associated with preparatory batch SX1583, 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.

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DATA ASSESSMENT REPORT

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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 FA13147 were collected on March 10-11, 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 obtained from the second run of sample MW-8 were qualified "//h" due to the holding time being exceeded by less than two times.

Semivolatile Organic Compounds by Method 8270D

Non-detections of semivolatile organic compounds benzoic acid and 4-nitrophenol in samples associated with preparatory batch SX1586 were qualified "/R/c" due to recovery in the associated laboratory control sample below the established criteria of 25-150% (19 and 23%, respectively). These qualifiers indicate the results are biased low and should be rejected.

Priority Pollutant 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.

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

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

With the exception of the non-detections of semivolatile organic compounds benzoic acid and 4-nitrophenol in samples associated with preparatory batch SX1586, 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.

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DATA ASSESSMENT REPORT

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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 FA13211 were collected on March 11-12, 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.

Semivolatile Organic Compounds by Method 8270D

Non-detections of phenolic semivolatile organic compounds in sample MW-21 were qualified "/J/i" due to surrogate recoveries below the established criteria of 20-155% (19% for 2-fluorphenol and 12% for phenol-d5). These qualifiers indicate the results are underestimation and should be considered biased low.

Non-detections of semivolatile organic compounds benzoic acid and 4-nitrophenol in samples associated with preparatory batch SX1586 were qualified "/R/c" due to recovery in the associated laboratory control sample below the established criteria of 25-150% (19 and 23%, respectively). These qualifiers indicate the results are biased low and should be rejected.

Non-detections of semivolatile organic compound benzoic acid in samples associated with preparatory batch SL3419 were qualified "/R/c" due to recovery in the associated laboratory control sample below the established criteria of 25-150% (15%). These qualifiers indicate the results are biased low and should be rejected.

Non-detections of phenolic semivolatile organic compounds in sample MW-21D were qualified "/R/G" due to surrogate recoveries below 10% (0% for 2-fluorophenol and phenol-d5). These qualifiers indicate the results should be rejected.

Priority Pollutant 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.

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

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

With the exception of the non-detections of semivolatile organic compounds benzoic acid and 4-nitrophenol in samples associated with preparatory batch SX1586, the non-detections of semivolatile organic compound benzoic acid in samples associated with preparatory batch SL3419, and the phenolic semivolatile organic compounds in sample MW-21D, 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.

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 FA13258 were collected on March 12-13, 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 the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Semivolatile Organic Compounds and TCLP Semivolatile Organic Compounds by Method 8270D

Non-detections of semivolatile organic compound benzoic acid in samples associated with preparatory batch SX1587 were qualified "/R/c" and detections were qualified "/J/c" due to recovery in the associated laboratory control sample below the established criteria of 25-150% (7%). These qualifiers indicate the detections are under-estimations and the results should be considered biased low, and the non-detections are biased low and should be rejected.

Priority Pollutant Metals and TCLP Priority Pollutant 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 compound benzoic acid in samples associated with preparatory batch SX1587, 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.

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 JB61406 were collected on March 7, 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 TO-15

Results of the 1,2,4-trimethylbenzene, acetone, ethyl acetate, hexane, isopropyl alcohol, m,p-xylene, methylene chloride, and xylenes (total) in sample SSV-4 were qualified "/J/A" due to the relative percent difference between the primary and field duplicate samples exceeding the established criteria of 35% [110.9% (µg/m^3) and 111.6% (ppbv), 69.2% (µg/m^3) and 69.2% (ppbv), 115% (µg/m^3) and 114.3% (ppbv), 50% (µg/m^3) and 50% (ppbv), 84.6% (µg/m^3) and 84.7% (ppbv), 107.7% (µg/m^3) and 108.9% (ppbv), 84.9% (µg/m^3) and 84.9% (ppbv), 114.9% (µg/m^3) and 115.6% (ppbv), respectively). These qualifiers indicate imprecision with field sampling techniques, laboratory methodology, or instrumentation and the results should be considered estimated.

Data Summary and Usability

None of the QC excursions encountered during the validation of this data set resulted in the rejection of any data. 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.

APPENDIX F

BASELINE RISK ASSESSMENT TABLES AND DATA

Tables

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UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

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Table F-1
VISL Calculator Soil Gas - Commercial
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

OSWER VAPOR INTRUSION ASSESSMENT
Vapor Intrusion Screening Level (VISL) Calculator Version 3.2, November 2013 RSLs

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Commercial	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-06	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	0.1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (°C)	Tgw	18.3	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for groundwater target concentrations

	CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source? Cvp > Cia,target? Yes/No	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source? Chc > Cia,target? Yes/No	Target Indoor Air Conc. @ TCR = 1E-06 or THQ = 0.1 MIN(Cia,c;Cia,nc) (ug/m^3)	Toxicity Basis C/NC	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 1E-06 or THQ = 0.1 Csg (ug/m^3)	Target Ground Water Conc. @ TCR = 1E-06 or THQ = 0.1 Cgw (ug/L)	Is Target Ground Water Conc. < MCL? Cgw<MCL? Yes/No (MCL ug/L)	Pure Phase Vapor Conc. @ 25°C Cvp (ug/m^3)	Groundwater Vapor Conc. Chc (ug/m^3)	Temperature for Groundwater Vapor Conc. Tgw or 25 C	Lower Explosive Limit** LEL (% by vol)	LEL Source	Inhalation Unit Risk IUR (ug/m^3)$^{-1}$	IUR Source*	Reference Concentration RfC (mg/m^3)	RFC Source*	Mutagenic Indicator i	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06 Cia,c (ug/m^3)	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.1 Cia,nc (ug/m^3)
x	67-64-1	Acetone	Yes	Yes	1.4E+04	NC	1.4E+05	1.3E+07	--	7.25E+08	1.07E+09	18.3	2.6	E			3.10E+01	A			1.4E+04
x	71-43-2	Benzene	Yes	Yes	1.6E+00	C	1.6E+01	9.5E+00	No (5)	3.98E+08	2.97E+08	18.3	1.2	N	7.80E-06	I	3.00E-02	I		1.6E+00	1.3E+01
x	75-15-0	Carbon Disulfide	Yes	Yes	3.1E+02	NC	3.1E+03	6.7E+02	--	1.47E+09	9.83E+08	18.3	1.3	N			7.00E-01	I			3.1E+02
x	74-87-3	Chloromethane	Yes	Yes	3.9E+01	NC	3.9E+02	1.3E+02	--	1.17E+10	1.60E+09	18.3	8.1	N			9.00E-02	I			3.9E+01
x	75-71-8	Dichlorodifluoromethane	Yes	Yes	4.4E+01	NC	4.4E+02	4.3E+00	--	3.16E+10	2.86E+09	18.3					1.00E-01	X			4.4E+01
x	141-78-6	Ethyl Acetate	Yes	Yes	3.1E+01	NC	3.1E+02	7.8E+03	--	4.42E+08	3.15E+08	18.3	2	N			7.00E-02	P			3.1E+01
x	100-41-4	Ethylbenzene	Yes	Yes	4.9E+00	C	4.9E+01	2.3E+01	Yes (700)	5.48E+07	3.68E+07	18.3	0.8	N	2.50E-06	CA	1.00E+00	I		4.9E+00	4.4E+02
x	110-54-3	Hexane, N-	Yes	Yes	3.1E+02	NC	3.1E+03	5.6E+00	--	7.00E+08	5.20E+08	18.3	1.1	N			7.00E-01	I			3.1E+02
x	78-93-3	Methyl Ethyl Ketone (2-Butanone)	Yes	Yes	2.2E+03	NC	2.2E+04	1.3E+06	--	3.52E+08	3.75E+08	18.3	1.4	N			5.00E+00	I			2.2E+03
x	75-09-2	Methylene Chloride	Yes	Yes	2.6E+02	NC	2.6E+03	2.6E+03	No (5)	1.99E+09	1.32E+09	18.3	13	N	1.00E-08	I	6.00E-01	I	Mut	1.2E+03	2.6E+02
x	127-18-4	Tetrachloroethylene	Yes	Yes	1.8E+01	NC	1.8E+02	3.5E+01	No (5)	1.65E+08	1.03E+08	18.3			2.60E-07	I	4.00E-02	I		4.7E+01	1.8E+01
x	108-88-3	Toluene	Yes	Yes	2.2E+03	NC	2.2E+04	1.1E+04	No (1000)	1.41E+08	1.00E+08	18.3	1.1	N			5.00E+00	I			2.2E+03
x	76-13-1	Trichloro-1,2,2-trifluoroethane, 1,1,2-	Yes	Yes	1.3E+04	NC	1.3E+05	8.0E+02	--	3.66E+09	2.80E+09	18.3					3.00E+01	H			1.3E+04
x	71-55-6	Trichloroethane, 1,1,1-	Yes	Yes	2.2E+03	NC	2.2E+04	4.2E+03	No (200)	8.90E+08	6.70E+08	18.3	7.5	N			5.00E+00	I			2.2E+03
x	79-01-6	Trichloroethylene	Yes	Yes	8.8E-01	NC	8.8E+00	3.0E+00	Yes (5)	4.88E+08	3.71E+08	18.3	8	N	see note	I	2.00E-03	I	TCE	3.0E+00	8.8E-01
x	75-69-4	Trichlorofluoromethane	Yes	Yes	3.1E+02	NC	3.1E+03	9.8E+01	--	5.94E+09	3.45E+09	18.3					7.00E-01	H			3.1E+02
x	95-63-6	Trimethylbenzene, 1,2,4-	Yes	Yes	3.1E+00	NC	3.1E+01	1.9E+01	--	1.36E+07	9.15E+06	18.3	0.9	N			7.00E-03	P			3.1E+00
x	108-67-8	Trimethylbenzene, 1,3,5-	No Inhal. Tox. Info	No Inhal. Tox. Info	--	--	--	--	--	1.36E+07	1.10E+07	18.3									
x	108-38-3	Xylene, m-	Yes	Yes	4.4E+01	NC	4.4E+02	2.2E+02	--	4.74E+07	3.18E+07	18.3	1.1	N			1.00E-01	S			4.4E+01
x	95-47-6	Xylene, o-	Yes	Yes	4.4E+01	NC	4.4E+02	3.1E+02	--	4.56E+07	2.54E+07	18.3	0.9	N			1.00E-01	S			4.4E+01
x	106-42-3	Xylene, P-	Yes	Yes	4.4E+01	NC	4.4E+02	2.3E+02	--	5.05E+07	3.08E+07	18.3	1	N			1.00E-01	S			4.4E+01
x	1330-20-7	Xylenes	Yes	Yes	4.4E+01	NC	4.4E+02	3.1E+02	Yes (10000)	4.78E+07	1.51E+07	18.3					1.00E-01	I			4.4E+01

Table F-1
VISL Calculator Soil Gas - Commercial
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

OSWER VAPOR INTRUSION ASSESSMENT
Vapor Intrusion Screening Level (VISL) Calculator Version 3.2, November 2013 RSLs

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Commercial	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-06	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	0.1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (^{o}C)	Tgw	18.3	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for groundwater target concentrations

CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source?	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source?	Target Indoor Air Conc. @ TCR = 1E-06 or THQ = 0.1	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 1E-06 or THQ = 0.1	Target Ground Water Conc. @ TCR = 1E-06 or THQ = 0.1	Is Target Ground Water Conc. < MCL?	Pure Phase Vapor Conc. @ 25^{o}C	Groundwater Vapor Conc.	Temperature for Groundwater Vapor Conc.	Lower Explosive Limit**	LEL Source	Inhalation Unit Risk	IUR Source*	Reference Concentration	RFC Source*	Mutagenic Indicator	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.1
		Cvp > Cia,target?	Chc > Cia,target?	MIN(Cia,c;Cia,nc)		Csg	Cgw	Cgw<MCL?	Cvp	Chc	Tgw or 25	LEL		IUR		RfC		i	Cia,c	Cia,nc
		Yes/No	Yes/No	(ug/m^3)	C/NC	(ug/m^3)	(ug/L)	Yes/No (MCL ug/L)	(ug/m^3)	(ug/m^3)	C	(% by vol)		(ug/m^3)$^{-1}$		(mg/m^3)			(ug/m^3)	(ug/m^3)

Notes:

(1) **Inhalation Pathway Exposure Parameters (RME):**

Exposure Scenario	Units	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected (based on scenario in cell E5) Symbol	Selected Value
Averaging time for carcinogens	(yrs)	ATc_R	70	ATc_C	70	ATc	70
Averaging time for non-carcinogens	(yrs)	ATnc_R	30	ATnc_C	25	ATnc	25
Exposure duration	(yrs)	ED_R	30	ED_C	25	ED	25
Exposure frequency	(days/yr)	EF_R	350	EF_C	250	EF	250
Exposure time	(hr/day)	ET_R	24	ET_C	8	ET	8

(2) **Generic Attenuation Factors:**

Source Medium of Vapors		Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected (based on scenario in cell E5) Symbol	Selected Value
Groundwater	(-)	AFgw_R	0.001	AFgw_C	0.001	AFgw	0.001
Sub-Slab and Exterior Soil Gas	(-)	AFss_R	0.1	AFss_C	0.1	AFss	0.1

(3) **Formulas**
Cia, target = MIN(Cia,c; Cia,nc)
Cia,c (ug/m3) = TCR x ATc x (365 days/yr) x (24 hrs/day) / (ED x EF x ET x IUR)
Cia,nc (ug/m3) = THQ x ATnc x (365 days/yr) x (24 hrs/day) x RfC x (1000 ug/mg) / (ED x EF x ET)

(4) **Special Case Chemicals**

Trichloroethylene	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected (based on scenario in cell E5) Symbol	Selected Value
	mIURTCE_R	1.00E-06	mIURTCE_C	0.00E+00	mIURTCE	0.00E+00
	IURTCE_R	3.10E-06	IURTCE_C	4.10E-06	IURTCE	4.10E-06

Mutagenic Chemicals — The exposure durations and age-dependent adjustment factors for mutagenic-mode-of-action are listed in the table below:

Note: This section applies to trichloroethylene and other mutagenic chemicals, but not to vinyl chloride.

Age Cohort	Exposure Duration (years)	Age-dependent adjustment factor
0 - 2 years	2	10
2 - 6 years	4	3
6 - 16 years	10	3
16 - 30 years	14	1

Mutagenic-mode-of-action (MMOA) adjustment factor 25 This factor is used in the equations for mutagenic chemicals.

Vinyl Chloride — See the Navigation Guide equation for Cia,c for vinyl chloride.

Notation:
NVT = Not sufficiently volatile and/or toxic to pose inhalation risk in selected exposure scenario for the indicated medium
C = Carcinogenic
NC = Non-carcinogenic
I = IRIS: EPA Integrated Risk Information System (IRIS). Available online at: http://www.epa.gov/iris/subst/index.html
P = PPRTV. EPA Provisional Peer Reviewed Toxicity Values (PPRTVs). Available online at: http://hhpprtv.ornl.gov/pprtv.shtml
A = Agency for Toxic Substances and Disease Registry (ATSDR) Minimum Risk Levels (MRLs). Available online at: http://www.atsdr.cdc.gov/mrls/index.html
CA = California Environmental Protection Agency/Office of Environmental Health Hazard Assessment assessments. Available online at: http://www.oehha.ca.gov/risk/ChemicalDB/index.asp
H = HEAST. EPA Superfund Health Effects Assessment Summary Tables (HEAST) database. Available online at: http://epa-heast.ornl.gov/heast.shtml
S = See RSL User Guide, Section 5
X = PPRTV Appendix
E = The Engineering ToolBox. Available online at http://www.engineeringtoolbox.com/explosive-concentration-limits-d_423.html
N = Centers for Disease Control and Prevention (CDC) National Institute for Occupational Safety and Health (NIOSH). Pocket Guide to Chemical Hazards. Available online at: http://www.cdc.gov/niosh/npg/default.html http://www.cdc.gov/niosh/npg/default.html
M = Chemical-specific MSDS
Mut = Chemical acts according to the mutagenic-mode-of-action, special exposure parameters apply (see footnote (4) above).
VC = Special exposure equation for vinyl chloride applies (see Navigation Guide for equation).
TCE = Special mutagenic and non-mutagenic IURs for trichloroethylene apply (see footnote (4) above).
Yellow highlighting indicates site-specific parameters that may be edited by the user.
Blue highlighting indicates exposure factors that are based on Risk Assessment Guidance for Superfund (RAGS) or EPA vapor intrusion guidance, which generally should not be changed.
**Lower explosive limit is the minimum concentration of the compound in air (% by volume) that is needed for the gas to ignite and explode.

Table F-2
VISL Calculator Soil Gas - Residential
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

OSWER VAPOR INTRUSION ASSESSMENT
Vapor Intrusion Screening Level (VISL) Calculator Version 3.2, November 2013 RSLs

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Residential	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-06	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	0.1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (°C)	Tgw	18.3	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for groundwater target concentrations

	CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source?	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source?	Target Indoor Air Conc. @ TCR = 1E-06 or THQ = 0.1	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 1E-06 or THQ = 0.1	Target Ground Water Conc. @ TCR = 1E-06 or THQ = 0.1	Is Target Ground Water Conc. < MCL?	Pure Phase Vapor Conc. @ 25°C	Groundwater Vapor Conc.	Temperature for Groundwater Vapor Conc.	Lower Explosive Limit**	LEL Source	Inhalation Unit Risk	IUR Source*	Reference Concentration	RFC Source*	Mutagenic Indicator	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.1
			Cvp > Cia,target?	Chc > Cia,target?	MIN(Cia,c;Cia,nc)		Csg	Cgw	Cgw<MCL?	Cvp	Chc	Tgw or 25	LEL		IUR		RfC		i	Cia,c	Cia,nc
	CAS	Chemical Name	Yes/No	Yes/No	(ug/m^3)	C/NC	(ug/m^3)	(ug/L)	Yes/No (MCL ug/L)	(ug/m^3)	(ug/m^3)	C	(% by vol)		(ug/m^3)$^{-1}$		(mg/m^3)			(ug/m^3)	(ug/m^3)
x	67-64-1	Acetone	Yes	Yes	3.2E+03	NC	3.2E+04	3.0E+06	--	7.25E+08	1.07E+09	18.3	2.6	E			3.10E+01	A			3.2E+03
x	71-43-2	Benzene	Yes	Yes	3.1E-01	C	3.1E+00	1.9E+00	Yes (5)	3.98E+08	2.97E+08	18.3	1.2	N	7.80E-06	I	3.00E-02	I		3.1E-01	3.1E+00
x	75-15-0	Carbon Disulfide	Yes	Yes	7.3E+01	NC	7.3E+02	1.6E+02	--	1.47E+09	9.83E+08	18.3	1.3	N			7.00E-01	I			7.3E+01
x	74-87-3	Chloromethane	Yes	Yes	9.4E+00	NC	9.4E+01	3.1E+01	--	1.17E+10	1.60E+09	18.3	8.1	N			9.00E-02	I			9.4E+00
x	75-71-8	Dichlorodifluoromethane	Yes	Yes	1.0E+01	NC	1.0E+02	1.0E+00	--	3.16E+10	2.86E+09	18.3					1.00E-01	X			1.0E+01
x	141-78-6	Ethyl Acetate	Yes	Yes	7.3E+00	NC	7.3E+01	1.9E+03	--	4.42E+08	3.15E+08	18.3	2	N			7.00E-02	P			7.3E+00
x	100-41-4	Ethylbenzene	Yes	Yes	9.7E-01	C	9.7E+00	4.5E+00	Yes (700)	5.48E+07	3.68E+07	18.3	0.8	N	2.50E-06	CA	1.00E+00	I		9.7E-01	1.0E+02
x	110-54-3	Hexane, N-	Yes	Yes	7.3E+01	NC	7.3E+02	1.3E+00	--	7.00E+08	5.20E+08	18.3	1.1	N			7.00E-01	I			7.3E+01
x	78-93-3	Methyl Ethyl Ketone (2-Butanone)	Yes	Yes	5.2E+02	NC	5.2E+03	3.1E+05	--	3.52E+08	3.75E+08	18.3	1.4	N			5.00E+00	I			5.2E+02
x	75-09-2	Methylene Chloride	Yes	Yes	6.3E+01	NC	6.3E+02	6.2E+02	No (5)	1.99E+09	1.32E+09	18.3	13	N	1.00E-08	I	6.00E-01	I	Mut	9.6E+01	6.3E+01
x	127-18-4	Tetrachloroethylene	Yes	Yes	4.2E+00	NC	4.2E+01	8.3E+00	No (5)	1.65E+08	1.03E+08	18.3			2.60E-07	I	4.00E-02	I		9.4E+00	4.2E+00
x	108-88-3	Toluene	Yes	Yes	5.2E+02	NC	5.2E+03	2.7E+03	No (1000)	1.41E+08	1.00E+08	18.3	1.1	N			5.00E+00	I			5.2E+02
x	76-13-1	Trichloro-1,2,2-trifluoroethane, 1,1,2-	Yes	Yes	3.1E+03	NC	3.1E+04	1.9E+02	--	3.66E+09	2.80E+09	18.3					3.00E+01	H			3.1E+03
x	71-55-6	Trichloroethane, 1,1,1-	Yes	Yes	5.2E+02	NC	5.2E+03	1.0E+03	No (200)	8.90E+08	6.70E+08	18.3	7.5	N			5.00E+00	I			5.2E+02
x	79-01-6	Trichloroethylene	Yes	Yes	2.1E-01	NC	2.1E+00	7.2E-01	Yes (5)	4.88E+08	3.71E+08	18.3	8	N	see note	I	2.00E-03	I	TCE	4.3E-01	2.1E-01
x	75-69-4	Trichlorofluoromethane	Yes	Yes	7.3E+01	NC	7.3E+02	2.3E+01	--	5.94E+09	3.45E+09	18.3					7.00E-01	H			7.3E+01
x	95-63-6	Trimethylbenzene, 1,2,4-	Yes	Yes	7.3E-01	NC	7.3E+00	4.5E+00	--	1.36E+07	9.15E+06	18.3	0.9	N			7.00E-03	P			7.3E-01
x	108-67-8	Trimethylbenzene, 1,3,5-	No Inhal. Tox. Info	No Inhal. Tox. Info	--	--	--	--	--	1.36E+07	1.10E+07	18.3									
x	108-38-3	Xylene, m-	Yes	Yes	1.0E+01	NC	1.0E+02	5.3E+01	--	4.74E+07	3.18E+07	18.3	1.1	N			1.00E-01	S			1.0E+01
x	95-47-6	Xylene, o-	Yes	Yes	1.0E+01	NC	1.0E+02	7.3E+01	--	4.56E+07	2.54E+07	18.3	0.9	N			1.00E-01	S			1.0E+01
x	106-42-3	Xylene, P-	Yes	Yes	1.0E+01	NC	1.0E+02	5.5E+01	--	5.05E+07	3.08E+07	18.3	1	N			1.00E-01	S			1.0E+01
x	1330-20-7	Xylenes	Yes	Yes	1.0E+01	NC	1.0E+02	7.3E+01	Yes (10000)	4.78E+07	1.51E+07	18.3					1.00E-01	I			1.0E+01

Table F-2
VISL Calculator Soil Gas - Residential
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

OSWER VAPOR INTRUSION ASSESSMENT
Vapor Intrusion Screening Level (VISL) Calculator Version 3.2, November 2013 RSLs

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Residential	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-06	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	0.1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (^{o}C)	Tgw	18.3	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for groundwater target concentrations

CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source?	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source?	Target Indoor Air Conc. @ TCR = 1E-06 or THQ = 0.1	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 1E-06 or THQ = 0.1	Target Ground Water Conc. @ TCR = 1E-06 or THQ = 0.1	Is Target Ground Water Conc. < MCL?	Pure Phase Vapor Conc. @ 25^{o}C	Groundwater Vapor Conc.	Temperature for Groundwater Vapor Conc.	Lower Explosive Limit**	LEL Source	Inhalation Unit Risk	IUR Source*	Reference Concentration	RFC Source*	Mutagenic Indicator	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.1
		Cvp > Cia,target?	Chc > Cia,target?	MIN(Cia,c;Cia,nc)		Csg	Cgw	Cgw<MCL?	Cvp	Chc	Tgw or 25	LEL		IUR		RfC		i	Cia,c	Cia,nc
		Yes/No	Yes/No	(ug/m^3)	C/NC	(ug/m^3)	(ug/L)	Yes/No (MCL ug/L)	(ug/m^3)	(ug/m^3)	C	(% by vol)		(ug/m^3)$^{-1}$		(mg/m^3)			(ug/m^3)	(ug/m^3)

Notes:

(1) **Inhalation Pathway Exposure Parameters (RME):**

Exposure Scenario	Units	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected (based on scenario in cell E5) Symbol	Selected Value
Averaging time for carcinogens	(yrs)	ATc_R	70	ATc_C	70	ATc	70
Averaging time for non-carcinogens	(yrs)	ATnc_R	30	ATnc_C	25	ATnc	30
Exposure duration	(yrs)	ED_R	30	ED_C	25	ED	30
Exposure frequency	(days/yr)	EF_R	350	EF_C	250	EF	350
Exposure time	(hr/day)	ET_R	24	ET_C	8	ET	24

(2) **Generic Attenuation Factors:**

Source Medium of Vapors	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected (based on scenario in cell E5) Symbol	Selected Value
Groundwater	AFgw_R	0.001	AFgw_C	0.001	AFgw	0.001
Sub-Slab and Exterior Soil Gas	AFss_R	0.1	AFss_C	0.1	AFss	0.1

(3) **Formulas**
Cia, target = MIN(Cia,c; Cia,nc)
Cia,c (ug/m3) = TCR x ATc x (365 days/yr) x (24 hrs/day) / (ED x EF x ET x IUR)
Cia,nc (ug/m3) = THQ x ATnc x (365 days/yr) x (24 hrs/day) x RfC x (1000 ug/mg) / (ED x EF x ET)

(4) **Special Case Chemicals**

Trichloroethylene	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected (based on scenario in cell E5) Symbol	Selected Value
	mIURTCE_R	1.00E-06	mIURTCE_C	0.00E+00	mIURTCE	1.00E-06
	IURTCE_R	3.10E-06	IURTCE_C	4.10E-06	IURTCE	3.10E-06

Mutagenic Chemicals — The exposure durations and age-dependent adjustment factors for mutagenic-mode-of-action are listed in the table below:

Note: This section applies to trichloroethylene and other mutagenic chemicals, but not to vinyl chloride.

Age Cohort	Exposure Duration (years)	Age-dependent adjustment factor
0 - 2 years	2	10
2 - 6 years	4	3
6 - 16 years	10	3
16 - 30 years	14	1

Mutagenic-mode-of-action (MMOA) adjustment factor 76 — This factor is used in the equations for mutagenic chemicals.

Vinyl Chloride — See the Navigation Guide equation for Cia,c for vinyl chloride.

Notation:
NVT = Not sufficiently volatile and/or toxic to pose inhalation risk in selected exposure scenario for the indicated medium
C = Carcinogenic
NC = Non-carcinogenic
I = IRIS: EPA Integrated Risk Information System (IRIS). Available online at: http://www.epa.gov/iris/subst/index.html
P = PPRTV. EPA Provisional Peer Reviewed Toxicity Values (PPRTVs). Available online at: http://hhpprtv.ornl.gov/pprtv.shtml
A = Agency for Toxic Substances and Disease Registry (ATSDR) Minimum Risk Levels (MRLs). Available online at: http://www.atsdr.cdc.gov/mrls/index.html
CA = California Environmental Protection Agency/Office of Environmental Health Hazard Assessment assessments. Available online at: http://www.oehha.ca.gov/risk/ChemicalDB/index.asp
H = HEAST. EPA Superfund Health Effects Assessment Summary Tables (HEAST) database. Available online at: http://epa-heast.ornl.gov/heast.shtml
S = See RSL User Guide, Section 5
X = PPRTV Appendix
E = The Engineering ToolBox. Available online at http://www.engineeringtoolbox.com/explosive-concentration-limits-d_423.html
N = Centers for Disease Control and Prevention (CDC) National Institute for Occupational Safety and Health (NIOSH). Pocket Guide to Chemical Hazards. Available online at: http://www.cdc.gov/niosh/npg/default.html http://www.cdc.gov/niosh/npg/default.html
M = Chemical-specific MSDS
Mut = Chemical acts according to the mutagenic-mode-of-action, special exposure parameters apply (see footnote (4) above).
VC = Special exposure equation for vinyl chloride applies (see Navigation Guide for equation).
TCE = Special mutagenic and non-mutagenic IURs for trichloroethylene apply (see footnote (4) above).
Yellow highlighting indicates site-specific parameters that may be edited by the user.
Blue highlighting indicates exposure factors that are based on Risk Assessment Guidance for Superfund (RAGS) or EPA vapor intrusion guidance, which generally should not be changed.
**Lower explosive limit is the minimum concentration of the compound in air (% by volume) that is needed for the gas to ignite and explode.

Table F-3
Estimation of Concentrations in Shower Air - Future Resident Adult
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Parameter	Concentration in Groundwater [1] (mg/L)	Molecular Weight [2] (g/mole)	Henry's Law Constant [2] (atm-m3/mol)	Gas-film Mass Transfer Coefficient [3] (cm/hr)	Liquid-film Mass Transfer Coefficient [4] (cm/hr)	Overall Mass Transfer Coefficient [5] (cm/hr)	Adjusted Mass Transfer Coefficent [6] (cm/hr)	Concentration Leaving Shower Droplet After Time ts [7] (µg/L)	Indoor VOC Generation Rate [8] (µg/m3-min)	Concentration in Shower Air [9] (ug/m3)
Chemical	CGW	MW	H	kg	kl	KL	KaL	C_{WD}	S	Cair
On-Site Groundwater VOCs										
2-Methylnaphthalene	7.40E-03	1.42E+02	5.18E-04	1.07E+03	1.11E+01	7.50E+00	1.01E+01	5.99E-01	5.00E-01	5.07E-01
Bromodichloromethane	1.04E-02	1.64E+02	2.12E-03	9.94E+02	1.04E+01	9.27E+00	1.25E+01	1.03E+00	8.59E-01	8.72E-01
Chloroform	1.31E-01	1.19E+02	3.67E-03	1.16E+03	1.21E+01	1.14E+01	1.54E+01	1.57E+01	1.31E+01	1.33E+01
cis-1,2-Dichloroethylene	4.66E-01	9.69E+01	4.08E-03	1.29E+03	1.35E+01	1.27E+01	1.72E+01	6.21E+01	5.17E+01	5.25E+01
Dibromochloromethane	1.80E-03	2.08E+02	7.83E-04	8.83E+02	9.20E+00	6.97E+00	9.41E+00	1.36E-01	1.13E-01	1.15E-01
Methylene chloride	5.52E-01	8.49E+01	3.25E-03	1.38E+03	1.44E+01	1.34E+01	1.81E+01	7.71E+01	6.42E+01	6.53E+01
Naphthalene	2.40E-03	1.28E+02	4.40E-04	1.12E+03	1.17E+01	7.47E+00	1.01E+01	1.93E-01	1.61E-01	1.64E-01
Tetrachloroethylene	1.58E+01	1.66E+02	1.77E-02	9.88E+02	1.03E+01	1.02E+01	1.37E+01	1.71E+03	1.42E+03	1.45E+03
Trichloroethylene	1.40E-01	1.31E+02	9.85E-03	1.11E+03	1.16E+01	1.13E+01	1.52E+01	1.67E+01	1.39E+01	1.42E+01
Off-Site Groundwater VOCs										
Bromodichloromethane	7.20E-03	1.64E+02	2.12E-03	9.94E+02	1.04E+01	9.27E+00	1.25E+01	7.13E-01	5.95E-01	6.04E-01
Chloroform	1.80E-01	1.19E+02	3.67E-03	1.16E+03	1.21E+01	1.14E+01	1.54E+01	2.16E+01	1.80E+01	1.83E+01
Dibromochloromethane	6.80E-04	2.08E+02	7.83E-04	8.83E+02	9.20E+00	6.97E+00	9.41E+00	5.13E-02	4.28E-02	4.34E-02
Tetrachloroethylene	9.98E-02	1.66E+02	1.77E-02	9.88E+02	1.03E+01	1.02E+01	1.37E+01	1.08E+01	8.99E+00	9.13E+00
Trichloroethylene	5.60E-04	1.31E+02	9.85E-03	1.11E+03	1.16E+01	1.13E+01	1.52E+01	6.68E-02	5.57E-02	5.66E-02

Notes:

[1] Refer to Tables 6-6 and 6-8, respectively, for on-site and off-site groundwater concentrations used.

[2] Chemical-specific properties were optained from the RSL Chemical-Specific Parameters Supporting Table (USEPA, May 2014).

[3] kg = kH * SQRT(MW [water] / MW)

[4] kl = kC * SQRT(MW [CO_2] / MW)

[5] $KL = [(1/kl)+((R * T)/(H*kg))]^{-1}$

[6] $KaL = KL * [(T_1*U_S)/(T_S*U_1)]^{-0.5}$

[7] $C_{WD} = CGW*CF*(1-EXP[(-KaL*t_s)/(60*d)])$

[8] $S = C_{WD}*FR/SV$

[9] Cair = [(S x 1 shower/day)/(Ra * 1440 min/day)] x Q

where, Q (min)= (Ds+[(EXP(-Ra*Dt))/Ra]-[(EXP(Ra*(Ds-Dt)))/Ra]) = 24.384153

and, where other inputs include:

kH = kg [Gas-Film Mass Transfer Coefficient] for water (cm/hr) = 3000
MW [water] = Molecular Weight for water (g/mol) = 18
kC = kl [Liquid-Film Mass Transfer Coefficient] for CO_2 (cm/hr) = 20
MW [CO_2] = Molecular Weight for CO_2 (g/mol) = 44
R = Gas Constant (atm m3/mol K) = 8.2E-05
T = Absolute Temperature (K) = 293
T_1 = Calibration Water Temperature of KL (K) = 293
T_S = Shower Water Temperature (K) = 318
U_1 Water Viscosity at T_1 (cp) = 1.002
U_S Water Viscosity at T_S (cp) = 0.596

CF = Conversion Factor (ug/mg) = 1000
d = Shower Droplet Diameter (mm) = 1
t_s = Shower Droplet Time (sec) = 0.5
FR = Shower Flow Rate (L/min) = 10
SV = Shower Room Air Volume (m3) = 12
Ra = Rate of Air Exchange (1/min) = 0.01667
Ds = Duration of Shower (min) = 43
Dt = Total Duration in Shower Room (min) = 73

Table F-4
Values Used For Calculation of Daily Intakes - Groundwater
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Ingestion	Resident (On-Site and Off-Site)	Adult	Groundwater (On-Site and Off-Site)	CDI	Chronic Daily Intake	Calculated	mg/kg-day	--	
				CW	Groundwater Exposure Point Concentration	See Table 6-5 and 6-7	mg/L	--	Chronic Daily Intake (mg/kg-day) for carcinogens =
				IRWa	Ingestion Rate, groundwater - Adult	2.5	L/day	USEPA, Feb 2014 (USEPA, 2011a)	CW x IRWa x EFa x EDa x 1/BWa x 1/ATC +
				IRWc	Ingestion Rate, groundwater - Child	0.78	L/day	USEPA, Feb 2014 (USEPA, 2011a)	CW x IRWc x EFc x EDc x 1/BWc x 1/ATC
				EFa	Exposure Frequency - Adult	350	days/year	USEPA, Feb 2014 (USEPA, 1991a)	
				EFc	Exposure Frequency - Child	350	days/year	USEPA, Feb 2014 (USEPA, 1991a)	
				EDa	Exposure Duration - Adult	20	years	USEPA, Feb 2014 (USEPA, 2011a)	Chronic Daily Intake (mg/kg-day) for noncarcinogens =
				EDc	Exposure Duration - Child	6	years	USEPA, Feb 2014 (USEPA, 1991a)	CW x IRWa x EFa x EDa x 1/BWa x 1/ATN +
				BWa	Body Weight - Adult	80	kg	USEPA, Feb 2014 (USEPA, 2011a)	CW x IRWc x EFc x EDc x 1/BWc x 1/ATN
				BWc	Body Weight - Child	15	kg	USEPA, Feb 2014 (USEPA, 2011a)	
				ATC	Averaging Time, carcinogens	25550	days	70 y x 365 d/y	
				ATN	Averaging Time, noncarcinogens	9490	days	ED x 365 d/y	
		Child	Groundwater (On-Site and Off-Site)	CDI	Chronic Daily Intake	Calculated	mg/kg-day	--	
				CW	Groundwater Exposure Point Concentration	See Table 6-5 and 6-7	mg/L	--	Chronic Daily Intake (mg/kg-day) for noncarcinogens =
				IRWc	Ingestion Rate, groundwater - Child	0.78	L/day	USEPA, Feb 2014 (USEPA, 2011a)	CW x IRWc x EFc x EDc x 1/BWc x 1/ATN
				EFc	Exposure Frequency - Child	350	days/year	USEPA, Feb 2014 (USEPA, 1991a)	
				EDc	Exposure Duration - Child	6	years	USEPA, Feb 2014 (USEPA, 1991a)	
				BWc	Body Weight - Child	15	kg	USEPA, Feb 2014 (USEPA, 2011a)	
				ATN	Averaging Time, noncarcinogens	2190	days	ED x 365 d/y	

Table F-4
Values Used For Calculation of Daily Intakes - Groundwater
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Dermal	Resident (On-Site and Off-Site)	Adult	Groundwater (On-Site and Off-Site)	CDI	Chronic Daily Intake	Calculated	mg/kg-day	--	
				CW	Groundwater Exposure Point Concentration	See Table 6-5 and 6-7	mg/L	--	Chronic Daily Intake (mg/kg-day) =
				FA	Fraction Absorbed Water	chemical-specific	unitless	USEPA, July 2004	DA-event x EV x EDa x EFa x SAa x 1/BWa x 1/AT +
				Kp	Dermal Permeability Coefficient	See Table F-10 and F-17	cm/hr	USEPA, July 2004	DA-event x EV x EDc x EFc x SAc x 1/BWc x 1/AT
				SAa	Body Area Available for Contact - Adult	20900	cm2	USEPA, Feb 2014 (USEPA, 2011a)	
				SAc	Body Area Available for Contact - Child	6378	cm2	USEPA, Feb 2014 (USEPA, 2011a)	Where:
				tau-event	Lag Time per Event	chemical-specific	hours/event	USEPA, July 2004	For organic compounds in which t-event is less than or equal to t-tau:
				t-eventa	Event Duration - Adult (showering)	0.71	hours/event	USEPA, Feb 2014 (USEPA, 2011a)	DA-event (Absorbed Dose per Event [mg/cm2-event]) =
				t-eventc	Event Duration - Child (bathing)	0.54	hours/event	USEPA, Feb 2014 (USEPA, 2011a)	2 x FA x Kp x CW x CF x SQRT([6 x tau-event x t-event] / p)
				B	Ratio of the perm coef of a compound through the stratum corneum relative to its perm coef across the viable epidermis	chemical-specific	unitless	USEPA, July 2004	For organics where t-event is greater than t-tau: DA-event = FA x Kp x CW x CF x {[t-event/(1+B)] + 2 x tau-event x [(1+3B + 3B ^{2}) / (1 + B)^2] }
				EV	Event Frequency	1	event/day	USEPA, July 2004	
				EFa	Exposure Frequency - Adult	350	days/year	USEPA, Feb 2014 (USEPA, 1991a)	For inorganic compounds,
				EFc	Exposure Frequency - Child	350	days/year	USEPA, Feb 2014 (USEPA, 1991a)	DA-event = Kp x CW x CF x t-event
				EDa	Exposure Duration - Adult	20	years	USEPA, Feb 2014 (USEPA, 2011a)	
				EDc	Exposure Duration - Child	6	years	USEPA, Feb 2014 (USEPA, 1991a)	
				CF	Conversion Factor	0.001	L/cm3	--	
				BWa	Body Weight - Adult	80	kg	USEPA, Feb 2014 (USEPA, 2011a)	
				BWc	Body Weight - Child	15	kg	USEPA, Feb 2014 (USEPA, 2011a)	
				ATC	Averaging Time, carcinogens	25550	days	70 y x 365 d/y	
				ATN	Averaging Time, noncarcinogens	9490	days	ED x 365 d/y	
		Child	Groundwater (On-Site and Off-Site)	CDI	Chronic Daily Intake	Calculated	mg/kg-day	--	
				CW	Groundwater Exposure Point Concentration	See Table 6-5 and 6-7	mg/L	--	Chronic Daily Intake (mg/kg-day) =
				FA	Fraction Absorbed Water	chemical-specific	unitless	USEPA, July 2004	DA-event x EV x EDa x EFa x SAa x 1/BWa x 1/AT +
				Kp	Dermal Permeability Coefficient	See Table F-10 and F-17	cm/hr	USEPA, July 2004	DA-event x EV x EDc x EFc x SAc x 1/BWc x 1/AT
				SAc	Body Area Available for Contact - Child	6378	cm2	USEPA, Feb 2014 (USEPA, 2011a)	Where:
				tau-event	Lag Time per Event	chemical-specific	hours/event	USEPA, July 2004	For organic compounds in which t-event is less than or equal to t-tau:
				t-eventc	Event Duration - Child (bathing)	0.54	hours/event	USEPA, Feb 2014 (USEPA, 2011a)	DA-event (Absorbed Dose per Event [mg/cm2-event]) =
				B	Ratio of the perm coef of a compound through the stratum corneum relative to its perm coef across the viable epidermis	chemical-specific	unitless	USEPA, July 2004	2 x FA x Kp x CW x CF x SQRT([6 x tau-event x t-event] / p)
				EV	Event Frequency	1	event/day	USEPA, July 2004	For organics where t-event is greater than t-tau:
				EFc	Exposure Frequency - Child	350	days/year	USEPA, Feb 2014 (USEPA, 1991a)	DA-event = FA x Kp x CW x CF x {[t-event/(1+B)] +
				EDc	Exposure Duration - Child	6	years	USEPA, Feb 2014 (USEPA, 1991a)	2 x tau-event x [(1+3B + 3B ^{2}) / (1 + B)^2] }
				CF	Conversion Factor	0.001	L/cm3	--	For inorganic compounds,
				BWc	Body Weight - Child	15	kg	USEPA, Feb 2014 (USEPA, 2011a)	DA-event = Kp x CW x CF x t-event
				ATN	Averaging Time, noncarcinogens	2190	days	ED x 365 d/y	

Notes:
Exposure factors for 0-2 year, 2-16 year, and 16-26 year life-stages used for calculating risk for carcinogens with a mutagenic mode of action from ingestion and dermal contact are shown on individual tables in Appendix F.

Table F-5
Values Used For Calculation of Daily Intakes - Groundwater to Air
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Vapors

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Inhalation	Resident On-Site and Off-Site	Adult	Groundwater Water Vapors at Showerhead	EC	Exposure Concentration	Calculated	ug/m3	--	
				CAIR	Air Exposure Point Concentration	Modeled from groundwater	ug/m3	--	Exposure Concentration (ug/m3) for carcinogens =
				EF	Exposure Frequency	350	days/year	USEPA, February 2014 (USEPA, 1991a)	CAIR x EF x ED x 1/ATC
				ED	Exposure Duration	20	years	USEPA, February 2014	Exposure Concentration (ug/m3) for noncarcinogens =
				ATC	Averaging Time, carcinogens	25550	days	70 y x 365 d/y	CAIR x EF x ED x 1/ATN
				ATN	Averaging Time, noncarcinogens	7300	days	ED x 365 d/y	where:
									CAIR is calculated using the Foster-Chrostowski model.

Notes:
Exposure factors for 6-16 year and 16-26 year life-stages used for calculating risk for carcinogens with a mutagenic mode of action from inhaling water vapors while showering are shown on individual tables in Appendix F.

Table F-6
Values Used For Calculation of Daily Intakes - Subsurface Soil
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Ingestion	Construction Worker	Adult	Subsurface Soil	CDI	Chronic Daily Intake	Calculated	mg/kg-day	--	
				CSOIL	Soil Exposure Point Concentration	See Table 6-9	mg/kg	--	Chronic Daily Intake (mg/kg-day) for carcinogens =
				IRSOIL	Ingestion Rate, soil	330	mg/day	USEPA, 2002	CSOIL x IRSOIL x FI x EF x ED x CF x 1/BW x 1/ATC
				FI	Fraction Ingested from Source	1	unitless	USEPA, Jan 2014	
				EF	Exposure Frequency	225	days/year	USEPA, Feb 2014 (USEPA, 1991a)	Chronic Daily Intake (mg/kg-day) for noncarcinogens =
				ED	Exposure Duration	1	years	Assumes one year construction	CSOIL x IRSOIL x FI x EF x ED x CF x 1/BW x 1/ATN
				CF	Conversion Factor	0.000001	kg/mg	--	
				BW	Body Weight	80	kg	USEPA, Feb 2014 (USEPA, 2011a)	
				ATC	Averaging Time, carcinogens	25550	days	70 y x 365 d/y	
				ATN	Averaging Time, noncarcinogens	365	days	ED x 365 d/y	
Dermal	Construction Worker	Adult	Subsurface Soil	CDI	Chronic Daily Intake	Calculated	mg/kg-day	--	
				CSOIL	Soil Exposure Point Concentration	See Table 6-9	mg/kg	--	Chronic Daily Intake (mg/kg-day) for carcinogens=
				SA	Skin surface area for contact	3470	cm2/day	USEPA, Feb 2014 (USEPA, 2011a)	CSOIL x SA x AF x ABS x EF x ED x CF x 1/BW x 1/ATC
				AF	Soil-to-skin adherence factor	0.3	mg/cm2	USEPA, 2004	
				ABS	Soil Absorption Factor	Chemical-Specific	unitless	USEPA, July 2004	Chronic Daily Intake (mg/kg-day) for noncarcinogens=
				EF	Exposure Frequency	225	days/year	USEPA, Feb 2014 (USEPA, 1991a)	CSOIL x SA x AF x ABS x EF x ED x CF x 1/BW x 1/ATN
				ED	Exposure Duration	1	years	Assumes one year construction	
				CF	Conversion Factor	0.000001	kg/mg	--	
				BW	Body Weight	80	kg	USEPA, Feb 2014 (USEPA, 2011a)	
				ATC	Averaging Time, carcinogens	25550	days	70 y x 365 d/y	
				ATN	Averaging Time, noncarcinogens	365	days	ED x 365 d/y	

Table F-7
Values Used For Calculation of Daily Intakes - Soil Gas to Air
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Current/Future
Medium: Soil Gas
Exposure Medium: Vapors

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Inhalation	Industrial Worker	Adult	Indoor Air via Vapor Intrusion	EC	Exposure Concentration	Calculated	ug/m3	--	
				CAIR	Air Exposure Point Concentration	Modeled from soil gas	ug/m3	--	Exposure Concentration (ug/m3) for carcinogens =
				ET	Exposure Time	8	hr/day	USEPA, February 2014	CAIR x ET x EF x ED x 1/ATC
				EF	Exposure Frequency	250	days/year	USEPA, February 2014 (USEPA, 1991a)	
				ED	Exposure Duration	25	years	USEPA, February 2014 (USEPA, 1991a)	Exposure Concentration (ug/m3) for noncarcinogens =
				ATC	Averaging Time, carcinogens	613,200	hours	70 y x 365 d/y x 24 hr/d	CAIR x ET x EF x ED x 1/ATN
				ATN	Averaging Time, noncarcinogens	219,000	hours	ED x 365 d/y x 24 hr/d	
	On-Site Resident	Adult	Indoor Air via Vapor Intrusion	EC	Exposure Concentration	Calculated	ug/m3	--	
				CAIR	Air Exposure Point Concentration	Modeled from soil gas	ug/m3	--	Exposure Concentration (ug/m3) for carcinogens =
				ET	Exposure Time	24	hr/day	USEPA, February 2014	CAIR x ET x EF x ED x 1/ATC
				EF	Exposure Frequency	350	days/year	USEPA, February 2014 (USEPA, 1991a)	
				ED	Exposure Duration	26	years	USEPA, February 2014 (USEPA, 1991a)	Exposure Concentration (ug/m3) for noncarcinogens =
				ATC	Averaging Time, carcinogens	613,200	hours	70 y x 365 d/y x 24 hr/d	CAIR x ET x EF x ED x 1/ATN
				ATN	Averaging Time, noncarcinogens	227,760	hours	ED x 365 d/y x 24 hr/d	

Notes:
Exposure factors for 6-16 year and 16-26 year life-stages used for calculating risk for carcinogens with a mutagenic mode of action from inhaling vapors from soil gas via vapor intrusion are shown on individual tables in Appendix F.

Table F-8
DA_{event} Equations for Groundwater
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

For organics,

$$If\ t_{event} \le t^*, then: DA_{event} = 2FA \times K_p \times C_w \sqrt{\frac{6\tau_{event} \times t_{event}}{\pi}}$$

$$If\ t_{event} > t^*, then: DA_{event} = FA \times K_p \times C_w \left[\frac{t_{event}}{1+B} + 2\tau_{event} \left(\frac{1+3B+3B^2}{(1+B)^2} \right) \right]$$

Parameter	Definition (Units)	Value	Source
Organics			
DA_{event}	Dose absorbed per event (mg/cm^2-event)	Chemical-specific	Calculated using Equations 3.2 or 3.3 (USEPA, July 2004).
FA	Fraction absorbed water (dimensionless)	Chemical-specific	Obtained from Appendix B, Exhibit B-3 (USEPA, July 2004).
K_p	Dermal permeability coefficient (cm/hr)	Chemical-specific	Obtained from Appendix B, Exhibit B-2 (USEPA, July 2004).
C_w	Chemical concentration in water (mg/cm^3)	Chemical-specific	Refer to Tables 6-5 and 6-7 for groundwater concentration.
τ_{event}	Lag time per event (hr/event)	Chemical-specific	Calculated using Equation A.4 (USEPA, July 2004).
t_{event}	Event duration (hr/event)	Resident Adult: 0.67	Age Adjusted, based on tevent of 0.54 for child and 0.71 for adult from USEPA, Feb 2014: ((0.54*6) + (0.71*20)) / 26
t^*	Time to reach steady-state (hr)	Chemical-specific	Calculated using Equations A.5 or A.6 (USEPA, July 2004).
B	Kp stratum corneum: Kp viable epidermis (dimensionless)	Chemical-specific	Calculated using Equation A.1 (USEPA, July 2004).

Table F-9
Estimation of DA_{event} - Lag Time per Event (τ_{event}) for Dermal Contact with Groundwater
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

$$\tau_{event} = \frac{l_{sc}^{\ 2}}{6 * D_{sc}} = 0.105 * 10^{(0.0056*MW)}$$

Used in calculation for τ_{event} (Equation A.4 in USEPA 2004)	Molecular Weight [1] (g/mole)	EDC for stratum corneum/ Apparent thickness of stratum corneum (cm/hr)	EDC for stratum corneum/ Apparent thickness of stratum corneum (cm/hr)	Apparent thickness of stratum corneum (cm)	Effective Diffusion Coefficient through Stratum Corneum (cm2/hr)	Lag Time per Event (hr/event)
Chemical	MW	Log *Dsc/lsc*	*Dsc / lsc*	*lsc*	*Dsc*	τ_{event}
On-Site						
Bromodichloromethane	163.8	-3.72427584	0.000188679	0.001	1.89E-07	0.88
Chloroform	119.4	-3.47511192	0.000334879	0.001	3.35E-07	0.50
cis-1,2-Dichloroethylene	96.9	-3.34884642	0.000447872	0.001	4.48E-07	0.37
Dibromochloromethane	208	-3.9723174	0.000106582	0.001	1.07E-07	1.56
Methylene chloride	84.9	-3.28150482	0.000522992	0.001	5.23E-07	0.32
Tetrachloroethylene	165.8	-3.73549944	0.000183866	0.001	1.84E-07	0.91
Trichloroethylene	131.4	-3.54245352	0.000286778	0.001	2.87E-07	0.58
2-Methylnaphthalene	142	-3.6019386	0.00025007	0.001	2.50E-07	0.67
Naphthalene	128.18	-3.524383524	0.000298962	0.001	2.99E-07	0.56
Arsenic	74.922	-3.22551028	0.000594963	0.001	5.95E-07	0.28
Chromium	52	-3.0968766	0.000800062	0.001	8.00E-07	0.21
Off-Site						
Bromodichloromethane	163.8	-3.72427584	0.000188679	0.001	1.89E-07	0.88
Chloroform	119.4	-3.47511192	0.000334879	0.001	3.35E-07	0.50
Dibromochloromethane	208	-3.9723174	0.000106582	0.001	1.07E-07	1.56
Tetrachloroethylene	165.8	-3.73549944	0.000183866	0.001	1.84E-07	0.91
Trichloroethylene	131.4	-3.54245352	0.000286778	0.001	2.87E-07	0.58

Note:
[1] Value obtained from the RSL Chemical-Specific Parameters Supporting Table (USEPA, May 2014).

Table F-10
Estimation of DA_{event} - Time to Reach Steady State for Dermal Contact with Groundwater
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

If $B \leq 0.6$, then $t^* = 2.4 * \tau_{event}$

If $B > 0.6$, then $t^* = 6 * \tau_{event} (b - \sqrt{b^2 - c^2})$

$$b = \frac{2 * (1 + B)^2}{\pi} - c \qquad c = \frac{1 + 3B + 3B^2}{3 * (1 + B)}$$

Used in calculation for t* (Equation A.5 or A.6 in USEPA 2004). Also uses Equations A.7 and A.8 for b and c in USEPA 2004.	**Permeability Constant [1]** (cm/hr)	**Molecular Weight [1]** (g/mole)	**Kp Stratum Corneum: Kp Viable Epidermis** (unitless)	**Lag Time per Event** (hr/event)	**Formula Used**	**Time to reach steady state** (hr)	**Correlation Coefficients** (unitless)	**Correlation Coefficients** (unitless)
Chemical	Kp	MW	B	τ_{event}	Formula	t*	b	c
On-Site								
Bromodichloromethane	0.00402	163.8	0.020	0.88	Eq. A.5	2.12	0.32	0.35
Chloroform	0.00683	119.4	0.029	0.50	Eq. A.5	1.19	0.32	0.35
cis-1,2-Dichloroethylene	0.011	96.9	0.042	0.37	Eq. A.5	0.89	0.33	0.36
Dibromochloromethane	0.00289	208	0.016	1.56	Eq. A.5	3.75	0.31	0.34
Methylene chloride	0.00354	84.9	0.013	0.32	Eq. A.5	0.76	0.31	0.34
Tetrachloroethylene	0.0334	165.8	0.165	0.91	Eq. A.5	2.18	0.41	0.45
Trichloroethylene	0.0116	131.4	0.051	0.58	Eq. A.5	1.39	0.34	0.37
2-Methylnaphthalene	0.0917	142	0.420	0.67	Eq. A.5	1.60	0.63	0.65
Naphthalene	0.0466	128.18	0.203	0.56	Eq. A.5	1.34	0.44	0.48
Arsenic	0.001	74.922	0.003	0.28	Eq. A.5	0.67	0.31	0.34
Chromium	0.001	52	0.003	0.21	Eq. A.5	0.50	0.30	0.34
Off-Site								
Bromodichloromethane	0.00402	163.8	0.020	0.88	Eq. A.5	2.12	0.32	0.35
Chloroform	0.00683	119.4	0.029	0.50	Eq. A.5	1.19	0.32	0.35
Dibromochloromethane	0.00289	208	0.016	1.56	Eq. A.5	3.75	0.31	0.34
Tetrachloroethylene	0.0334	165.8	0.165	0.91	Eq. A.5	2.18	0.41	0.45
Trichloroethylene	0.0116	131.4	0.051	0.58	Eq. A.5	1.39	0.34	0.37

Note:
[1] Value obtained from the RSL Chemical-Specific Parameters Supporting Table (USEPA, May 2014).

Table F-11

Estimation of DA_{event} for Dermal Contact with Organics in Groundwater (Resident Adult)

Human Health Risk Assessment

UTC Delavan Spray Technologies Site

Bamberg, South Carolina

AECOM Project No. 60314964

For organics ,

$$If\ t_{event} \le t^*,\ then: DA_{event} = 2FA \times K_p \times C_w \sqrt{\frac{6\tau_{event} \times t_{event}}{\pi}}$$

$$If\ t_{event} > t^*,\ then: DA_{event} = FA \times K_p \times C_w \left[\frac{t_{event}}{1+B} + 2\tau_{event}\left(\frac{1+3B+3B^2}{(1+B)^2}\right)\right]$$

Parameter	Fraction absorbed water[1] (unitless)	Permeability Constant[2] (cm/hr)	Concentration in Water[3] (mg/L)	Concentration in Water (mg/cm3)	Lag Time per Event[4] (hr/event)	Time to reach steady state[5] (hr)	Event Duration[6] (hr/event)	Molecular Weight[2] (g/mole)	Kp Stratum Corneum: Kp Viable Epidermis[7] (unitless)	Formula Used[8, 9]	Absorbed Dose per Event[8] (mg/cm3-event)	Absorbed Dose per Event[9] (mg/cm3-event)	Absorbed Dose per Event[10] (mg/cm3-event)
Chemical	FA	Kp	Cw (mg/L)	Cw (mg/cm ^{3})	τ_{event}	t*	t_{event}	MW	B	Formula	DA_{event} (Eq. 3.2)	DA_{event} (Eq. 3.3)	Final DA_{event} Adult
On-Site													
Bromodichloromethane	1.0	0.00402	0.01040	1.04E-05	0.88	2.12	0.67	163.8	0.020	Eq. 3.2	8.89E-08	-	8.89E-08
Chloroform	1.0	0.00683	0.13100	1.31E-04	0.50	1.19	0.67	119.4	0.029	Eq. 3.2	1.43E-06	-	1.43E-06
cis-1,2-Dichloroethylene	1.0	0.011	0.46600	4.66E-04	0.37	0.89	0.67	96.9	0.042	Eq. 3.2	7.07E-06	-	7.07E-06
Dibromochloromethane	1.0	0.00289	0.00180	1.80E-06	1.56	3.75	0.67	208	0.016	Eq. 3.2	1.47E-08	-	1.47E-08
Methylene chloride	1.0	0.00354	0.55180	5.52E-04	0.32	0.76	0.67	84.9	0.013	Eq. 3.2	2.49E-06	-	2.49E-06
Tetrachloroethylene	1.0	0.0334	15.80100	1.58E-02	0.91	2.18	0.67	165.8	0.165	Eq. 3.2	1.14E-03	-	1.14E-03
Trichloroethylene	1.0	0.0116	0.14030	1.40E-04	0.58	1.39	0.67	131.4	0.051	Eq. 3.2	2.81E-06	-	2.81E-06
2-Methylnaphthalene	1.0	0.0917	0.00740	7.40E-06	0.67	1.60	0.67	142	0.420	Eq. 3.2	1.25E-06	-	1.25E-06
Naphthalene	1.0	0.0466	0.00240	2.40E-06	0.56	1.34	0.67	128.18	0.203	Eq. 3.2	1.89E-07	-	1.89E-07
Off-Site													
Bromodichloromethane	1.0	0.00402	0.00720	7.20E-06	0.88	2.12	0.67	163.8	0.020	Eq. 3.2	6.15E-08	-	6.15E-08
Chloroform	1.0	0.00683	0.18000	1.80E-04	0.50	1.19	0.67	119.4	0.029	Eq. 3.2	1.96E-06	-	1.96E-06
Dibromochloromethane	1.0	0.00289	0.00068	6.80E-07	1.56	3.75	0.67	208	0.016	Eq. 3.2	5.56E-09	-	5.56E-09
Tetrachloroethylene	1.0	0.0334	0.09980	9.98E-05	0.91	2.18	0.67	165.8	0.165	Eq. 3.2	7.18E-06	-	7.18E-06
Trichloroethylene	1.0	0.0116	0.00056	5.60E-07	0.58	1.39	0.67	131.4	0.051	Eq. 3.2	1.12E-08	-	1.12E-08

Notes:

[1] Value obtained from Appendix B, Exhibit B-3 (USEPA, July 2004).

[2] Value obtained from the RSL Chemical-Specific Parameters Supporting Table (USEPA, May 2014).

[3] Refer to Tables 6-5 and 6-7, respectively, for on-site and off-site groundwater concentration.

[4] Refer to Table F-9.

[5] Refer to Table F-10.

[6] Refer to Table F-8.

[7] Value estimated using Equation A-1 (USEPA 2004).

[8] Estimated using Equation 3-2 when $t_{event} \le t^*$ (USEPA 2004).

[9] Estimated Using Equation 3-3 when $t_{event} > t^*$ (USEPA 2004).

[10] DA_{event} from either Equation 3-2 or 3-3 depending on t_{event} (USEPA 2004).

Table F-12

Estimation of DA_{event} for Dermal Contact with Inorganics in Groundwater (Resident Adult)
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

For inorganics,

$$DA_{event} = K_p \times C_w \times CF \times t_{event}$$

Parameter	Permeability Constant[1] (cm/hr)	Concentration in Water[2] (mg/L)	Conversion Factor (L/cm3)	Event Duration (hr/event)	Absorbed Dose per Event[3] (mg/cm^2-event)
Chemical (Inorganics)	Kp	CW	CF	t_{event}	Final DA_{event}
On-Site					
Arsenic	1.E-03	3.20E-03	1.00E-03	0.67	2.14E-09
Chromium	1.E-03	5.25E-03	1.00E-03	0.67	3.51E-09

Notes:

[1] Value obtained from the RSL Chemical-Specific Parameters Supporting Table (USEPA, May 2014).

[2] Refer to Table 6-5 for on-site groundwater concentration.

[3] DA_{event} from Equation 3-4 (USEPA, July 2004).

Table F-13

Estimation of DA_{event} for Dermal Contact with Organics in Groundwater (Resident Child)

Human Health Risk Assessment

UTC Delavan Spray Technologies Site

Bamberg, South Carolina

AECOM Project No. 60314964

$$For\ organics\ ,$$

$$If\ t_{event} \le t^*,\ then\ :\ DA_{event} = 2FA \times K_p \times C_w \sqrt{\frac{6\tau_{event} \times t_{event}}{\pi}}$$

$$If\ t_{event} > t^*,\ then\ :\ DA_{event} = FA \times K_p \times C_w \left[\frac{t_{event}}{1+B} + 2\tau_{event}\left(\frac{1+3B+3B^2}{(1+B)^2}\right)\right]$$

Parameter	Fraction absorbed water[1] (unitless)	Permeability Constant[2] (cm/hr)	Concentration in Water[3] (mg/L)	Concentration in Water (mg/cm3)	Lag Time per Event[4] (hr/event)	Time to reach steady state[5] (hr)	Event Duration[6] (hr/event)	Molecular Weight[2] (g/mole)	Kp Stratum Corneum: Kp Viable Epidermis[7] (unitless)	Formula Used[8, 9]	Absorbed Dose per Event[8] (mg/cm3-event)	Absorbed Dose per Event[9] (mg/cm3-event)	Absorbed Dose per Event[10] (mg/cm3-event)
Chemical	FA	Kp	Cw (mg/L)	Cw (mg/cm ^{3})	τ_{event}	t*	t_{event}	MW	B	Formula	DA_{event} (Eq. 3.2)	DA_{event} (Eq. 3.3)	Final DA_{event} Child
On-Site													
Bromodichloromethane	1.0	0.00402	0.01040	1.04E-05	0.88	2.12	0.54	163.8	0.020	Eq. 3.2	7.98E-08	-	7.98E-08
Chloroform	1.0	0.00683	0.13100	1.31E-04	0.50	1.19	0.54	119.4	0.029	Eq. 3.2	1.28E-06	-	1.28E-06
cis-1,2-Dichloroethylene	1.0	0.011	0.46600	4.66E-04	0.37	0.89	0.54	96.9	0.042	Eq. 3.2	6.35E-06	-	6.35E-06
Dibromochloromethane	1.0	0.00289	0.00180	1.80E-06	1.56	3.75	0.54	208	0.016	Eq. 3.2	1.32E-08	-	1.32E-08
Methylene chloride	1.0	0.00354	0.55180	5.52E-04	0.32	0.76	0.54	84.9	0.013	Eq. 3.2	2.24E-06	-	2.24E-06
Tetrachloroethylene	1.0	0.0334	15.80100	1.58E-02	0.91	2.18	0.54	165.8	0.165	Eq. 3.2	1.02E-03	-	1.02E-03
Trichloroethylene	1.0	0.0116	0.14030	1.40E-04	0.58	1.39	0.54	131.4	0.051	Eq. 3.2	2.52E-06	-	2.52E-06
2-Methylnaphthalene	1.0	0.0917	0.00740	7.40E-06	0.67	1.60	0.54	142	0.420	Eq. 3.2	1.13E-06	-	1.13E-06
Naphthalene	1.0	0.0466	0.00240	2.40E-06	0.56	1.34	0.54	128.18	0.203	Eq. 3.2	1.70E-07	-	1.70E-07
Off-Site													
Bromodichloromethane	1.0	0.00402	0.00720	7.20E-06	0.88	2.12	0.54	163.8	0.020	Eq. 3.2	5.53E-08	-	5.53E-08
Chloroform	1.0	0.00683	0.18000	1.80E-04	0.50	1.19	0.54	119.4	0.029	Eq. 3.2	1.76E-06	-	1.76E-06
Dibromochloromethane	1.0	0.00289	0.00068	6.80E-07	1.56	3.75	0.54	208	0.016	Eq. 3.2	4.99E-09	-	4.99E-09
Tetrachloroethylene	1.0	0.0334	0.09980	9.98E-05	0.91	2.18	0.54	165.8	0.165	Eq. 3.2	6.45E-06	-	6.45E-06
Trichloroethylene	1.0	0.0116	0.00056	5.60E-07	0.58	1.39	0.54	131.4	0.051	Eq. 3.2	1.01E-08	-	1.01E-08

Notes:

[1] Value obtained from Appendix B, Exhibit B-3 (USEPA, July 2004).

[2] Value obtained from the RSL Chemical-Specific Parameters Supporting Table (USEPA, May 2014).

[3] Refer to Tables 6-5 and 6-7, respectively, for on-site and off-site groundwater concentration.

[4] Refer to Table F-9.

[5] Refer to Table F-10.

[6] Refer to Table F-8.

[7] Value estimated using Equation A-1 (USEPA, July 2004).

[8] Estimated using Equation 3-2 when $t_{event} \le t^*$ (USEPA, July 2004).

[9] Estimated Using Equation 3-3 when $t_{event} > t^*$ (USEPA, July 2004).

[10] DA_{event} from either Equation 3-2 or 3-3 depending on t_{event} (USEPA, July 2004).

Table F-14

Estimation of DA_{event} for Dermal Contact with Inorganics in Groundwater (Resident Child)
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

For inorganics

$$DA_{event} = K_p \times C_w \times CF \times t_{event}$$

Parameter	Permeability Constant[1] (cm/hr)	Concentration in Water[2] (mg/L)	Conversion Factor (L/cm3)	Event Duration (hr/event)	Absorbed Dose per Event[3] (mg/cm^2-event)
Chemical (Inorganics)	Kp	CW	CF	t_{event}	Final DA_{event}
On-Site					
Arsenic	1.E-03	3.20E-03	1.00E-03	0.54	1.73E-09
Chromium	1.E-03	5.25E-03	1.00E-03	0.54	2.83E-09

Notes:

[1] Value obtained from the RSL Chemical-Specific Parameters Supporting Table (USEPA, May 2014).

[2] Refer to Table 6-5 for on-site groundwater concentration.

[3] DA_{event} from Equation 3-4 (USEPA, July 2004).

Table F-15
DA_{event} Equations for Groundwater for Carcinogens with a Mutagenic Mode of Action
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

For organics,

$$If\ t_{event} \le t^*, then: DA_{event} = 2FA \times K_p \times C_w \sqrt{\frac{6\tau_{event} \times t_{event}}{\pi}}$$

$$If\ t_{event} > t^*, then: DA_{event} = FA \times K_p \times C_w \left[\frac{t_{event}}{1+B} + 2\tau_{event} \left(\frac{1+3B+3B^2}{(1+B)^2} \right) \right]$$

Parameter	Definition (Units)	Value	Source
Organics			
DA_{event}	Dose absorbed per event (mg/cm^2-event)	Chemical-specific	Calculated using Equations 3.2 or 3.3 (USEPA, July 2004).
FA	Fraction absorbed water (dimensionless)	Chemical-specific	Obtained from Appendix B, Exhibit B-3 (USEPA, July 2004).
K_p	Dermal permeability coefficient (cm/hr)	Chemical-specific	Obtained from Appendix B, Exhibit B-2 (USEPA, July 2004).
C_w	Chemical concentration in water (mg/cm^3)	Chemical-specific	Refer to Table 6-5 and 6-7 for groundwater concentration.
τ_{event}	Lag time per event (hr/event)	Chemical-specific	Calculated using Equation A.4 (USEPA, July 2004).
t_{event}	Event duration (hr/event)	Resident Adult: 0.71	Obtained from (USEPA, February 2014).
		Resident Child: 0.54	Obtained from (USEPA, February 2014).
t^*	Time to reach steady-state (hr)	Chemical-specific	Calculated using Equations A.5 or A.6 (USEPA, July 2004).
B	Kp stratum corneum: Kp viable epidermis (dimensionless)	Chemical-specific	Calculated using Equation A.1 (USEPA, July 2004).

Table F-16
Estimation of DA_{event} - Lag Time per Event (τ_{event}) for Dermal Contact with Groundwater
for Carcinogens with a Mutagenic Mode of Action
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

$$\tau_{event} = \frac{l_{sc}^{\ 2}}{6 * D_{sc}} = 0.105 * 10^{(0.0056*MW)}$$

Used in calculation for τ_{event} (Equation A.4 in USEPA 2004)	Molecular Weight [1] (g/mole)	EDC for stratum corneum/ Apparent thickness of stratum corneum (cm/hr)	EDC for stratum corneum/ Apparent thickness of stratum corneum (cm/hr)	Apparent thickness of stratum corneum (cm)	Effective Diffusion Coefficient through Stratum Corneum (cm2/hr)	Lag Time per Event (hr/event)
Chemical	MW	Log *Dsc/lsc*	*Dsc / lsc*	*lsc*	*Dsc*	τ_{event}
On-Site						
Methylene Chloride	84.9	-3.28150482	0.000522992	0.001	5.23E-07	0.32
Trichloroethene	131.4	-3.54245352	0.000286778	0.001	2.87E-07	0.58
Off-Site						
Trichloroethene	131.4	-3.54245352	0.000286778	0.001	2.87E-07	0.58

Note:
[1] Value obtained from the RSL Chemical-Specific Parameters Supporting Table (USEPA, May 2014).

Table F-17
Estimation of DA_{event} - Time to Reach Steady State for Dermal Contact with Groundwater
for Carcinogens with a Mutagenic Mode of Action
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

If $B \leq 0.6$, then $t^* = 2.4 * \tau_{event}$

If $B > 0.6$, then $t^* = 6 * \tau_{event} (b - \sqrt{b^2 - c^2})$

$$b = \frac{2 * (1 + B)^2}{\pi} - c \qquad c = \frac{1 + 3B + 3B^2}{3 * (1 + B)}$$

Used in calculation for t* (Equation A.5 or A.6 in USEPA 2004). Also uses Equations A.7 and A.8 for b and c in USEPA 2004.	**Permeability Constant** [1] (cm/hr)	**Molecular Weight** [1] (g/mole)	**Kp Stratum Corneum: Kp Viable Epidermis** (unitless)	**Lag Time per Event** (hr/event)	**Formula Used**	**Time to reach steady state** (hr)	**Correlation Coefficients** (unitless)	**Correlation Coefficients** (unitless)
Chemical	Kp	MW	B	τ_{event}	Formula	t*	b	c
On-Site								
Methylene Chloride	0.00354	84.9	0.013	0.32	Eq. A.5	0.76	0.31	0.34
Trichloroethene	0.0116	131.4	0.051	0.58	Eq. A.5	1.39	0.34	0.37
Off-Site								
Trichloroethene	0.0116	131.4	0.051	0.58	Eq. A.5	1.39	0.34	0.37

Note:
[1] Value obtained from the RSL Chemical-Specific Parameters Supporting Table (USEPA, May 2014).

Table F-18

Estimation of DA_{event} for Dermal Contact with Organics in Groundwater for Carcinogens with a Mutagenic Mode of Action (Resident Adult)

Human Health Risk Assessment

UTC Delavan Spray Technologies Site

Bamberg, South Carolina

AECOM Project No. 60314964

$$For\ \ organics\ \ ,$$

$$If\ t_{event}\ \le t^*,\ then\ :DA_{event}\ = 2FA \times K_p \times C_w \sqrt{\frac{6\tau_{event}\ \times t_{event}}{\pi}}$$

$$If\ t_{event}\ > t^*,\ then\ :DA_{event}\ = FA \times K_p \times C_w \left[\frac{t_{event}}{1+B} + 2\tau_{event}\left(\frac{1+3B+3B^2}{(1+B)^2}\right)\right]$$

Parameter	Fraction absorbed water[1] (unitless)	Permeability Constant[2] (cm/hr)	Concentration in Water[3] (mg/L)	Concentration in Water (mg/cm3)	Lag Time per Event[4] (hr/event)	Time to reach steady state[5] (hr)	Event Duration[6] (hr/event)	Molecular Weight[2] (g/mole)	Kp Stratum Corneum: Kp Viable Epidermis[7] (unitless)	Formula Used[8, 9]	Absorbed Dose per Event[8] (mg/cm3-event)	Absorbed Dose per Event[9] (mg/cm3-event)	Absorbed Dose per Event[10] (mg/cm3-event)
Chemical	FA	Kp	Cw (mg/L)	Cw (mg/cm ^{3})	τ_{event}	t*	t_{event}	MW	B	Formula	DA_{event} (Eq. 3.2)	DA_{event} (Eq. 3.3)	Final DA_{event} Adult
On-Site													
Methylene Chloride	1.0	0.00354	0.55180	5.52E-04	0.32	0.76	0.71	84.9	0.013	Eq. 3.2	2.57E-06	-	2.57E-06
Trichloroethene	1.0	0.0116	0.14030	1.40E-04	0.58	1.39	0.71	131.4	0.051	Eq. 3.2	2.89E-06	-	2.89E-06
Off-Site													
Trichloroethene	1.0	0.0116	0.000560	5.60E-07	0.58	1.39	0.71	131.4	0.051	Eq. 3.2	1.15E-08	-	1.15E-08

Notes:

[1] Value obtained from Appendix B, Exhibit B-3 (USEPA, July 2004).

[2] Value obtained from the RSL Chemical-Specific Parameters Supporting Table (USEPA, May 2014).

[3] Refer to Tables 6-5 and 6-7, respectively, for on-site and off-site groundwater concentration.

[4] Refer to Table F-16.

[5] Refer to Table F-17.

[6] Refer to Table F-15.

[7] Value estimated using Equation A-1 (USEPA, July 2004).

[8] Estimated using Equation 3-2 when $t_{event} \le t^*$ (USEPA, July 2004).

[9] Estimated Using Equation 3-3 when $t_{event} > t^*$ (USEPA, July 2004).

[10] DA_{event} from either Equation 3-2 or 3-3 depending on t_{event} (USEPA 2004).

Table F-19

Estimation of DA_{event} for Dermal Contact with Organics in Groundwater for Carcinogens with a Mutagenic Mode of Action (Resident Child)

Human Health Risk Assessment

UTC Delavan Spray Technologies Site

Bamberg, South Carolina

AECOM Project No. 60314964

$$For\ \ organics\ \ ,$$

$$If\ t_{event} \le t^*,\ then\ : DA_{event} = 2FA \times K_p \times C_w \sqrt{\frac{6\tau_{event} \times t_{event}}{\pi}}$$

$$If\ t_{event} > t^*,\ then\ : DA_{event} = FA \times K_p \times C_w \left[\frac{t_{event}}{1+B} + 2\tau_{event}\left(\frac{1+3B+3B^2}{(1+B)^2}\right)\right]$$

Parameter	Fraction absorbed water [1] (unitless)	Permeability Constant [2] (cm/hr)	Concentration in Water [3] (mg/L)	Concentration in Water (mg/cm3)	Lag Time per Event [4] (hr/event)	Time to reach steady state [5] (hr)	Event Duration [6] (hr/event)	Molecular Weight [2] (g/mole)	Kp Stratum Corneum: Kp Viable Epidermis [7] (unitless)	Formula Used [8, 9]	Absorbed Dose per Event [8] (mg/cm3-event)	Absorbed Dose per Event [9] (mg/cm3-event)	Absorbed Dose per Event [10] (mg/cm3-event)
Chemical	FA	Kp	Cw (mg/L)	Cw (mg/cm^3)	τ_{event}	t*	t_{event}	MW	B	Formula	DA_{event} (Eq. 3.2)	DA_{event} (Eq. 3.3)	Final DA_{event} Child
On-Site													
Methylene Chloride	1.0	0.00354	0.55180	5.52E-04	0.32	0.76	0.54	84.9	0.013	Eq. 3.2	2.24E-06	-	2.24E-06
Trichloroethene	1.0	0.0116	0.14030	1.40E-04	0.58	1.39	0.54	131.4	0.051	Eq. 3.2	2.52E-06	-	2.52E-06
Off-Site													
Trichloroethene	1.0	0.0116	0.000560	5.60E-07	0.58	1.39	0.54	131.4	0.051	Eq. 3.2	1.01E-08	-	1.01E-08

Notes:

[1] Value obtained from Appendix B, Exhibit B-3 (USEPA, July 2004).

[2] Value obtained from the RSL Chemical-Specific Parameters Supporting Table (USEPA, May 2014).

[3] Refer to Tables 6-5 and 6-7, respectively, for on-site and off-site groundwater concentration.

[4] Refer to Table F-16.

[5] Refer to Table F-17.

[6] Refer to Table F-15.

[7] Value estimated using Equation A-1 (USEPA, July 2004).

[8] Estimated using Equation 3-2 when $t_{event} \le t^*$ (USEPA, July 2004).

[9] Estimated Using Equation 3-3 when $t_{event} > t^*$ (USEPA, July 2004).

[10] DA_{event} from either Equation 3-2 or 3-3 depending on t_{event} (USEPA, July 2004).

Table F-20
Calculation of Risks to Future Residents from Ingestion of Groundwater for Carcinogens with a Mutagenic Mode of Action
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	26-year Resident (Adult/Child)

Medium:	Groundwater
Exposure Medium:	Groundwater
Exposure Route:	Ingestion

Age	IRGW [1,2,5] (L/day)	EF [1,2] (days/yr)	ED [3,5] (years)	BW [1,2,4,5] (kg)	AT-C (days) (70 years x 365 days/year)
0 to 2 years	0.78	350	2	10	25550
2 to 16 years	2	350	14	33	25550
16 to 26 years	2.5	350	10	80	25550

DI = (CGW x IRGW x EF x ED) / (BW x AT-C)

Risk (0 to 2 years) = DI (0 to 2 years) x SF x 10 (Age-Dependent Adjustment Factor)
Risk (2 to 16 years) = DI (2 to 16 years) x SF x 3 (Age-Dependent Adjustment Factor)
Risk (16 to 26 years) = DI (16 to 26 years) x SF x 1 (Age-Dependent Adjustment Factor)

Chemical	CGW (mg/L)	DI (0 to 2 years) (mg/kg-day)	DI (2 to 16 years) (mg/kg-day)	DI (16 to 26 years) (mg/kg-day)	SF $(mg/kg\text{-}day)^{-1}$	Risk (0 to 2 years)	Risk (2 to 16 years)	Risk (16 to 26 years)	Total Risk
On-Site Groundwater									
Methylene Chloride	5.52E-01	1.18E-03	6.41E-03	2.36E-03	2.00E-03	2.36E-05	3.85E-05	4.72E-06	6.68E-05
Trichloroethene	1.40E-01	3.00E-04	1.63E-03	6.01E-04	4.60E-02	1.38E-04	2.25E-04	2.76E-05	3.91E-04
Off-Site Groundwater									
Trichloroethene	5.60E-04	1.20E-06	6.51E-06	2.40E-06	4.60E-02	5.50E-07	8.98E-07	1.10E-07	1.56E-06

Where:

CGW (mg/L) = Concentration in groundwater
IRGW (L/day) = Ingestion Rate, groundwater
EF (days/year) = Exposure Frequency
ED (years) = Exposure Duration
BW (kg) = Body Weight
AT-C (days) = (70 [lifetime in years] x 365 days/year)
DI (mg/kg-day) = Daily Intake
SF $(mg/kg\text{-}day)^{-1}$ = Oral Slope Factor

Sources:

[1] USEPA, 1991. Human Health Evaluation Manual, Supplemental Guidance: "Standard Default Exposure Factors". June 1991.
[2] USEPA, 2013. Regional Screening Table - User's Guide, Mid-Atlantic Risk Assessment. May 2013. http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/usersguide.htm.
[3] USEPA, 2005. Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens. March 2005.
[4] USEPA, 1997. Exposure Factors Handbook. August 1997.
[5] USEPA, 2014. OSWER Directive 9200.1-120. February 2014.

Table F-21
Calculation of Risks to Future Residents from Dermal Contact with Groundwater for Carcinogens with a Mutagenic Mode of Action
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	26-year Resident (Adult/Child)

Medium:	Groundwater
Exposure Medium:	Groundwater
Exposure Route:	Dermal Contact

Age	EV [1] (events/day)	EF [1] (days/yr)	ED [2,6] (years)	SA [1,3,6] (cm^2)	BW [1,3,6] (kg)	AT-C (days) (70 years x 365 days/year)
0 to 2 years	1	350	2	4643	10	25550
2 to 16 years	1	350	14	11601	33	25550
16 to 26 years	1	350	10	20900	80	25550

DAD = (DA-Event x EV x EF x ED x SA) / (BW x AT-C)

Risk (0 to 2 years) = DAD (0 to 2 years) x SF x 10 (Age-Dependent Adjustment Factor)
Risk (2 to 16 years) = DAD (2 to 16 years) x SF x 3 (Age-Dependent Adjustment Factor)
Risk (16 to 26 years) = DAD (16 to 26 years) x SF x 1 (Age-Dependent Adjustment Factor)

Chemical	CGW (mg/L)	DA-Event [4] (0 to 2 years) (mg/cm^2-event)	DA-Event [4] (2 to 16 years) (mg/cm^2-event)	DA-Event [5] (16 to 26 years) (mg/cm^2-event)	DAD (0 to 2 years) (mg/kg-day)	DAD (2 to 16 years) (mg/kg-day)	DAD (16 to 26 years) (mg/kg-day)	SF $(mg/kg\text{-}day)^{-1}$	Risk (0 to 2 years)	Risk (2 to 16 years)	Risk (16 to 26 years)	Total Risk
On-Site Groundwater												
Methylene Chloride	5.52E-01	2.24E-06	2.24E-06	2.57E-06	2.85E-05	1.51E-04	9.19E-05	2.00E-03	5.70E-07	9.06E-07	1.84E-07	1.66E-06
Trichloroethene	1.40E-01	2.52E-06	2.52E-06	2.89E-06	3.21E-05	1.70E-04	1.03E-04	4.60E-02	1.47E-05	2.34E-05	4.76E-06	4.29E-05
Off-Site Groundwater												
Trichloroethene	5.60E-04	1.01E-08	1.01E-08	1.15E-08	1.28E-07	6.78E-07	4.13E-07	4.60E-02	5.89E-08	9.36E-08	1.90E-08	1.71E-07

Where:

DA-Event (mg/cm2-event) = Absorbed dose per event
CGW (mg/L) = Concentration in groundwater
DAD (mg/kg-day) = Dermally Absorbed Dose
EV (events/day) = Event Frequency
EF (days/year) = Exposure Frequency
ED (years) = Exposure Duration
SA (cm2) = Skin Surface Area available for contact
BW (kg) = Body Weight
AT-C (days) = (70 [lifetime in years] x 365 days/year)
SF $(mg/kg\text{-}day)^{-1}$ = Dermal Slope Factor

Sources:

[1] USEPA, 2004. Risk Assessment Guidance for Superfund Volume 1: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment), Final, July 2004.
[2] USEPA, 2005. Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens. March 2005.
[3] USEPA, 1997. Exposure Factors Handbook. August 1997.
[4] DA-Event calculations are shown on Table F-19.
[5] DA-Event calculations are shown on Table F-18.
[6] USEPA, 2014. OSWER Directive 9200.1-120. February 2014.

Table F-22
Calculation of Risks to Future Residents from Inhalation of VOCs while Showering with Goundwater
for Carcinogens with a Mutagenic Mode of Action
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	20-year Resident (Adult/Child)

Medium:	Groundwater
Exposure Medium:	Air
Exposure Route:	Inhalation

Age	EF [1,2] (days/yr)	ED [3,4] (years)	AT-C (days) (70 years x 365 days/year)
6 to 16 years	350	10	25550
16 to 26 years	350	10	25550

EC = (CA x EF x ED) / (AT-C)

Risk (6 to 16 years) = EC (6 to 16 years) x IUR x 3 (Age-Dependent Adjustment Factor)
Risk (16 to 26 years) = EC (16 to 26 years) x IUR x 1 (Age-Dependent Adjustment Factor)

Chemical	CA (ug/m3)	EC (6 to 16 years) (ug/m3)	EC (16 to 26 years) (ug/m3)	IUR $(ug/m^3)^{-1}$	Risk (6 to 16 years)	Risk (16 to 26 years)	Total Risk
On-Site Groundwater							
Methylene Chloride	6.53E+01	8.94E+00	8.94E+00	1.00E-08	2.68E-07	8.94E-08	3.58E-07
Trichloroethene	1.42E+01	1.94E+00	1.94E+00	4.10E-06	2.39E-05	7.96E-06	3.18E-05
Off-Site Groundwater							
Trichloroethene	5.66E-02	7.75E-03	7.75E-03	4.10E-06	9.53E-08	3.18E-08	1.27E-07

Where:

CA (ug/m3) = Contaminant concentration in air (calculated using USEPA Region III modified Foster-Chrostowski model)
EF (days/year) = Exposure Frequency
ED (years) = Exposure Duration
AT-C (days) = (70 [lifetime in years] x 365 days/year)
EC (ug/m3) = Exposure concentration for estimating cancer risk
IUR $(ug/m3)^{-1}$ = Inhalation Unit Risk

Sources:

[1] USEPA, 1991. Human Health Evaluation Manual, Supplemental Guidance: "Standard Default Exposure Factors". June 1991.
[2] USEPA, 2013. Regional Screening Table - User's Guide, Mid-Atlantic Risk Assessment. May 2013. http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/usersguide.htm.
[3] USEPA, 2005. Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens. March 2005.
[4] USEPA, 2014. OSWER Directive 9200.1-120. February 2014.

Table F-23
Calculation of Risks to Future Residents from Inhalation of VOCs via Vapor Intrusion
for Carcinogens with a Mutagenic Mode of Action
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe:	Future
Receptor Population:	Resident
Receptor Age:	26-year Resident (Adult/Child)

Medium:	Groundwater
Exposure Medium:	Air
Exposure Route:	Inhalation

Age	ET [1,2] (hours/day)	EF [1] (days/yr)	ED [3,4] (years)	AT-C (hours) (70 years x 365 days/year x 24 hours/day)
0 to 2 years	24	350	2	613200
2 to 16 years	24	350	14	613200
16 to 26 years	24	350	10	613200

EC = (CA x ET x EF x ED) / (AT-C)

Risk (0 to 2 years) = EC (0 to 2 years) x IUR x 10 (Age-Dependent Adjustment Factor)
Risk (2 to 16 years) = EC (2 to 16 years) x IUR x 3 (Age-Dependent Adjustment Factor)
Risk (16 to 26 years) = EC (16 to 26 years) x IUR x 1 (Age-Dependent Adjustment Factor)

Chemical	CA (ug/m3)	EC (0 to 2 years) (ug/m3)	EC (2 to 16 years) (ug/m3)	EC (16 to 26 years) (ug/m3)	IUR $(ug/m^3)^{-1}$	Risk (0 to 2 years)	Risk (2 to 16 years)	Risk (16 to 26 years)	Total Risk
On-Site Groundwater									
Trichloroethene	9.87E-02	2.70E-03	1.89E-02	1.35E-02	4.10E-06	1.11E-07	2.33E-07	5.54E-08	3.99E-07

Where:

CA (ug/m3) = Contaminant concentration in air (calculated using Johnson and Ettinger Model)
EF (days/year) = Exposure Frequency
ED (years) = Exposure Duration
ET (hours/day) = Exposure Time
AT-C (hours) = (70 [lifetime in years] x 365 days/year x 24 hours/day)
EC (ug/m3) = Exposure concentration for estimating cancer risk
IUR $(ug/m3)^{-1}$ = Inhalation Unit Risk

Sources:

[1] USEPA, 1991. Human Health Evaluation Manual, Supplemental Guidance: "Standard Default Exposure Factors". June 1991.

[2] USEPA, 2013. Regional Screening Table - User's Guide, Mid-Atlantic Risk Assessment. May 2013. http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/usersguide.htm.

[3] USEPA, 2005. Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens. March 2005.

[4] USEPA, 2014. OSWER Directive 9200.1-120. February 2014.

Table F-24
Calculation Of Chemical Cancer Risks And Non-Cancer Hazards - Current/Future Industrial Worker
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Current/Future
Receptor Population: Industrial Worker
Receptor Age: Adult

							Cancer Risk Calculations					Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF/Unit Risk		Cancer	Intake/Exposure Concentration		RfD/RfC		Hazard
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	Risk	Value	Units	Value	Units	Quotient
Soil Gas	Vapors	Indoor Air Via Vapor Intrusion	Inhalation	***Volatile Organic Compounds***												
				Tetrachloroethene	8.97E+00	ug/m3	7.31E-01	ug/m3	2.6E-07	(ug/m3)-1	2E-07	2.0E+00	ug/m3	4.0E+01	ug/m3	0.05
				Trichloroethene	8.45E-03	ug/m3	6.89E-04	ug/m3	4.1E-06	(ug/m3)-1	3E-09	1.9E-03	ug/m3	2.1E+00	ug/m3	0.0009
			Exp. Route Total								2E-07					0.05
		Exposure Point Total									2E-07					0.05
	Exposure Medium Total										2E-07					0.05
Soil Gas Total											2E-07					0.05
Total Receptor Risk									Total of Receptor Risks Across Soil Gas		2E-07			Total of Receptor Hazards Across Soil Gas		0.05

Table F-25
Calculation Of Chemical Cancer Risks And Non-Cancer Hazards — Future Construction Worker
Reasonable Maximum Exposure
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

							Cancer Risk Calculations					Non-Cancer Hazard Calculations				
	Exposure	Exposure	Exposure	Chemical of	EPC		Intake/Exposure Concentration		CSF/Unit Risk		Cancer	Intake/Exposure Concentration		RfD/RfC		Hazard
Medium	Medium	Point	Route	Potential Concern	Value	Units	Value	Units	Value	Units	Risk	Value	Units	Value	Units	Quotient
Subsurface Soil	Subsurface Soil	Subsurface Soil	Ingestion													
				Volatile Organic Compounds												
				Tetrachloroethylene	85.4	mg/kg	3.10E-06	mg/kg-day	2.1E-03	kg-day/mg	6.5E-09	2.2E-04	mg/kg-day	6.0E-03	mg/kg-day	0.04
				Inorganics												
				Chromium, Hexavalent	3.2	mg/kg	1.15E-07	mg/kg-day	5.0E-01	kg-day/mg	5.7E-08	8.0E-06	mg/kg-day	3.0E-03	mg/kg-day	0.003
			Exp. Route Total								6.4E-08					0.04
			Dermal													
				Volatile Organic Compounds												
				Tetrachloroethylene	85.4	mg/kg	9.79E-08	mg/kg-day	2.1E-03	kg-day/mg	2.1E-10	6.9E-06	mg/kg-day	6.0E-03	mg/kg-day	0.001
				Inorganics												
				Chromium, Hexavalent	3.2	mg/kg	3.61E-10	mg/kg-day	2.0E+01	kg-day/mg	7.2E-09	2.5E-08	mg/kg-day	7.5E-05	mg/kg-day	0.0003
			Exp. Route Total								7.4E-09					0.001
		Exposure Point Total									7.1E-08					0.04
	Exposure Medium Total										7.1E-08					0.04
Subsurface Soil Total											7.1E-08					0.04
											Total of Receptor Risks Across Subsurface Soil					Total of Receptor Hazards Across Subsurface Soil
											7.1E-08					0.04

Table F-26
Calculation Of Chemical Cancer Risks And Non-Cancer Hazards - Future On-Site Resident Adult
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Receptor Population: On-Site Resident
Receptor Age: Adult

							Cancer Risk Calculations					Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF/Unit Risk		Cancer	Intake/Exposure Concentration		RfD/RfC		Hazard
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	Risk	Value	Units	Value	Units	Quotient
Groundwater	Groundwater	On-Site Groundwater	Ingestion													
				Volatile Organic Compounds												
				Bromodichloromethane	1.04E-02	mg/L	1.33E-04	mg/kg-day	6.2E-02	kg-day/mg	8E-06	3.6E-04	mg/kg-day	2.0E-02	mg/kg-day	0.02
				Chloroform	1.31E-01	mg/L	1.68E-03	mg/kg-day	3.1E-02	kg-day/mg	5E-05	4.5E-03	mg/kg-day	1.0E-02	mg/kg-day	0.5
				cis-1,2-Dichloroethylene	4.66E-01	mg/L	5.98E-03	mg/kg-day	NA	kg-day/mg	NA	1.6E-02	mg/kg-day	2.0E-03	mg/kg-day	8
				Dibromochloromethane	1.80E-03	mg/L	2.31E-05	mg/kg-day	8.4E-02	kg-day/mg	2E-06	6.2E-05	mg/kg-day	2.0E-02	mg/kg-day	0.003
				Methylene chloride	5.52E-01	mg/L	(1)	mg/kg-day	(1)	kg-day/mg	7E-05	1.9E-02	mg/kg-day	6.0E-03	mg/kg-day	3
				Tetrachloroethylene	1.58E+01	mg/L	2.03E-01	mg/kg-day	2.1E-03	kg-day/mg	4E-04	5.5E-01	mg/kg-day	6.0E-03	mg/kg-day	91
				Trichloroethylene	1.40E-01	mg/L	(1)	mg/kg-day	(1)	kg-day/mg	4E-04	4.8E-03	mg/kg-day	5.1E-04	mg/kg-day	10
				SemiVolatile Organic Compounds												
				2-Methylnaphthalene	7.40E-03	mg/L	9.50E-05	mg/kg-day	NA	kg-day/mg	NA	2.6E-04	mg/kg-day	4.0E-03	mg/kg-day	0.06
				Naphthalene	2.40E-03	mg/L	3.08E-05	mg/kg-day	NA	kg-day/mg	NA	8.3E-05	mg/kg-day	2.0E-02	mg/kg-day	0.004
				Inorganics												
				Arsenic	3.20E-03	mg/L	4.11E-05	mg/kg-day	1.5E+00	kg-day/mg	6E-05	1.1E-04	mg/kg-day	3.0E-04	mg/kg-day	0.4
				Chromium	5.25E-03	mg/L	6.73E-05	mg/kg-day	5.0E-01	kg-day/mg	3E-05	1.8E-04	mg/kg-day	3.0E-03	mg/kg-day	0.06
			Exp. Route Total								1E-03					113
			Dermal													
				Volatile Organic Compounds												
				Bromodichloromethane	1.04E-02	mg/L	9.47E-06	mg/kg-day	6.2E-02	kg-day/mg	6E-07	2.5E-05	mg/kg-day	2.0E-02	mg/kg-day	0.001
				Chloroform	1.31E-01	mg/L	1.52E-04	mg/kg-day	3.1E-02	kg-day/mg	5E-06	4.1E-04	mg/kg-day	1.0E-02	mg/kg-day	0.04
				cis-1,2-Dichloroethylene	4.66E-01	mg/L	7.54E-04	mg/kg-day	NA	kg-day/mg	NA	2.0E-03	mg/kg-day	2.0E-03	mg/kg-day	1
				Dibromochloromethane	1.80E-03	mg/L	1.57E-06	mg/kg-day	8.4E-02	kg-day/mg	1E-07	4.2E-06	mg/kg-day	2.0E-02	mg/kg-day	0.0002
				Methylene chloride	5.52E-01	mg/L	(1)	mg/kg-day	(1)	kg-day/mg	2E-06	7.2E-04	mg/kg-day	6.0E-03	mg/kg-day	0.1
				Tetrachloroethylene	1.58E+01	mg/L	1.21E-01	mg/kg-day	2.1E-03	kg-day/mg	3E-04	3.3E-01	mg/kg-day	6.0E-03	mg/kg-day	54
				Trichloroethylene	1.40E-01	mg/L	(1)	mg/kg-day	(1)	kg-day/mg	4E-05	8.1E-04	mg/kg-day	5.1E-04	mg/kg-day	2
				SemiVolatile Organic Compounds												
				2-Methylnaphthalene	7.40E-03	mg/L	1.34E-04	mg/kg-day	NA	kg-day/mg	NA	3.6E-04	mg/kg-day	4.0E-03	mg/kg-day	0.09
				Naphthalene	2.40E-03	mg/L	2.01E-05	mg/kg-day	NA	kg-day/mg	NA	5.4E-05	mg/kg-day	2.0E-02	mg/kg-day	0.003
				Inorganics												
				Arsenic	3.20E-03	mg/L	2.28E-07	mg/kg-day	1.5E+00	kg-day/mg	3E-07	6.1E-07	mg/kg-day	3.0E-04	mg/kg-day	0.002
				Chromium	5.25E-03	mg/L	3.74E-07	mg/kg-day	5.0E-01	kg-day/mg	2E-07	1.0E-06	mg/kg-day	3.0E-03	mg/kg-day	0.0003
			Exp. Route Total								3E-04					57
		Exposure Point Total									1E-03					170
	Exposure Medium Total										1E-03					170

Table F-26
Calculation Of Chemical Cancer Risks And Non-Cancer Hazards - Future On-Site Resident Adult
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Receptor Population: On-Site Resident
Receptor Age: Adult

							Cancer Risk Calculations					Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF/Unit Risk		Cancer	Intake/Exposure Concentration		RfD/RfC		Hazard
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	Risk	Value	Units	Value	Units	Quotient
Groundwater	Vapors	Water Vapors at Showerhead from On-Site Groundwater	Inhalation	***Volatile Organic Compounds***												
				2-Methylnaphthalene	5.07E-01	ug/m3	1.39E-01	ug/m3	NA	(ug/m3)-1	NA	4.9E-01	ug/m3	NA	ug/m3	NA
				Bromodichloromethane	8.72E-01	ug/m3	2.39E-01	ug/m3	3.7E-05	(ug/m3)-1	9E-06	8.4E-01	ug/m3	NA	ug/m3	NA
				Chloroform	1.33E+01	ug/m3	3.65E+00	ug/m3	2.3E-05	(ug/m3)-1	8E-05	1.3E+01	ug/m3	9.8E+01	ug/m3	0.1
				cis-1,2-Dichloroethylene	5.25E+01	ug/m3	1.44E+01	ug/m3	NA	(ug/m3)-1	NA	5.0E+01	ug/m3	NA	ug/m3	NA
				Dibromochloromethane	1.15E-01	ug/m3	3.15E-02	ug/m3	2.7E-05	(ug/m3)-1	9E-07	1.1E-01	ug/m3	NA	ug/m3	NA
				Methylene chloride	6.53E+01	ug/m3	(1)	ug/m3	(1)	(ug/m3)-1	4E-07	6.3E+01	ug/m3	6.0E+02	ug/m3	0.1
				Naphthalene	1.64E-01	ug/m3	4.49E-02	ug/m3	3.4E-05	(ug/m3)-1	2E-06	1.6E-01	ug/m3	3.0E+00	ug/m3	0.05
				Tetrachloroethylene	1.45E+03	ug/m3	3.96E+02	ug/m3	2.6E-07	(ug/m3)-1	1E-04	1.4E+03	ug/m3	4.0E+01	ug/m3	35
				Trichloroethylene	1.42E+01	ug/m3	(1)	ug/m3	(1)	(ug/m3)-1	3E-05	1.4E+01	ug/m3	2.1E+00	ug/m3	6
			Exp. Route Total								2E-04					41
		Exposure Point Total									2E-04					41
	Exposure Medium Total										2E-04					41
Groundwater Total											2E-03					211
Soil Gas	Vapors	Indoor Air Via Vapor Intrusion	Inhalation	***Volatile Organic Compounds***												
				1,2,4-Trimethylbenzene	3.02E-03	ug/m3	1.08E-03	ug/m3	NA	(ug/m3)-1	NA	2.9E-03	ug/m3	7.0E+00	ug/m3	0.0004
				Tetrachloroethene	1.05E+02	ug/m3	3.74E+01	ug/m3	2.6E-07	(ug/m3)-1	1E-05	1.0E+02	ug/m3	4.0E+01	ug/m3	3
				Trichloroethene	9.87E-02	ug/m3	(1)	ug/m3	(1)	(ug/m3)-1	4E-07	9.5E-02	ug/m3	2.1E+00	ug/m3	0.05
			Exp. Route Total								1E-05					3
		Exposure Point Total									1E-05					3
	Exposure Medium Total										1E-05					3
Soil Gas Total											1E-05					3
Total Receptor Risk							Total of Receptor Risks Across Groundwater and Soil Gas				2E-03	Total of Receptor Hazards Across Groundwater and Soil Gas				214

Notes:
(1) Refer to Appendix F for the risk estimates for chemicals with a mutagenic mode of action for carcinogenesis. Tables F-20 through F-23 provide age-dependent exposure estimates for 0-2 year, 2-16 year, and 16-26 year life-stages (6-16 year and 16-26 year life-stages for inhalation while showering) and the age-dependent adjustment factors in dose (slope factors, IURs) that were used.
NA - Not Applicable.

Table F-27
Calculation Of Chemical Cancer Risks And Non-Cancer Hazards - Future On-Site Resident Child
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Receptor Population: On-Site Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF/Unit Risk Value	CSF/Unit Risk Units	Cancer Risk	Noncancer Hazard Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	RfD/RfC Value	RfD/RfC Units	Hazard Quotient
Groundwater	Groundwater	On-Site Groundwater	Ingestion	***Volatile Organic Compounds***												
				Bromodichloromethane	1.04E-02	mg/L	NA	NA	NA	NA	NA	5.2E-04	mg/kg-day	2.0E-02	mg/kg-day	0.03
				Chloroform	1.31E-01	mg/L	NA	NA	NA	NA	NA	6.5E-03	mg/kg-day	1.0E-02	mg/kg-day	0.7
				cis-1,2-Dichloroethylene	4.66E-01	mg/L	NA	NA	NA	NA	NA	2.3E-02	mg/kg-day	2.0E-03	mg/kg-day	12
				Dibromochloromethane	1.80E-03	mg/L	NA	NA	NA	NA	NA	9.0E-05	mg/kg-day	2.0E-02	mg/kg-day	0.004
				Methylene chloride	5.52E-01	mg/L	NA	NA	NA	NA	NA	2.8E-02	mg/kg-day	6.0E-03	mg/kg-day	5
				Tetrachloroethylene	1.58E+01	mg/L	NA	NA	NA	NA	NA	7.9E-01	mg/kg-day	6.0E-03	mg/kg-day	131
				Trichloroethylene	1.40E-01	mg/L	NA	NA	NA	NA	NA	7.0E-03	mg/kg-day	5.1E-04	mg/kg-day	14
				SemiVolatile Organic Compounds												
				2-Methylnaphthalene	7.40E-03	mg/L	NA	NA	NA	NA	NA	3.7E-04	mg/kg-day	4.0E-03	mg/kg-day	0.09
				Naphthalene	2.40E-03	mg/L	NA	NA	NA	NA	NA	1.2E-04	mg/kg-day	2.0E-02	mg/kg-day	0.006
				Inorganics												
				Arsenic	3.20E-03	mg/L	NA	NA	NA	NA	NA	1.6E-04	mg/kg-day	3.0E-04	mg/kg-day	0.5
				Chromium	5.25E-03	mg/L	NA	NA	NA	NA	NA	2.6E-04	mg/kg-day	3.0E-03	mg/kg-day	0.09
			Exp. Route Total								NA					163
			Dermal	***Volatile Organic Compounds***												
				Bromodichloromethane	1.04E-02	mg/L	NA	NA	NA	NA	NA	3.3E-05	mg/kg-day	2.0E-02	mg/kg-day	0.002
				Chloroform	1.31E-01	mg/L	NA	NA	NA	NA	NA	5.2E-04	mg/kg-day	1.0E-02	mg/kg-day	0.05
				cis-1,2-Dichloroethylene	4.66E-01	mg/L	NA	NA	NA	NA	NA	2.6E-03	mg/kg-day	2.0E-03	mg/kg-day	1
				Dibromochloromethane	1.80E-03	mg/L	NA	NA	NA	NA	NA	5.4E-06	mg/kg-day	2.0E-02	mg/kg-day	0.0003
				Methylene chloride	5.52E-01	mg/L	NA	NA	NA	NA	NA	9.1E-04	mg/kg-day	6.0E-03	mg/kg-day	0.2
				Tetrachloroethylene	1.58E+01	mg/L	NA	NA	NA	NA	NA	4.2E-01	mg/kg-day	6.0E-03	mg/kg-day	69
				Trichloroethylene	1.40E-01	mg/L	NA	NA	NA	NA	NA	1.0E-03	mg/kg-day	5.1E-04	mg/kg-day	2
				SemiVolatile Organic Compounds			NA	NA	NA	NA	NA					
				2-Methylnaphthalene	7.40E-03	mg/L	NA	NA	NA	NA	NA	4.6E-04	mg/kg-day	4.0E-03	mg/kg-day	0.1
				Naphthalene	2.40E-03	mg/L	NA	NA	NA	NA	NA	6.9E-05	mg/kg-day	2.0E-02	mg/kg-day	0.003
				Inorganics			NA	NA	NA	NA	NA					
				Arsenic	3.20E-03	mg/L	NA	NA	NA	NA	NA	7.0E-07	mg/kg-day	3.0E-04	mg/kg-day	0.002
				Chromium	5.25E-03	mg/L	NA	NA	NA	NA	NA	1.2E-06	mg/kg-day	3.0E-03	mg/kg-day	0.0004
			Exp. Route Total								NA					73
		Exposure Point Total									NA					236
	Exposure Medium Total										NA					236
Groundwater Total											NA					236
Total Receptor Risk								Total of Receptor Risks Across Groundwater			NA		Total of Receptor Hazards Across Groundwater			236

NA - Not Applicable

Table F-28
Calculation Of Chemical Cancer Risks And Non-Cancer Hazards - Future Off-Site Resident Adult
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Receptor Population: Off-Site Resident
Receptor Age: Adult

							Cancer Risk Calculations					Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF/Unit Risk		Cancer	Intake/Exposure Concentration		RfD/RfC		Hazard
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	Risk	Value	Units	Value	Units	Quotient
Groundwater	Groundwater	Off-Site Groundwater	Ingestion	***Volatile Organic Compounds***												
				Bromodichloromethane	7.20E-03	mg/L	0.000092	mg/kg-day	6.2E-02	kg-day/mg	6E-06	2.5E-04	mg/kg-day	2.0E-02	mg/kg-day	0.01
				Chloroform	1.80E-01	mg/L	0.002310	mg/kg-day	3.1E-02	kg-day/mg	7E-05	6.2E-03	mg/kg-day	1.0E-02	mg/kg-day	0.6
				Dibromochloromethane	6.80E-04	mg/L	0.000009	mg/kg-day	8.4E-02	kg-day/mg	7E-07	2.3E-05	mg/kg-day	2.0E-02	mg/kg-day	0.001
				Tetrachloroethylene	9.98E-02	mg/L	0.001281	mg/kg-day	2.1E-03	kg-day/mg	3E-06	3.4E-03	mg/kg-day	6.0E-03	mg/kg-day	0.6
				Trichloroethylene	5.60E-04	mg/L	(1)	mg/kg-day	(1)	kg-day/mg	2E-06	1.9E-05	mg/kg-day	5.1E-04	mg/kg-day	0.04
			Exp. Route Total								8E-05					1
			Dermal	***Volatile Organic Compounds***												
				Bromodichloromethane	7.20E-03	mg/L	0.000007	mg/kg-day	6.2E-02	kg-day/mg	4E-07	1.8E-05	mg/kg-day	2.0E-02	mg/kg-day	0.0009
				Chloroform	1.80E-01	mg/L	0.000209	mg/kg-day	3.1E-02	kg-day/mg	6E-06	5.6E-04	mg/kg-day	1.0E-02	mg/kg-day	0.06
				Dibromochloromethane	6.80E-04	mg/L	0.000001	mg/kg-day	8.4E-02	kg-day/mg	5E-08	1.6E-06	mg/kg-day	2.0E-02	mg/kg-day	0.00008
				Tetrachloroethylene	9.98E-02	mg/L	0.000765	mg/kg-day	2.1E-03	kg-day/mg	2E-06	2.1E-03	mg/kg-day	6.0E-03	mg/kg-day	0.3
				Trichloroethylene	5.60E-04	mg/L	(1)	mg/kg-day	(1)	kg-day/mg	2E-07	3.2E-06	mg/kg-day	5.1E-04	mg/kg-day	0.006
			Exp. Route Total								9E-06					0.4
		Exposure Point Total									9E-05					2
		Exposure Medium Total									9E-05					2
	Vapors	Water Vapors at Showerhead from Off-Site Groundwater	Inhalation	***Volatile Organic Compounds***												
				Bromodichloromethane	6.04E-01	ug/m3	0.165	ug/m3	3.7E-05	(ug/m3)-1	6E-06	5.8E-01	ug/m3	NA	ug/m3	NA
				Chloroform	1.83E+01	ug/m3	5.013	ug/m3	2.3E-05	(ug/m3)-1	1E-04	1.8E+01	ug/m3	9.8E+01	ug/m3	0.2
				Dibromochloromethane	4.34E-02	ug/m3	0.012	ug/m3	2.7E-05	(ug/m3)-1	3E-07	4.2E-02	ug/m3	NA	ug/m3	NA
				Tetrachloroethylene	9.13E+00	ug/m3	2.501	ug/m3	2.6E-07	(ug/m3)-1	7E-07	8.8E+00	ug/m3	4.0E+01	ug/m3	0.2
				Trichloroethylene	5.66E-02	ug/m3	(1)	ug/m3	(1)	(ug/m3)-1	1E-07	5.4E-02	ug/m3	2.1E+00	ug/m3	0.03
			Exp. Route Total								1E-04					0.4
		Exposure Point Total									1E-04					0.4
		Exposure Medium Total									1E-04					0.4
Groundwater Total											2E-04					2
Total Receptor Risk								Total of Receptor Risks Across Groundwater			2E-04		Total of Receptor Hazards Across Groundwater			2

Notes:
(1) Refer to Appendix F for the risk estimates for chemicals with a mutagenic mode of action for carcinogenesis. Tables F-20 through F-22 provide age-dependent exposure estimates for 0-2 year, 2-16 year, and 16-26 year life-stages (6-16 year and 16-26 year life-stages for inhalation while showering) and the age-dependent adjustment factors in dose (slope factors, IURs) that were used.
NA - Not Applicable

Table F-29
Calculation Of Chemical Cancer Risks And Non-Cancer Hazards - Future Off-Site Resident Child
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Receptor Population: Off-Site Resident
Receptor Age: Child

							Cancer Risk Calculations					Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF/Unit Risk		Cancer	Intake/Exposure Concentration		RfD/RfC		Hazard
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	Risk	Value	Units	Value	Units	Quotient
Groundwater	Groundwater	Off-Site Groundwater	Ingestion													
				Volatile Organic Compounds												
				Bromodichloromethane	7.20E-03	mg/L	NA	NA	NA	NA	NA	3.6E-04	mg/kg-day	2.0E-02	mg/kg-day	0.02
				Chloroform	1.80E-01	mg/L	NA	NA	NA	NA	NA	9.0E-03	mg/kg-day	1.0E-02	mg/kg-day	0.9
				Dibromochloromethane	6.80E-04	mg/L	NA	NA	NA	NA	NA	3.4E-05	mg/kg-day	2.0E-02	mg/kg-day	0.002
				Tetrachloroethylene	9.98E-02	mg/L	NA	NA	NA	NA	NA	5.0E-03	mg/kg-day	6.0E-03	mg/kg-day	0.8
				Trichloroethylene	5.60E-04	mg/L	NA	NA	NA	NA	NA	2.8E-05	mg/kg-day	5.1E-04	mg/kg-day	0.05
			Exp. Route Total								NA					2
			Dermal													
				Volatile Organic Compounds												
				Bromodichloromethane	7.20E-03	mg/L	NA	NA	NA	NA	NA	2.3E-05	mg/kg-day	2.0E-02	mg/kg-day	0.001
				Chloroform	1.80E-01	mg/L	NA	NA	NA	NA	NA	7.2E-04	mg/kg-day	1.0E-02	mg/kg-day	0.07
				Dibromochloromethane	6.80E-04	mg/L	NA	NA	NA	NA	NA	2.0E-06	mg/kg-day	2.0E-02	mg/kg-day	0.0001
				Tetrachloroethylene	9.98E-02	mg/L	NA	NA	NA	NA	NA	2.6E-03	mg/kg-day	6.0E-03	mg/kg-day	0.4
				Trichloroethylene	5.60E-04	mg/L	NA	NA	NA	NA	NA	4.1E-06	mg/kg-day	5.1E-04	mg/kg-day	0.008
			Exp. Route Total								NA					0.5
		Exposure Point Total									NA					2
	Exposure Medium Total										NA					2
Groundwater Total											NA					2
Total Receptor Risk								Total of Receptor Risks Across Groundwater			NA		Total of Receptor Hazards Across Groundwater			2

NA - Not Applicable

Table F-30
Summary of Receptor Risks and Hazards for COPCs - Current/Future Industrial Worker
Reasonable Maximum Exposure
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Current/Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil Gas	Vapors	Indoor Air Via Vapor Intrusion	***Volatile Organic Compounds***									
			Tetrachloroethene	--	2E-07	--	2E-07	CNS	--	0.05	--	0.05
			Trichloroethene	--	3E-09	--	3E-09	Fetus	--	0.0009	--	0.0009
			Chemical Total	--	2E-07	--	2E-07		--	0.05	--	0.05
		Exposure Point Total					2E-07					0.05
	Exposure Medium Total						2E-07					0.05
Soil Gas Total							2E-07					0.05
Receptor Total							2E-07					0.05

Notes
"--" - Not Applicable
CNS - Central Nervous System
ND - No Data

Target Organ HI per Medium

Organ	Soil Gas
Blood	--
Body Weight	--
CNS	0.05
Fetus	0.0009
Kidney	--
Liver	--
Lung	--
Nasal System	--
ND	--
None	--
Skin	--

	Soil Gas
Total Blood HI	--
Total Body Weight HI	--
Total CNS HI	0.05
Total Fetus HI	0.0009
Total Kidney HI	--
Total Liver HI	--
Total Lung HI	--
Total Nasal System HI	--
Total ND HI	--
Total None HI	--
Total Skin HI	--

Table F-31
Summary of Receptor Risks and Hazards for COPCs - Future Construction Worker
Reasonable Maximum Exposure
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Subsurface Soil	Subsurface Soil	Subsurface Soil	***Volatile Organic Compounds***									
			Tetrachloroethylene	7E-09	--	2E-10	7E-09	CNS	0.04	--	0.001	0.04
			Inorganics									
			Chromium, Hexavalent	6E-08	--	7E-09	6E-08	None	0.003	--	0.0003	0.003
			Chemical Total	6E-08	--	7E-09	7E-08		0.04	--	0.001	0.04
		Exposure Point Total					7E-08					0.04
	Exposure Medium Total						7E-08					0.04
Subsurface Soil Total							7E-08					0.04
Receptor Total							7E-08					0.04

Notes
"--" - Not Applicable
CNS - Central Nervous System
ND - No Data

Target Organ HI per Medium

Organ	Subsurface Soil
Blood	--
Body Weight	--
CNS	0.04
Fetus	--
Kidney	--
Liver	--
Lung	--
Nasal System	--
ND	--
None	0.003
Skin	--

	Subsurface Soil
Total Blood HI	--
Total Body Weight HI	--
Total CNS HI	0.04
Total Fetus HI	--
Total Kidney HI	--
Total Liver HI	--
Total Lung HI	--
Total Nasal System HI	--
Total ND HI	--
Total None HI	0.003
Total Skin HI	--

Table F-32
Summary of Receptor Risks and Hazards for COPCs - Future On-Site Resident Adult
Reasonable Maximum Exposure
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Receptor Population: On-Site Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Groundwater	***Volatile Organic Compounds***									
			Bromodichloromethane	8E-06	--	6E-07	9E-06	Kidney	0.02	--	0.001	0.02
			Chloroform	5E-05	--	5E-06	6E-05	Liver	0.5	--	0.04	0.5
			cis-1,2-Dichloroethylene	--	--	--	--	Kidney	8	--	1	9
			Dibromochloromethane	2E-06	--	1E-07	2E-06	Liver	0.003	--	0.0002	0.003
			Methylene chloride	7E-05	--	2E-06	7E-05	Liver	3	--	0.1	3
			Tetrachloroethylene	4E-04	--	3E-04	7E-04	CNS	91	--	54	145
			Trichloroethylene	4E-04	--	4E-05	4E-04	Fetus	10	--	2	11
			SemiVolatile Organic Compounds			--					--	
			2-Methylnaphthalene	--	--	--	--	Lung	0.06	--	0.09	0.2
			Naphthalene	--	--	--	--	Body Weight	0.004	--	0.003	0.007
			Inorganics			--					--	
			Arsenic	6E-05	--	3E-07	6E-05	Skin	0.4	--	0.002	0.4
			Chromium	3E-05		2E-07	3E-05	None	0.06	--	0.0003	0.06
			Chemical Total	1E-03	--	3E-04	1E-03		113	--	57	170
		Exposure Point Total					1E-03					170
	Exposure Medium Total						1E-03					170
	Vapors	Water Vapors at Showerhead	***Volatile Organic Compounds***									
			2-Methylnaphthalene	--	--	--	--	--	--	--	--	--
			Bromodichloromethane	--	9E-06	--	9E-06	--	--	--	--	--
			Chloroform	--	8E-05	--	8E-05	ND	--	0.1	--	0.1
			cis-1,2-Dichloroethylene	--	--	--	--	--	--	--	--	--
			Dibromochloromethane	--	9E-07	--	9E-07	--	--	--	--	--
			Methylene chloride	--	4E-07	--	4E-07	Liver	--	0.1	--	0.1
			Naphthalene	--	2E-06	--	2E-06	Nasal System	--	0.05	--	0.05
			Tetrachloroethylene	--	1E-04	--	1E-04	CNS	--	35	--	35
			Trichloroethylene	--	3E-05	--	3E-05	Fetus	--	6	--	6
			Chemical Total	--	2E-04	--	2E-04		--	41	--	41
		Exposure Point Total					2E-04					41
	Exposure Medium Total						2E-04					41
Groundwater Total							2E-03					211
Soil Gas	Vapors	Indoor Air Via Vapor Intrusion	***Volatile Organic Compounds***									
			1,2,4-Trimethylbenzene	--	--	--	--	Blood	--	0.0004	--	0.0004
			Tetrachloroethene	--	1E-05	--	1E-05	CNS	--	3	--	3
			Trichloroethene	--	4E-07	--	4E-07	Fetus	--	0.05	--	0.05
			Chemical Total	--	1E-05	--	1E-05		--	3	--	3
		Exposure Point Total					1E-05					3
	Exposure Medium Total						1E-05					3
Soil Gas Total							1E-05					3
Receptor Total							2E-03					214

Table F-32
Summary of Receptor Risks and Hazards for COPCs - Future On-Site Resident Adult
Reasonable Maximum Exposure
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Receptor Population: On-Site Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total

Notes
"--" - Not Applicable
CNS - Central Nervous System
ND - No Data

Target Organ HI per Medium

Organ	Groundwater	Soil Gas		Groundwater and Soil Gas
Blood	--	0.0004	Total Blood HI	0.0004
Body Weight	0.007	--	Total Body Weight HI	0.007
CNS	180	3	Total CNS HI	183
Fetus	18	0.05	Total Fetus HI	18
Kidney	9	--	Total Kidney HI	9
Liver	4	--	Total Liver HI	4
Lung	0.2	--	Total Lung HI	0.2
Nasal System	0.05	--	Total Nasal System HI	0.05
ND	0.1	--	Total ND HI	0.1
None	0.06	--	Total None HI	0.06
Skin	0.4	--	Total Skin HI	0.4

Table F-33
Summary of Receptor Risks and Hazards for COPCs - Future On-Site Resident Child
Reasonable Maximum Exposure
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Receptor Population: On-Site Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Groundwater	***Volatile Organic Compounds***									
			Bromodichloromethane	--	--	--	--	Kidney	0.03	--	--	0.03
			Chloroform	--	--	--	--	Liver	0.7	--	0.002	0.7
			cis-1,2-Dichloroethylene	--	--	--	--	Kidney	12	--	0.1	12
			Dibromochloromethane	--	--	--	--	Liver	0.004	--	1	1
			Methylene chloride	--	--	--	--	Liver	5	--	0.0003	5
			Tetrachloroethylene	--	--	--	--	CNS	131	--	0.2	131
			Trichloroethylene	--	--	--	--	Fetus	14	--	69	83
			SemiVolatile Organic Compounds	--	--	--	--					
			2-Methylnaphthalene	--	--	--	--	Lung	0.09	--	--	0.09
			Naphthalene	--	--	--	--	Body Weight	0.006	--	0.1	0.1
			Inorganics	--	--	--	--					
			Arsenic	--	--	--	--	Skin	0.5	--	--	0.5
			Chromium	--	--	--	--	None	0.09	--	0.002	0.09
			Chemical Total	--	--	--	--		163	--	71	234
		Exposure Point Total					--					234
	Exposure Medium Total						--					234
Groundwater Total							--					234
Receptor Total							--					234

Notes
"--" - Not Applicable
CNS - Central Nervous System
ND - No Data

Target Organ HI per Medium

Organ	Groundwater
Blood	--
Body Weight	0.1
CNS	131
Fetus	83
Kidney	12
Liver	7
Lung	0.1
Nasal System	--
ND	--
None	0.09
Skin	0.5

	Groundwater
Total Blood HI	--
Total Body Weight HI	0.1
Total CNS HI	131
Total Fetus HI	83
Total Kidney HI	12
Total Liver HI	7
Total Lung HI	0.1
Total Nasal System HI	--
Total ND HI	--
Total None HI	0.09
Total Skin HI	0.5

Table F-34
Summary of Receptor Risks and Hazards for COPCs - Future Off-Site Resident Adult
Reasonable Maximum Exposure
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Receptor Population: Off-Site Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Off-Site Groundwater	***Volatile Organic Compounds***									
			Bromodichloromethane	6E-06	--	4E-07	6E-06	Kidney	0.01	--	0.0009	0.01
			Chloroform	7E-05	--	6E-06	8E-05	Liver	0.6	--	0.06	0.7
			Dibromochloromethane	7E-07	--	5E-08	8E-07	Liver	0.001	--	0.00008	0.001
			Tetrachloroethylene	3E-06	--	2E-06	4E-06	CNS	0.6	--	0.3	0.9
			Trichloroethylene	2E-06	--	2E-07	2E-06	Fetus	0.04	--	0.006	0.04
			Chemical Total	8E-05	--	9E-06	9E-05		1	--	0.4	2
		Exposure Point Total					9E-05					2
	Exposure Medium Total						9E-05					2
	Vapors	Water Vapors at Showerhead	***Volatile Organic Compounds***									
			Bromodichloromethane	--	6E-06	--	6E-06	--	--	--	--	--
			Chloroform	--	1E-04	--	1E-04	ND	--	0.2	--	0.2
			Dibromochloromethane	--	3E-07	--	3E-07	--	--	--	--	--
			Tetrachloroethylene	--	7E-07	--	7E-07	CNS	--	0.2	--	0.2
			Trichloroethylene		1E-07	--	1E-07	Fetus	--	0.03	--	0.03
			Chemical Total	--	1E-04	--	1E-04		--	0.4	--	0.4
		Exposure Point Total					1E-04					0.4
	Exposure Medium Total						1E-04					0.4
Groundwater Total							2E-04					2
Receptor Total							2E-04					2

Notes
"--" - Not Applicable
CNS - Central Nervous System
ND - No Data

Target Organ HI per Medium

Organ	Groundwater
Blood	--
Body Weight	--
CNS	1
Fetus	0.07
Kidney	0.01
Liver	0.7
Lung	--
Nasal System	--
ND	0.2
None	--
Skin	--

	Groundwater
Total Blood HI	--
Total Body Weight HI	--
Total CNS HI	1
Total Fetus HI	0.07
Total Kidney HI	0.01
Total Liver HI	0.7
Total Lung HI	--
Total Nasal System HI	--
Total ND HI	0.2
Total None HI	--
Total Skin HI	--

Table F-35
Summary of Receptor Risks and Hazards for COPCs - Future Off-Site Resident Child
Reasonable Maximum Exposure
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Receptor Population: Off-Site Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Groundwater	***Volatile Organic Compounds***									
			Bromodichloromethane	--	--	--	--	Kidney	0.02	--	0.001	0.02
			Chloroform	--	--	--	--	Liver	0.9	--	0.07	1
			Dibromochloromethane	--	--	--	--	Liver	0.002	--	0.0001	0.002
			Tetrachloroethylene	--	--	--	--	CNS	0.8	--	0.4	1
			Trichloroethylene	--	--	--	--	Fetus	0.05	--	0.008	0.06
			Chemical Total	--	--	--	--		2	--	0.5	2
		Exposure Point Total					--					2
	Exposure Medium Total						--					2
Groundwater Total							--					2
Receptor Total							--					2

Notes
"--" - Not Applicable
CNS - Central Nervous System
ND - No Data

Target Organ HI per Medium

Organ	Groundwater
Blood	--
Body Weight	--
CNS	1
Fetus	0.06
Kidney	0.02
Liver	1
Lung	--
Nasal System	--
ND	--
None	--
Skin	--

	Groundwater
Total Blood HI	--
Total Body Weight HI	--
Total CNS HI	1
Total Fetus HI	0.06
Total Kidney HI	0.02
Total Liver HI	1
Total Lung HI	--
Total Nasal System HI	--
Total ND HI	--
Total None HI	--
Total Skin HI	--

Table F-36
Risk Summary - Future On-Site Resident Adult
Reasonable Maximum Exposure
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Receptor Population: On-Site Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Groundwater	***Volatile Organic Compounds***									
			Bromodichloromethane	8E-06	--	6E-07	9E-06					
			Chloroform	5E-05	--	5E-06	6E-05	Liver	0.5	--	0.04	0.5
			cis-1,2-Dichloroethylene					Kidney	8	--	1	9
			Dibromochloromethane	2E-06	--	1E-07	2E-06					
			Methylene chloride	7E-05	--	2E-06	7E-05	Liver	3	--	0.1	3
			Tetrachloroethylene	4E-04	--	3E-04	7E-04	CNS	91	--	54	145
			Trichloroethylene	4E-04	--	4E-05	4E-04	Fetus	10	--	2	11
			SemiVolatile Organic Compounds								--	
			Naphthalene	--	--	--	--					
			Inorganics			--					--	
			Arsenic	6E-05	--	3E-07	6E-05					
			Chromium	3E-05		2E-07	3E-05					
			Chemical Total	1E-03	--	3E-04	1E-03		112	--	57	169
		Exposure Point Total					1E-03					169
	Exposure Medium Total						1E-03					169
	Vapors	Water Vapors at Showerhead	***Volatile Organic Compounds***									
			Bromodichloromethane	--	9E-06	--	9E-06					
			Chloroform	--	8E-05	--	8E-05					
			cis-1,2-Dichloroethylene									
			Dibromochloromethane	--	9E-07	--	9E-07					
			Methylene chloride	--	4E-07	--	4E-07	Liver	--	0.1	--	0.1
			Naphthalene	--	2E-06	--	2E-06					
			Tetrachloroethylene	--	1E-04	--	1E-04	CNS	--	35	--	35
			Trichloroethylene	--	3E-05	--	3E-05	Fetus	--	6	--	6
			Chemical Total	--	2E-04	--	2E-04		--	41	--	41
		Exposure Point Total					2E-04					41
	Exposure Medium Total						2E-04					41
Groundwater Total							2E-03					211
Soil Gas	Vapors	Indoor Air Via Vapor Intrusion	***Volatile Organic Compounds***									
			Tetrachloroethene	--	1E-05	--	1E-05	CNS	--	3	--	3
			Chemical Total	--	1E-05	--	1E-05		--	3	--	3
		Exposure Point Total					1E-05					3
	Exposure Medium Total						1E-05					3
Soil Gas Total							1E-05					3
Receptor Total							2E-03					213

Table F-36
Risk Summary - Future On-Site Resident Adult
Reasonable Maximum Exposure
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Receptor Population: On-Site Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total

Notes
"--" - Not Applicable
CNS - Central Nervous System

Target Organ HI per Medium

Organ	Groundwater	Soil Gas		Groundwater and Soil Gas
CNS	180	3	Total CNS HI	183
Fetus	18	--	Total Fetus HI	18
Kidney	9	--	Total Kidney HI	9
Liver	4	--	Total Liver HI	4

Table F-37
Risk Summary - Future On-Site Resident Child
Reasonable Maximum Exposure
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Receptor Population: On-Site Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Groundwater	***Volatile Organic Compounds***									
			Chloroform	--	--	--	--	Liver	0.7	--	0.002	0.7
			cis-1,2-Dichloroethylene	--	--	--	--	Kidney	12	--	0.1	12
			Dibromochloromethane	--	--	--	--	Liver	0.004	--	1	1
			Methylene chloride	--	--	--	--	Liver	5	--	0.0003	5
			Tetrachloroethylene	--	--	--	--	CNS	131	--	0.2	131
			Trichloroethylene	--	--	--	--	Fetus	14	--	69	83
			Chemical Total	--	--	--	--		162	--	71	233
		Exposure Point Total					--					233
	Exposure Medium Total						--					233
Groundwater Total							--					233
Receptor Total							--					233

Notes
"--" - Not Applicable
CNS - Central Nervous System

Target Organ HI per Medium

Organ	Groundwater
CNS	131
Fetus	83
Kidney	12
Liver	7

	Groundwater
Total CNS HI	131
Total Fetus HI	83
Total Kidney HI	12
Total Liver HI	7

Table F-38
Risk Summary - Future Off-Site Resident Adult
Reasonable Maximum Exposure
Human Health Risk Assessment
UTC Delavan Spray Technologies Site
Bamberg, South Carolina
AECOM Project No. 60314964

Scenario Timeframe: Future
Receptor Population: Off-Site Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Off-Site Groundwater	***Volatile Organic Compounds***									
			Bromodichloromethane	6E-06	--	4E-07	6E-06					
			Chloroform	7E-05	--	6E-06	8E-05					
			Dibromochloromethane	7E-07	--	5E-08	8E-07					
			Tetrachloroethylene	3E-06	--	2E-06	4E-06					
			Trichloroethylene	2E-06	--	2E-07	2E-06					
			Chemical Total	8E-05	--	9E-06	9E-05					
		Exposure Point Total					9E-05					
	Exposure Medium Total						9E-05					
	Vapors	Water Vapors at Showerhead	***Volatile Organic Compounds***									
			Bromodichloromethane	--	6E-06	--	6E-06					
			Chloroform	--	1E-04	--	1E-04					
			Dibromochloromethane	--	3E-07	--	3E-07					
			Tetrachloroethylene	--	7E-07	--	7E-07					
			Trichloroethylene		1E-07	--	1E-07					
			Chemical Total	--	1E-04	--	1E-04					
		Exposure Point Total					1E-04					
	Exposure Medium Total						1E-04					
Groundwater Total							2E-04					
Receptor Total							2E-04					

Notes
"--" - Not Applicable

Attachments

Calculation of 95% UCL for
cis-1,2-Dichloroethene in
On-Site Groundwater

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	5/21/2014 6:46:41 PM
From File	GW On-Site for Pro UCL.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

cis-1,2-Dichloroethylene

General Statistics

Total Number of Observations	3	Number of Distinct Observations	3
		Number of Missing Observations	0
Minimum	4	Mean	176.9
Maximum	466	Median	60.65
SD	252	Std. Error of Mean	14550%
Coefficient of Variation	1.425	Skewness	1.634

Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use
guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.
For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).
Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0

Normal GOF Test

Shapiro Wilk Test Statistic	0.84	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.767	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.344	Lilliefors GOF Test
5% Lilliefors Critical Value	0.512	Data appear Normal at 5% Significance Level
Data appear Normal at 5% Significance Level		

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	601.7	95% Adjusted-CLT UCL (Chen-1995)	562.8
		95% Modified-t UCL (Johnson-1978)	624.6

Gamma GOF Test
Not Enough Data to Perform GOF Test

Gamma Statistics

k hat (MLE)	0.491	k star (bias corrected MLE)	N/A
Theta hat (MLE)	360.2	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	2.947	nu star (bias corrected)	N/A
MLE Mean (bias corrected)	N/A	MLE Sd (bias corrected)	N/A
		Approximate Chi Square Value (0.05)	N/A
Adjusted Level of Significance	N/A	Adjusted Chi Square Value	N/A

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	N/A	95% Adjusted Gamma UCL (use when n<50)	N/A

Calculation of 95% UCL for cis-1,2-Dichloroethene in On-Site Groundwater

Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.993	Shapiro Wilk Lognormal GOF Test	
5% Shapiro Wilk Critical Value	0.767	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.204	Lilliefors Lognormal GOF Test	
5% Lilliefors Critical Value	0.512	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			

Lognormal Statistics			
Minimum of Logged Data	1.386	Mean of logged Data	3.879
Maximum of Logged Data	6.144	SD of logged Data	2.387

Assuming Lognormal Distribution			
95% H-UCL	6.30E+25	90% Chebyshev (MVUE) UCL	699
95% Chebyshev (MVUE) UCL	927.7	97.5% Chebyshev (MVUE) UCL	1245
99% Chebyshev (MVUE) UCL	1868		

Nonparametric Distribution Free UCL Statistics
Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs			
95% CLT UCL	416.2	95% Jackknife UCL	601.7
95% Standard Bootstrap UCL	N/A	95% Bootstrap-t UCL	N/A
95% Hall's Bootstrap UCL	N/A	95% Percentile Bootstrap UCL	N/A
95% BCA Bootstrap UCL	N/A		
90% Chebyshev(Mean, Sd) UCL	613.3	95% Chebyshev(Mean, Sd) UCL	811
97.5% Chebyshev(Mean, Sd) UCL	1085	99% Chebyshev(Mean, Sd) UCL	1624

Suggested UCL to Use	
95% Student's-t UCL	601.7

Recommended UCL exceeds the maximum observation

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)
and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.
For additional insight the user may want to consult a statistician.

Calculation of 95% UCL for
Methylene Chloride in
On-Site Groundwater

UCL Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	5/21/2014 6:47:46 PM
From File	GW On-Site for Pro UCL.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Methylene chloride

General Statistics

Total Number of Observations	6	Number of Distinct Observations	6
Number of Detects	4	Number of Non-Detects	2
Number of Distinct Detects	4	Number of Distinct Non-Detects	2
Minimum Detect	5.4	Minimum Non-Detect	2
Maximum Detect	765	Maximum Non-Detect	20
Variance Detects	162578	Percent Non-Detects	33.33%
Mean Detects	355.7	SD Detects	403.2
Median Detects	326.2	CV Detects	1.134
Skewness Detects	0.0835	Kurtosis Detects	-5.516
Mean of Logged Detects	4.343	SD of Logged Detects	2.575

Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use
guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.
For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).
Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.806	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.302	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.443	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	238.6	Standard Error of Mean	155.4
SD	329.7	95% KM (BCA) UCL	N/A
95% KM (t) UCL	551.8	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	494.3	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	704.9	95% KM Chebyshev UCL	916.1
97.5% KM Chebyshev UCL	1209	99% KM Chebyshev UCL	1785

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.548	Anderson-Darling GOF Test	
5% A-D Critical Value	0.69	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.32	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.413	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.426	k star (bias corrected MLE)	0.273
Theta hat (MLE)	835.6	Theta star (bias corrected MLE)	1302
nu hat (MLE)	3.405	nu star (bias corrected)	2.185
MLE Mean (bias corrected)	355.7	MLE Sd (bias corrected)	680.6

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.524	nu hat (KM)	6.284
Approximate Chi Square Value (6.28, α)	1.787	Adjusted Chi Square Value (6.28, β)	1.054
95% Gamma Approximate KM-UCL (use when n>=5(	839.1	95% Gamma Adjusted KM-UCL (use when n<50)	1423

Calculation of 95% UCL for
Methylene Chloride in
On-Site Groundwater

Gamma ROS Statistics using Imputed Non-Detects
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	237.1
Maximum	765	Median	9.35
SD	362.3	CV	1.528
k hat (MLE)	0.182	k star (bias corrected MLE)	0.202
Theta hat (MLE)	1304	Theta star (bias corrected MLE)	1174
nu hat (MLE)	2.182	nu star (bias corrected)	2.424
MLE Mean (bias corrected)	237.1	MLE Sd (bias corrected)	527.6
		Adjusted Level of Significance (β)	0.0122
Approximate Chi Square Value (2.42, α)	0.224	Adjusted Chi Square Value (2.42, β)	0.107
95% Gamma Approximate UCL (use when n>=50)	2561	95% Gamma Adjusted UCL (use when n<50)	N/A

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.826	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.294	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.443	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	237.8	Mean in Log Scale	2.856
SD in Original Scale	361.8	SD in Log Scale	3.175
95% t UCL (assumes normality of ROS data)	535.4	95% Percentile Bootstrap UCL	471.1
95% BCA Bootstrap UCL	489.6	95% Bootstrap t UCL	16613
95% H-UCL (Log ROS)	7.31E+10		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	3.287	95% H-UCL (KM -Log)	8351700
KM SD (logged)	2.393	95% Critical H Value (KM-Log)	9.148
KM Standard Error of Mean (logged)	1.141		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	239	Mean in Log Scale	3.279
SD in Original Scale	360.9	SD in Log Scale	2.688
95% t UCL (Assumes normality)	535.8	95% H-Stat UCL	2.20E+08

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	551.8	95% KM (Percentile Bootstrap) UCL	N/A

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Calculation of 95% UCL for
Tetrachloroethene in
On-Site Groundwater

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	5/21/2014 6:48:34 PM
From File	GW On-Site for Pro UCL.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Tetrachloroethylene

General Statistics			
Total Number of Observations	15	Number of Distinct Observations	15
Number of Detects	14	Number of Non-Detects	1
Number of Distinct Detects	14	Number of Distinct Non-Detects	1
Minimum Detect	1.55	Minimum Non-Detect	0.26
Maximum Detect	16300	Maximum Non-Detect	0.26
Variance Detects	29624113	Percent Non-Detects	6.67%
Mean Detects	2358	SD Detects	5443
Median Detects	159	CV Detects	2.308
Skewness Detects	2.319	Kurtosis Detects	4.026
Mean of Logged Detects	5.261	SD of Logged Detects	2.467

Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.476	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.478	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.237	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
Mean	2201	Standard Error of Mean	1367
SD	5101	95% KM (BCA) UCL	4451
95% KM (t) UCL	4609	95% KM (Percentile Bootstrap) UCL	4368
95% KM (z) UCL	4449	95% KM Bootstrap t UCL	49831
90% KM Chebyshev UCL	6302	95% KM Chebyshev UCL	8159
97.5% KM Chebyshev UCL	10737	99% KM Chebyshev UCL	15801

Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	1.31	Anderson-Darling GOF Test	
5% A-D Critical Value	0.842	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.316	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.249	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			

Gamma Statistics on Detected Data Only			
k hat (MLE)	0.279	k star (bias corrected MLE)	0.267
Theta hat (MLE)	8465	Theta star (bias corrected MLE)	8849
nu hat (MLE)	7.801	nu star (bias corrected)	7.463
MLE Mean (bias corrected)	2358	MLE Sd (bias corrected)	4568

Gamma Kaplan-Meier (KM) Statistics			
k hat (KM)	0.186	nu hat (KM)	5.586
Approximate Chi Square Value (5.59, α)	1.432	Adjusted Chi Square Value (5.59, β)	1.191
95% Gamma Approximate KM-UCL (use when n>=50	8586	95% Gamma Adjusted KM-UCL (use when n<50)	10322

Calculation of 95% UCL for
Tetrachloroethene in
On-Site Groundwater

Gamma ROS Statistics using Imputed Non-Detects
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	2201
Maximum	16300	Median	114
SD	5280	CV	2.399
k hat (MLE)	0.232	k star (bias corrected MLE)	0.23
Theta hat (MLE)	9475	Theta star (bias corrected MLE)	9558
nu hat (MLE)	6.969	nu star (bias corrected)	6.909
MLE Mean (bias corrected)	2201	MLE Sd (bias corrected)	4587
		Adjusted Level of Significance (β)	0.0324
Approximate Chi Square Value (6.91, α)	2.121	Adjusted Chi Square Value (6.91, β)	1.81
95% Gamma Approximate UCL (use when n>=50)	7171	95% Gamma Adjusted UCL (use when n<50)	8403

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.954	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.161	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.237	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2201	Mean in Log Scale	4.864
SD in Original Scale	5280	SD in Log Scale	2.83
95% t UCL (assumes normality of ROS data)	4602	95% Percentile Bootstrap UCL	4367
95% BCA Bootstrap UCL	5224	95% Bootstrap t UCL	48915
95% H-UCL (Log ROS)	788757		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	4.82	95% H-UCL (KM -Log)	740243
KM SD (logged)	2.827	95% Critical H Value (KM-Log)	6.218
KM Standard Error of Mean (logged)	0.758		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	2201	Mean in Log Scale	4.774
SD in Original Scale	5280	SD in Log Scale	3.034
95% t UCL (Assumes normality)	4602	95% H-Stat UCL	2574139

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use
99% KM (Chebyshev) UCL 15801

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Calculation of 95% UCL for
Trichloroethene in
On-Site Groundwater

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	5/21/2014 6:49:14 PM
From File	GW On-Site for Pro UCL.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Trichloroethylene

General Statistics

Total Number of Observations	5	Number of Distinct Observations	5
		Number of Missing Observations	0
Minimum	5	Mean	56.47
Maximum	209	Median	6.8
SD	87.9	Std. Error of Mean	3931.00%
Coefficient of Variation	1.557	Skewness	1.941

Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use
guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.
For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).
Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0

Normal GOF Test

Shapiro Wilk Test Statistic	0.703	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.762	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.314	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.396	Data appear Normal at 5% Significance Level	

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	140.3	95% Adjusted-CLT UCL (Chen-1995)	157.6
		95% Modified-t UCL (Johnson-1978)	146

Gamma GOF Test

A-D Test Statistic	0.604	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.707	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.362	Kolmogrov-Smirnoff Gamma GOF Test	
5% K-S Critical Value	0.37	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.571	k star (bias corrected MLE)	0.362
Theta hat (MLE)	98.97	Theta star (bias corrected MLE)	156.2
nu hat (MLE)	5.706	nu star (bias corrected)	3.616
MLE Mean (bias corrected)	56.47	MLE Sd (bias corrected)	93.91
		Approximate Chi Square Value (0.05)	0.576
Adjusted Level of Significance	0.0086	Adjusted Chi Square Value	0.226

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	354.5	95% Adjusted Gamma UCL (use when n<50)	902.5

Calculation of 95% UCL for
Trichloroethene in
On-Site Groundwater

Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.825	Shapiro Wilk Lognormal GOF Test	
5% Shapiro Wilk Critical Value	0.762	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.332	Lilliefors Lognormal GOF Test	
5% Lilliefors Critical Value	0.396	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			

Lognormal Statistics			
Minimum of Logged Data	1.609	Mean of logged Data	2.943
Maximum of Logged Data	5.342	SD of logged Data	1.656

Assuming Lognormal Distribution			
95% H-UCL	48556	90% Chebyshev (MVUE) UCL	144.4
95% Chebyshev (MVUE) UCL	187.6	97.5% Chebyshev (MVUE) UCL	247.6
99% Chebyshev (MVUE) UCL	365.5		

Nonparametric Distribution Free UCL Statistics
Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs			
95% CLT UCL	121.1	95% Jackknife UCL	140.3
95% Standard Bootstrap UCL	113.7	95% Bootstrap-t UCL	5275
95% Hall's Bootstrap UCL	2465	95% Percentile Bootstrap UCL	127.6
95% BCA Bootstrap UCL	137.8		
90% Chebyshev(Mean, Sd) UCL	174.4	95% Chebyshev(Mean, Sd) UCL	227.8
97.5% Chebyshev(Mean, Sd) UCL	302	99% Chebyshev(Mean, Sd) UCL	447.6

Suggested UCL to Use	
95% Student's-t UCL	140.3

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)
and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.
For additional insight the user may want to consult a statistician.

Calculation of 95% UCL for
Chromium in
On-Site Groundwater

UCL Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	6/16/2014 1:25:23 PM
From File	GW On-Site for Pro UCL.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Chromium

General Statistics

Total Number of Observations	11	Number of Distinct Observations	3
Number of Detects	2	Number of Non-Detects	9
Number of Distinct Detects	2	Number of Distinct Non-Detects	1
Minimum Detect	6.6	Minimum Non-Detect	2
Maximum Detect	10.5	Maximum Non-Detect	2
Variance Detects	7.605	Percent Non-Detects	81.82%
Mean Detects	8.55	SD Detects	2.758
Median Detects	8.55	CV Detects	0.323
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	2.119	SD of Logged Detects	0.328

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only
Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	3.191	Standard Error of Mean	1.134
SD	2.66	95% KM (BCA) UCL	N/A
95% KM (t) UCL	5.246	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	5.056	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	6.593	95% KM Chebyshev UCL	8.134
97.5% KM Chebyshev UCL	10.27	99% KM Chebyshev UCL	14.47

Gamma GOF Tests on Detected Observations Only
Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	18.89	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.453	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	75.54	nu star (bias corrected)	N/A
MLE Mean (bias corrected)	N/A	MLE Sd (bias corrected)	N/A

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	1.439	nu hat (KM)	31.67
		Adjusted Level of Significance (β)	0.0278
Approximate Chi Square Value (31.67, α)	19.81	Adjusted Chi Square Value (31.67, β)	18.29
95% Gamma Approximate KM-UCL (use when n>=50	5.101	95% Gamma Adjusted KM-UCL (use when n<50)	5.524

Calculation of 95% UCL for
Chromium in
On-Site Groundwater

Lognormal GOF Test on Detected Observations Only
Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.746	Mean in Log Scale	0.48
SD in Original Scale	3.141	SD in Log Scale	1.09
95% t UCL (assumes normality of ROS data)	4.462	95% Percentile Bootstrap UCL	4.351
95% BCA Bootstrap UCL	4.874	95% Bootstrap t UCL	6.957
95% H-UCL (Log ROS)	8.736		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	2.373	Mean in Log Scale	0.385
SD in Original Scale	3.176	SD in Log Scale	0.864
95% t UCL (Assumes normality)	4.108	95% H-Stat UCL	4.515

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	5.246	95% KM (% Bootstrap) UCL	N/A

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Calculation of 95% UCL for Tetrachloroethene in Subsurface Soil

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	5/18/2014 2:33:24 PM
From File	SSS for Pro UCL.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Tetrachloroethylene

General Statistics			
Total Number of Observations	8	Number of Distinct Observations	7
Number of Detects	5	Number of Non-Detects	3
Number of Distinct Detects	4	Number of Distinct Non-Detects	3
Minimum Detect	0.0041	Minimum Non-Detect	8.20E-04
Maximum Detect	85.4	Maximum Non-Detect	9.90E-04
Variance Detects	1458	Percent Non-Detects	37.50%
Mean Detects	17.09	SD Detects	38.19
Median Detects	0.0077	CV Detects	2.235
Skewness Detects	2.236	Kurtosis Detects	5
Mean of Logged Detects	-3.152	SD of Logged Detects	4.256

Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest. For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012). Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0

Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.552	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.762	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.473	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.396	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
Mean	10.68	Standard Error of Mean	11.16
SD	28.24	95% KM (BCA) UCL	N/A
95% KM (t) UCL	31.83	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	29.04	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	44.17	95% KM Chebyshev UCL	59.34
97.5% KM Chebyshev UCL	80.4	99% KM Chebyshev UCL	121.8

Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	1.208	Anderson-Darling GOF Test	
5% A-D Critical Value	0.839	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.502	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.4	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			

Gamma Statistics on Detected Data Only			
k hat (MLE)	0.131	k star (bias corrected MLE)	0.186
Theta hat (MLE)	130.6	Theta star (bias corrected MLE)	92.02
nu hat (MLE)	1.308	nu star (bias corrected)	1.857
MLE Mean (bias corrected)	17.09	MLE Sd (bias corrected)	39.65

Calculation of 95% UCL for Tetrachloroethene in Subsurface Soil

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.143	nu hat (KM)	2.287
Approximate Chi Square Value (2.29, α)	0.197	Adjusted Chi Square Value (2.29, β)	0.121
95% Gamma Approximate KM-UCL (use when n>=50	124	95% Gamma Adjusted KM-UCL (use when n<50)	201.6

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detected data is small such as < 0.1

For such situations, GROS method tends to yield inflated values of UCLs and BTVs

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0041	Mean	10.68
Maximum	85.4	Median	0.00885
SD	30.19	CV	2.826
k hat (MLE)	0.129	k star (bias corrected MLE)	0.164
Theta hat (MLE)	82.55	Theta star (bias corrected MLE)	65.05
nu hat (MLE)	2.07	nu star (bias corrected)	2.627
MLE Mean (bias corrected)	10.68	MLE Sd (bias corrected)	26.36
		Adjusted Level of Significance (β)	0.0195
Approximate Chi Square Value (2.63, α)	0.271	Adjusted Chi Square Value (2.63, β)	0.157
95% Gamma Approximate UCL (use when n>=50)	103.5	95% Gamma Adjusted UCL (use when n<50)	178.6

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.608	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.762	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.456	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.396	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	10.68	Mean in Log Scale	-6.757
SD in Original Scale	30.19	SD in Log Scale	5.925
95% t UCL (assumes normality of ROS data)	30.9	95% Percentile Bootstrap UCL	32.03
95% BCA Bootstrap UCL	42.7	95% Bootstrap t UCL	110673
95% H-UCL (Log ROS)	5.88E+21		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	10.68	Mean in Log Scale	-4.87
SD in Original Scale	30.19	SD in Log Scale	3.997
95% t UCL (Assumes normality)	30.9	95% H-Stat UCL	1.47E+09

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

99% KM (Chebyshev) UCL	121.8

Warning: Recommended UCL exceeds the maximum observation

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Calculation of 95% UCL for
Hexavalent Chromium in
Subsurface Soil

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	5/18/2014 2:34:32 PM
From File	SSS for Pro UCL.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Hex Chrome

General Statistics

Total Number of Observations	5	Number of Distinct Observations	5
Number of Detects	4	Number of Non-Detects	1
Number of Distinct Detects	4	Number of Distinct Non-Detects	1
Minimum Detect	1.3	Minimum Non-Detect	0.94
Maximum Detect	3.8	Maximum Non-Detect	0.94
Variance Detects	1.169	Percent Non-Detects	20%
Mean Detects	2.325	SD Detects	1.081
Median Detects	2.1	CV Detects	0.465
Skewness Detects	1.048	Kurtosis Detects	0.919
Mean of Logged Detects	0.765	SD of Logged Detects	0.455

Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use
guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.
For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).
Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.943	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.222	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.443	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	2.048	Standard Error of Mean	0.519
SD	1.004	95% KM (BCA) UCL	N/A
95% KM (t) UCL	3.154	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	2.901	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	3.604	95% KM Chebyshev UCL	4.308
97.5% KM Chebyshev UCL	5.286	99% KM Chebyshev UCL	7.208

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.223	Anderson-Darling GOF Test	
5% A-D Critical Value	0.658	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.189	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.396	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	6.526	k star (bias corrected MLE)	1.798
Theta hat (MLE)	0.356	Theta star (bias corrected MLE)	1.293
nu hat (MLE)	52.21	nu star (bias corrected)	14.39
MLE Mean (bias corrected)	2.325	MLE Sd (bias corrected)	1.734

Calculation of 95% UCL for
Hexavalent Chromium in
Subsurface Soil

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	4.159	nu hat (KM)	41.59
Approximate Chi Square Value (41.59, α)	27.81	Adjusted Chi Square Value (41.59, β)	23
95% Gamma Approximate KM-UCL (use when n>=50)	3.063	95% Gamma Adjusted KM-UCL (use when n<50)	3.703

Gamma ROS Statistics using Imputed Non-Detects
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.862
Maximum	3.8	Median	1.8
SD	1.396	CV	0.75
k hat (MLE)	0.655	k star (bias corrected MLE)	0.396
Theta hat (MLE)	2.841	Theta star (bias corrected MLE)	4.708
nu hat (MLE)	6.555	nu star (bias corrected)	3.955
MLE Mean (bias corrected)	1.862	MLE Sd (bias corrected)	2.961
		Adjusted Level of Significance (β)	0.0086
Approximate Chi Square Value (3.96, α)	0.704	Adjusted Chi Square Value (3.96, β)	0.288
95% Gamma Approximate UCL (use when n>=50)	10.46	95% Gamma Adjusted UCL (use when n<50)	N/A

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.993	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.154	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.443	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.985	Mean in Log Scale	0.519
SD in Original Scale	1.206	SD in Log Scale	0.678
95% t UCL (assumes normality of ROS data)	3.135	95% Percentile Bootstrap UCL	2.84
95% BCA Bootstrap UCL	2.84	95% Bootstrap t UCL	3.534
95% H-UCL (Log ROS)	7.094		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	0.6	95% H-UCL (KM -Log)	4.121
KM SD (logged)	0.483	95% Critical H Value (KM-Log)	2.895
KM Standard Error of Mean (logged)	0.25		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	1.954	Mean in Log Scale	0.461
SD in Original Scale	1.251	SD in Log Scale	0.786
95% t UCL (Assumes normality)	3.147	95% H-Stat UCL	10.41

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	3.154	95% KM (Percentile Bootstrap) UCL	N/A

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Johnson and Ettinger Model Inputs for
Current/Future Industrial Worker - Tetrachloroethene

SG-ADV
Version 3.1; 02/04

Reset

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
127184	3.34E+05			Tetrachloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (^oC)	ENTER Totals must add up to value of Ls (cell F24) Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, (Enter value or 0) h_B (cm)	ENTER Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
15	30	18.3	30			SL		

MORE ↓

ENTER Stratum A SCS soil type	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)
SL	1.62	0.387	0.103		Error	Error	Error		Error	Error	Error

MORE ↓

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($g/cm\text{-}s^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	9388	4724	457	0.1	0.25	

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
70	25	25	250

END

Johnson and Ettinger Model Inputs for
Current/Future Industrial Worker - Tetrachloroethene

Exposure duration, τ (sec)	Source-building separation, L_T (cm)	Stratum A soil air-filled porosity, θ_a^A (cm^3/cm^3)	Stratum B soil air-filled porosity, θ_a^B (cm^3/cm^3)	Stratum C soil air-filled porosity, θ_a^C (cm^3/cm^3)	Stratum A effective total fluid saturation, S_{te} (cm^3/cm^3)	Stratum A soil intrinsic permeability, k_i (cm^2)	Stratum A soil relative air permeability, k_{rg} (cm^2)	Stratum A soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
7.88E+08	15	0.284	#VALUE!	#VALUE!	0.184	6.02E-09	0.901	5.42E-09	28,224	3.34E+05	1.41E+06

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Stratum A effective diffusion coefficient, D^{eff}_A (cm^2/s)	Stratum B effective diffusion coefficient, D^{eff}_B (cm^2/s)	Stratum C effective diffusion coefficient, D^{eff}_C (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)	Diffusion path length, L_d (cm)
4.48E+07	6.30E-05	15	9,469	1.27E-02	5.31E-01	1.78E-04	7.27E-03	0.00E+00	0.00E+00	7.27E-03	15

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe^f) (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)	Unit risk factor, URF ($\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
15	3.34E+05	0.10	3.79E+01	7.27E-03	2.82E+03	1.04E+08	2.69E-05	8.97E+00	5.9E-06	6.0E-01

END

Johnson and Ettinger Model Inputs for
Current/Future Industrial Worker - Trichloroethene

SG-ADV
Version 3.1; 02/04

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
79016	3.14E+02			Trichloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (^oC)	ENTER Totals must add up to value of Ls (cell F24) Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, (Enter value or 0) h_B (cm)	ENTER Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
15	30	18.3	30			SL		

MORE ↓

ENTER Stratum A SCS soil type	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)
SL	1.62	0.387	0.103		Error	Error	Error		Error	Error	Error

MORE ↓

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($g/cm\text{-}s^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	9388	4724	457	0.1	0.25	

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
70	25	25	250

END

Johnson and Ettinger Model Inputs for
Current/Future Industrial Worker - Trichloroethene

Exposure duration, τ (sec)	Source-building separation, L_T (cm)	Stratum A soil air-filled porosity, θ_a^A (cm^3/cm^3)	Stratum B soil air-filled porosity, θ_a^B (cm^3/cm^3)	Stratum C soil air-filled porosity, θ_a^C (cm^3/cm^3)	Stratum A effective total fluid saturation, S_{te} (cm^3/cm^3)	Stratum A soil intrinsic permeability, k_i (cm^2)	Stratum A soil relative air permeability, k_{rg} (cm^2)	Stratum A soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
7.88E+08	15	0.284	#VALUE!	#VALUE!	0.184	6.02E-09	0.901	5.42E-09	28,224	3.14E+02	1.41E+06

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} ($atm\text{-}m^3/mol$)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Stratum A effective diffusion coefficient, D^{eff}_A (cm^2/s)	Stratum B effective diffusion coefficient, D^{eff}_B (cm^2/s)	Stratum C effective diffusion coefficient, D^{eff}_C (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)	Diffusion path length, L_d (cm)
4.48E+07	6.30E-05	15	8,454	7.40E-03	3.09E-01	1.78E-04	7.98E-03	0.00E+00	0.00E+00	7.98E-03	15

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)	Unit risk factor, URF ($\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
15	3.14E+02	0.10	3.79E+01	7.98E-03	2.82E+03	2.03E+07	2.69E-05	8.45E-03	1.1E-04	4.0E-02

END

Johnson and Ettinger Model Inputs for
Future On-Site Resident - 1,2,4-Trimethylbenzene

SG-ADV
Version 3.1; 02/04

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
95636	9.65E+00			1,2,4-Trimethylbenzene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (^oC)	ENTER Totals must add up to value of Ls (cell F24) Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, (Enter value or 0) h_B (cm)	ENTER Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
15	30	18.3	30			SL		

MORE ↓

ENTER Stratum A SCS soil type	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)
SL	1.62	0.387	0.103		Error	Error	Error		Error	Error	Error

MORE ↓

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($g/cm\text{-}s^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.25	

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
70	26	26	350

END

Johnson and Ettinger Model Inputs for
Future On-Site Resident - 1,2,4-Trimethylbenzene

Exposure duration, τ (sec)	Source-building separation, L_T (cm)	Stratum A soil air-filled porosity, θ_a^A (cm^3/cm^3)	Stratum B soil air-filled porosity, θ_a^B (cm^3/cm^3)	Stratum C soil air-filled porosity, θ_a^C (cm^3/cm^3)	Stratum A effective total fluid saturation, S_{te} (cm^3/cm^3)	Stratum A soil intrinsic permeability, k_i (cm^2)	Stratum A soil relative air permeability, k_{rg} (cm^2)	Stratum A soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
8.20E+08	15	0.284	#VALUE!	#VALUE!	0.184	6.02E-09	0.901	5.42E-09	4,000	9.65E+00	1.69E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Stratum A effective diffusion coefficient, D^{eff}_A (cm^2/s)	Stratum B effective diffusion coefficient, D^{eff}_B (cm^2/s)	Stratum C effective diffusion coefficient, D^{eff}_C (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)	Diffusion path length, L_d (cm)
1.06E+06	3.77E-04	15	11,588	3.92E-03	1.64E-01	1.78E-04	6.12E-03	0.00E+00	0.00E+00	6.12E-03	15

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)	Unit risk factor, URF ($\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
15	9.65E+00	0.10	5.37E+00	6.12E-03	4.00E+02	3.36E+09	3.13E-04	3.02E-03	NA	6.0E-03

END

Johnson and Ettinger Model Inputs for
Future On-Site Resident - Tetrachloroethene

SG-ADV
Version 3.1; 02/04

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
127184	3.34E+05			Tetrachloroethylene

MORE

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (^oC)	ENTER Totals must add up to value of Ls (cell F24) Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, (Enter value or 0) h_B (cm)	ENTER Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
15	30	18.3	30			SL		

MORE

ENTER Stratum A SCS soil type	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)
SL	1.62	0.387	0.103		Error	Error	Error		Error	Error	Error

MORE

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($g/cm\text{-}s^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.25	

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
70	26	26	350

END

Johnson and Ettinger Model Inputs for
Future On-Site Resident - Tetrachloroethene

Exposure duration, τ (sec)	Source-building separation, L_T (cm)	Stratum A soil air-filled porosity, θ_a^A (cm^3/cm^3)	Stratum B soil air-filled porosity, θ_a^B (cm^3/cm^3)	Stratum C soil air-filled porosity, θ_a^C (cm^3/cm^3)	Stratum A effective total fluid saturation, S_{te} (cm^3/cm^3)	Stratum A soil intrinsic permeability, k_i (cm^2)	Stratum A soil relative air permeability, k_{rg} (cm^2)	Stratum A soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
8.20E+08	15	0.284	#VALUE!	#VALUE!	0.184	6.02E-09	0.901	5.42E-09	4,000	3.34E+05	1.69E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Stratum A effective diffusion coefficient, D^{eff}_A (cm^2/s)	Stratum B effective diffusion coefficient, D^{eff}_B (cm^2/s)	Stratum C effective diffusion coefficient, D^{eff}_C (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)	Diffusion path length, L_d (cm)
1.06E+06	3.77E-04	15	9,469	1.27E-02	5.31E-01	1.78E-04	7.27E-03	0.00E+00	0.00E+00	7.27E-03	15

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe^f) (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)	Unit risk factor, URF ($\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
15	3.34E+05	0.10	5.37E+00	7.27E-03	4.00E+02	1.04E+08	3.14E-04	1.05E+02	5.9E-06	6.0E-01

END

Johnson and Ettinger Model Inputs for
Future On-Site Resident - Trichloroethene

SG-ADV
Version 3.1; 02/04

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
79016	3.14E+02			Trichloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (^oC)	ENTER Totals must add up to value of Ls (cell F24) Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, (Enter value or 0) h_B (cm)	ENTER Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
15	30	18.3	30			SL		

MORE ↓

ENTER Stratum A SCS soil type	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)
SL	1.62	0.387	0.103		Error	Error	Error		Error	Error	Error

MORE ↓

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($g/cm\text{-}s^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.25	

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
70	26	26	350

END

Johnson and Ettinger Model Inputs for
Future On-Site Resident - Trichloroethene

Exposure duration, τ (sec)	Source-building separation, L_T (cm)	Stratum A soil air-filled porosity, θ_a^A (cm^3/cm^3)	Stratum B soil air-filled porosity, θ_a^B (cm^3/cm^3)	Stratum C soil air-filled porosity, θ_a^C (cm^3/cm^3)	Stratum A effective total fluid saturation, S_{te} (cm^3/cm^3)	Stratum A soil intrinsic permeability, k_i (cm^2)	Stratum A soil relative air permeability, k_{rg} (cm^2)	Stratum A soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
8.20E+08	15	0.284	#VALUE!	#VALUE!	0.184	6.02E-09	0.901	5.42E-09	4,000	3.14E+02	1.69E+04

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Stratum A effective diffusion coefficient, D^{eff}_A (cm^2/s)	Stratum B effective diffusion coefficient, D^{eff}_B (cm^2/s)	Stratum C effective diffusion coefficient, D^{eff}_C (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)	Diffusion path length, L_d (cm)
1.06E+06	3.77E-04	15	8,454	7.40E-03	3.09E-01	1.78E-04	7.98E-03	0.00E+00	0.00E+00	7.98E-03	15

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)	Unit risk factor, URF ($\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
15	3.14E+02	0.10	5.37E+00	7.98E-03	4.00E+02	2.03E+07	3.14E-04	9.87E-02	1.1E-04	4.0E-02

END