WATER SUPPLY MONITORING REPORT: FIRST QUARTER 2014

CTS OF ASHEVILLE, INC. SUPERFUND SITE

235 Mills Gap Road
Asheville, Buncombe County, North Carolina
EPA ID: NCD003149556
CERCLA Docket No. CERCLA-04-2012-3762

Prepared for:

CTS Corporation
905 West Boulevard North
Elkhart, Indiana 46514

Prepared by:

AMEC Environment & Infrastructure, Inc.
1308 Patton Avenue
Asheville, North Carolina 28806

AMEC Project 6252-12-0006

March 12, 2014

amec

March 12, 2014

Ms. Samantha Urquhart-Foster
Superfund Remedial and Site Evaluation Branch
U.S. Environmental Protection Agency
61 Forsyth Street, S.W.
Atlanta, Georgia 30303-8960
Urquhart-Foster.Samantha@epa.gov

Subject: **Water Supply Monitoring Report: First Quarter 2014**
CTS of Asheville, Inc. Superfund Site
235 Mills Gap Road, Asheville, Buncombe County, North Carolina
EPA ID: NCD003149556
CERCLA Docket No. CERCLA-04-2012-3762
AMEC Project 6252-12-0006

Dear Ms. Urquhart-Foster:

Please find attached the Water Supply Monitoring Report: First Quarter 2014 for the above-referenced Site. AMEC Environment & Infrastructure, Inc. prepared this Report on behalf of CTS Corporation pursuant to the requirement set forth in Section 3.1.6 of the Scope of Work contained in Appendix A of the Administrative Settlement Agreement and Order on Consent for Remedial Investigation/Feasibility Study between the United States Environmental Protection Agency Region 4 and CTS Corporation (effective date of January 26, 2012).

If you have questions regarding this Water Supply Monitoring Report, please contact us at (828) 252-8130.

Sincerely,

AMEC Environment & Infrastructure, Inc.

Susan E. Kelly, P.E., L.G.
Senior Engineer

Matthew E. Wallace, P.E.
Principal Engineer

NORTH CAROLINA PROFESSIONAL SEAL 24933 3/12/14 ENGINEER MATTHEW E. WALLACE

SEK/MEW:sek

cc: Elizabeth Ahlemann, CTS Corporation
Michael Dolan, Jones Day
Nile Testerman, NCDENR

Correspondence:
AMEC
1308 Patton Avenue
Asheville, North Carolina 28806
Tel 828.252.8130
Fax 828.251.9690
License Number: NC Corporate Engineering F-1253

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LIST OF ACRONYMS

AMEC	AMEC Environment & Infrastructure, Inc.
FDR	field data record
IRM	Interim Response Measure
MGRA	Mills Gap Road Associates
RI/FS	Remedial Investigation/Feasibility Study
TCE	trichloroethene (also, trichloroethylene)
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

EXECUTIVE SUMMARY

AMEC Environment & Infrastructure, Inc., on behalf of CTS Corporation, conducted the first quarter 2014 water supply monitoring event for the CTS of Asheville, Inc. Superfund Site (Site). The monitoring activities were conducted pursuant to Section 3.1.6 of the Scope of Work contained in Appendix A of the Administrative Settlement Agreement and Order on Consent for Remedial Investigation/Feasibility Study between the United States Environmental Protection Agency (USEPA) and CTS Corporation.

The USEPA collected and analyzed water supply samples from identified wells/springs within an approximate one-mile radius of the Site on a quarterly basis between September 2008 and March 2012 (14 sampling events). Trichloroethene and associated daughter products were identified in several of the sampled water supply wells and those homes have been connected to the municipal water supply. Since January 2013, AMEC has conducted five water supply well/spring sampling events, including the January 2014 monitoring event.

The objective of the water supply monitoring activities is to collect water supply samples to monitor potential target VOC contamination impacting the residential water supply sources within an approximate one-mile radius of the former plant at the Site. This Water Supply Monitoring Report describes the activities that were undertaken to monitor drinking water quality from water supply wells and springs located within a one-mile radius of the former plant at the Site.

The monitoring activities were conducted in accordance with the USEPA-approved Work Plan for Monitoring of Drinking Water Wells, Revision 1 (Work Plan) dated August 30, 2012. Water supply samples were collected from 25 locations during this quarterly sampling event. The laboratory analytical results of the submitted water samples indicate that the analyzed constituents were not detected above the associated method detection limits. Not considering the data gaps related to water samples not being collected at well locations where a sample could not be collected due to mechanical problems or per a homeowner's request to sample their well during the next sampling event, the data collected for water supply monitoring are considered 100 percent complete and usable for meeting the objectives presented in the Work Plan.

1.0 INTRODUCTION

AMEC Environment & Infrastructure, Inc. (AMEC), on behalf of CTS Corporation, has prepared this Water Supply Monitoring Report: First Quarter 2014 (Report) for the CTS of Asheville, Inc. Superfund Site (Site). This Report describes work conducted in accordance with the Work Plan for Monitoring of Drinking Water Wells, Revision 1 (Work Plan), dated August 30, 2012, which was approved by the United States Environmental Protection Agency (USEPA) in a letter dated October 26, 2012. The water supply monitoring activities were conducted pursuant to Section 3.1.6 of the Scope of Work contained in Appendix A of the Administrative Settlement Agreement and Order on Consent for Remedial Investigation/Feasibility Study (RI/FS) between the USEPA and CTS Corporation (effective date January 26, 2012). This Report describes the activities that were undertaken to monitor drinking water quality from water supply wells and springs located within a one-mile radius of the former plant at the Site.

1.1 SITE DESCRIPTION

The Site is approximately nine acres on Mills Gap Road in Asheville, Buncombe County, North Carolina, and the areal extent of the contamination. The approximate center of the Site is located at north latitude 35°29’36” and west longitude 82°30’25”. The Site formerly contained an approximate 95,000-square foot, single-story brick and metal structure in the southern portion of the Site. The building was demolished in December 2011 and the concrete building pad remains intact. The Site is unoccupied.

1.2 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

Environmental investigations have been conducted at the Site by several entities since 1987. The results of previous investigations have been described in other Site documents, and will be presented in the RI/FS Work Plan to be prepared for the Site. The results of previous investigations have identified volatile organic compounds (VOCs), primarily TCE, at the Site.

The USEPA collected and analyzed water supply samples from identified wells/springs within an approximate one-mile radius of the Site on a quarterly basis between September

2008 and March 2012 (14 sampling events). Since January 2013, AMEC has conducted five water supply monitoring events, including the January 2014 monitoring event.

1.3 OBJECTIVE OF WATER SUPPLY MONITORING

The objective of the water supply monitoring activities is to collect water supply samples to monitor potential target VOC concentrations in residential water supply sources within an approximate one-mile radius of the former plant at the Site. Water supply samples will be collected on a quarterly basis from approximately one-quarter of the water supply sources; therefore, each water supply source will be sampled annually.

2.0 WATER SUPPLY MONITORING ACTIVITIES

The water supply monitoring activities were conducted in accordance with the USEPA-approved Work Plan. The Work Plan was developed to monitor potential target VOC concentrations in residential water supply sources within an approximate one-mile radius of the former plant at the Site. The collected water samples were analyzed for the target VOCs associated with the Site and, as requested by the USEPA, the samples were also analyzed for toluene.

2.1 ASSIGNMENT OF SAMPLING LOCATIONS

Access agreements were sent by the USEPA to homes within a one-mile radius of the Site requesting access for AMEC and USEPA personnel to enter an owner's property for collection of water supply samples and/or to service a Respondent-installed Interim Response Measure (IRM) water filtration system. As of January 1, 2014, 108 completed/accepted access agreements had been received by USEPA. Nine of the locations contain an IRM filtration system where water is supplied by a shared well that is located on another property. In such instances, water supply samples (pre- and post-filtration system) will be collected from the "source" well property. At one location, the source well is located on a property that is currently vacant, and the adjacent property, which has an IRM filtration system installed in the residence, obtains water from the source well on the vacant property. In this instance, pre- and post-filtration system samples will be collected at the occupied residence with the IRM filtration system.

In late 2012, the original 87 sampling locations were assigned to a quarterly sampling event (January, April, July, or October) using a random number generator procedure. The resulting sample assignment included 22 sampling locations for the first three quarters and 21 sampling locations for the fourth quarter. As additional access agreements were obtained, the water supply sample locations were assigned sequentially to the next quarter, beginning with the fourth quarter. As of January 1, 2014, an additional twelve locations had been added to the monitoring program.

2.2 SAMPLING ACTIVITIES

Sampling activities were conducted from January 13 through 17, 2014. A USEPA contractor representative accompanied AMEC during the sampling activities. There were 29 locations planned for the sampling event (one sampling location was postponed from the first quarter 2013 sampling event to this sampling event and three sampling locations were postponed from the fourth quarter 2013 sampling event to this sampling event). However, samples were not obtained from the following three locations: [redacted]. Samples could not be collected at [redacted] or [redacted] because the well pumps were inoperable at the time of sampling. The property owner at [redacted] requested that their well be sampled during the next monitoring event. These three locations will be sampled during the next quarterly sampling event, but will remain in their assigned quarter sampling group for subsequent sampling.

Where a water supply system has a Respondent-installed IRM filtration system, a water sample was collected pre-filter (at the wellhead or at a sample port 'upstream' of the filtration system) and post-filter (at an interior faucet, exterior spigot, or at a sample port 'downstream' of the filtration system). The well systems were purged for at least 15 minutes prior to sample collection. At residences with an IRM filtration system, the system was purged from a location downstream of the filtration system. At residences without an IRM filtration system, the water system was purged from a spigot on the wellhead. At approximate five-minute intervals during purging, water quality parameters (pH, temperature, conductivity, and turbidity) were measured and recorded on the Water Supply Well Sampling Field Data Record (FDR). Copies of the equipment calibration FDRs, sampling FDRs, and the logbook for the sampling activities are included in Appendix A. Table 1 contains a summary of the water supply samples collected and associated quality assurance/quality control samples submitted to the laboratory.

The water samples were packed in ice-chilled coolers and delivered under chain-of-custody protocol to the laboratory by AMEC personnel. The samples were delivered to Pace Analytical Services (Pace) in Asheville, North Carolina, and couriered by laboratory personnel to Pace's laboratory in Huntersville, North Carolina, for analysis.

2.3 ANALYSIS OF WATER SAMPLES

The water samples were submitted for analysis of the following target VOCs according to USEPA Method 8260:

- 1,1-dichloroethene
- cis-1,2-dichloroethene
- trans-1,2-dichloroethene
- tetrachloroethene
- 1,1,1-trichloroethane
- trichloroethene
- vinyl chloride
- toluene

3.0 ANALYTICAL RESULTS AND DATA USABILITY

The following sections describe the laboratory analytical results of the submitted water samples, as well as the results of the data validation and data usability. The laboratory analytical reports are included as Appendix B.

The laboratory analytical results of the submitted water samples indicate that the analyzed constituents were not detected above the associated method detection limits.

3.1 DATA VALIDATION

Data validation was conducted based on procedures in the USEPA Region 4 Data Validation Standard Operating Procedures for Organic Analysis (USEPA, 2008). Full validation, including raw data verification and calculation checks, was completed on ten percent of the laboratory data.

The data validation report is included in Appendix C. The reporting limits of several samples were qualified as estimated due to out of range surrogate or MS/MSD recoveries. The qualified analytes were not detected above the laboratory reporting limit in the associated samples.

3.2 DATA USABILITY SUMMARY

The field investigation was conducted as proposed in the Work Plan, with the following discrepancies:

- Matrix spike and matrix spike duplicate samples (MS/MSD) were not identified on the chain-of-custody records. With the exception of MS/MSD sample, the laboratory used water samples that were included in the sample delivery group to conduct the MS/MSD evaluation.

The field investigation was conducted as proposed in the Work Plan, with the following data gaps:

- A water supply sample was not collected from [redacted].
- A water supply sample was not collected from [redacted].
- A water supply sample was not collected from [redacted].

A data quality issue related to surrogate recovery was identified during the data validation process, and the reporting limits for toluene and tetrachloroethene were qualified as estimated in one sample. Data quality issues related to MS/MSD recoveries were also identified during the data validation process, and the reporting limit for 1,1-Dichloroethene was qualified as estimated in four samples. The quantitative uncertainty of the detection limits is not interpreted to be significant with respect to the project objectives.

The identified data gaps were out of the control of AMEC, the Respondent, or USEPA (i.e., mechanical and scheduling issues and a request to sample at a later time) and will be addressed during the next quarterly monitoring event. The data set is considered to be 100 percent complete with respect to the collected data. Therefore, the data are usable for completing the objectives set forth in the Work Plan.

4.0 DISCUSSION AND CONCLUSIONS

The water supply monitoring activities were conducted in accordance with the USEPA-approved Work Plan. Concentrations of analyzed constituents were not detected above the laboratory method detection limits.

The next monitoring event will be conducted in April 2014. In addition to the scheduled sampling locations, samples will be collected, if possible, from the following locations, which were not accessible during this monitoring event: [redacted], [redacted], and [redacted].

TABLE

TABLE 1
Water Supply Sample Summary
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

Address	Station ID	Sample ID	Date	Sample Location	Associated QA/QC Samples
[redacted]	MGPW060	PW-060A-05	1/13/2014	spigot on wellhead	TB-01-05
[redacted]	MGPW060	PW-060B-05	1/13/2014	spigot on house	TB-01-05
[redacted]	MGPW142	PW-142A-05	1/13/2014	pre system port	TB-01-05
[redacted]	MGPW142	PW-142B-05	1/13/2014	post system port	TB-01-05
[redacted]	MGPW047	PW-047A-05	1/13/2014	spigot on wellhead	TB-01-05
[redacted]	MGPW047	PW-047B-05	1/13/2014	spigot on house	TB-01-05
[redacted]	MGPW048	PW-048A-05	1/13/2014	sample port on IRM system	TB-01-05
[redacted]	MGPW048	PW-048B-05	1/13/2014	spigot on house	TB-01-05
[redacted]	MGPW063	PW-063A-05	1/13/2014	spigot on wellhead	TB-01-05 FD-01-05
[redacted]	MGPW063	PW-063B-05	1/13/2014	spigot on house	TB-01-05
[redacted]	MGPW039	PW-039A-05	1/14/2014	spigot on wellhead	TB-01-05
[redacted]	MGPW039	PW-039B-05	1/14/2014	sample port on IRM system	TB-01-05
[redacted]	MGPW058	PW-058A-05	1/14/2014	spigot on wellhead	TB-01-05
[redacted]	MGPW058	PW-058B-05	1/14/2014	spigot on house	TB-01-05
[redacted]	MGPW103	PW-103A-05	1/14/2014	spigot on wellhead	TB-01-05
[redacted]	MGPW103	PW-103B-05	1/14/2014	spigot on house	TB-01-05
[redacted]	MGPW149	PW-149A-05	1/14/2014	spigot on wellhead	TB-02-05
[redacted]	MGPW149	PW-149B-05	1/14/2014	spigot on house	TB-02-05
[redacted]	MGPW091	PW-091A-05	1/14/2014	spigot on wellhead	TB-02-05 FD-02-05
[redacted]	MGPW091	PW-091B-05	1/14/2014	sample port on IRM system	TB-02-05
[redacted]	MGPW157	PW-157A-05	1/14/2014	spigot on wellhead	TB-02-05
[redacted]	MGPW157	PW-157B-05	1/14/2014	spigot on house	TB-02-05
[redacted]	MGPW087	PW-087-05	1/14/2014	spigot on wellhead	TB-02-05
[redacted]	MGPW156	PW-156A-05	1/15/2014	spigot on wellhead	TB-02-05
[redacted]	MGPW156	PW-156B-05	1/15/2014	kitchen sink	TB-02-05
[redacted]	MGPW119	PW-119A-05	1/15/2014	spigot on wellhead	TB-02-05
[redacted]	MGPW119	PW-119B-05	1/15/2014	sample port on IRM system	TB-02-05
[redacted]	MGPW136	PW-136A-05	1/15/2014	sample port on IRM system	TB-02-05
[redacted]	MGPW136	PW-136B-05	1/15/2014	sample port on IRM system	TB-02-05
[redacted]	MGPW026	PW-026A-05	1/15/2014	sample port on IRM system	TB-02-05
[redacted]	MGPW026	PW-026B-05	1/15/2014	spigot on house	TB-02-05
[redacted]	MGPW014	PW-014A-05	1/15/2014	spigot on wellhead	TB-03-05 FD-03-05
[redacted]	MGPW014	PW-014B-05	1/15/2014	sample port on IRM system	TB-03-05
[redacted]	MGPW151	PW-151A-05	1/15/2014	sample port on IRM system	TB-03-05
[redacted]	MGPW151	PW-151B-05	1/15/2014	sample port on IRM system	TB-03-05
[redacted]	MGPW133	PW-133A-05	1/16/2014	sample port on IRM system	TB-03-05
[redacted]	MGPW133	PW-133B-05	1/16/2014	spigot on house	TB-03-05
[redacted]	MGPW101	PW-101A-05	1/16/2014	sample port on IRM system	TB-03-05
[redacted]	MGPW101	PW-101B-05	1/16/2014	sample port on IRM system	TB-03-05
[redacted]	MGPW046	PW-046-05	1/16/2014	spigot on wellhead	TB-03-05
[redacted]	MGPW121	PW-121A-05	1/16/2014	spigot on wellhead	TB-04-05 FD-04-05
[redacted]	MGPW121	PW-121B-05	1/16/2014	kitchen sink	TB-04-05

TABLE 1
Water Supply Sample Summary
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

Address	Station ID	Sample ID	Date	Sample Location	Associated QA/QC Samples
[redacted]	MGPW143	PW-143A-05	1/16/2014	spigot on wellhead	TB-04-05
[redacted]	MGPW143	PW-143B-05	1/16/2014	spigot on house	TB-04-05
[redacted]	MGPW146	PW-146A-05	1/16/2014	sample port on IRM system	TB-04-05
[redacted]	MGPW146	PW-146B-05	1/16/2014	spigot on house	TB-04-05
[redacted]	MGPW085	PW-085A-05	1/17/2014	sample port on IRM system	TB-04-05 FD-05-05
[redacted]	MGPW085	PW-085B-05	1/17/2014	sample port on IRM system	TB-04-05

Notes:

Prepared By: ELF 2/25/14
Checked By: SEK 2/25/14

1. Station IDs provided by USEPA.
2. IRM - Interim Response Measure (Respondent-installed filtration system).
3. Samples denoted with "A" collected before the IRM system and samples denoted with "B" collected after the IRM system.
4. Samples without an "A" or "B" were collected from wells that do not have an IRM system installed.

FIGURES

[redacted]

Sampling Quarter Key

- First Quarter
- Second Quarter
- Third Quarter
- Fourth Quarter

Locations included in quarterly monitoring updated 2/25/14.

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QUARTERLY DRINKING WATER WELL LOCATION MAP
CTS OF ASHEVILLE, INC. SUPERFUND SITE
ASHEVILLE, NORTH CAROLINA

DRAWN: SEK	DATE: FEB. 2014
DFT CHECK: MEW	SCALE: NOT TO SCALE
ENG CHECK: --	PROJ: 6252-12-0006
APPROVAL: MEW	FIGURE: 1

REFERENCE: Parcels from Buncombe County GIS.

[redacted]

LEGEND

Well Sampled in January 2014

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DRINKING WATER WELLS SAMPLED IN JANUARY 2014
CTS OF ASHEVILLE, INC. SUPERFUND SITE
ASHEVILLE, NORTH CAROLINA

DRAWN: SEK	DATE: FEB. 2014
DFT CHECK: MEW	SCALE: NOT TO SCALE
ENG CHECK: --	PROJ: 6252-12-0006
APPROVAL: MEW	FIGURE: 2

REFERENCE: Parcels from Buncombe County GIS.

APPENDIX A

LOGBOOK AND FIELD DATA RECORDS

Location CTS of Asheville Date 1/8/14 RMC 1/8/14 1/8/14 ~~12/8/13~~ RMC 1/8/14

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1430 - Arrive at residence located ~~@ 1430~~ RMC 12/8/13 [redacted] to obtain GPS coordinates for water supply well. (MGPW142) / top of cover

1440 - Arrive at residence located @ [redacted] to obtain GPS coordinates for water supply well (MGPW158) / obtain @ wellhouse door

1510 - Arrive @ residence located @ [redacted] to obtain GPS coordinates for water supply well (MGPW160) / obtained on top of concrete well cap

1540 - Arrive @ residence located @ [redacted] to obtain GPS coordinates for water supply well / obtain from beside fake rock well cover. (MGPW156)

1555 - Arrive @ residence located @ [redacted] to obtain GPS coordinates from water supply well (MGPW155) / obtain from beside fake rock cover. Homeowner confirmed well belonged to residence.

1620 - Arrive @ residence located @ [redacted] (MGPW159) to obtain GPS coordinates for water supply well / obtain at top of concrete cover

Location CTS of Asheville Date 1/13/14

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0900 - At office / loading equipment

- Calibrate water quality meter & turbidity meter / contact equipment supplier regarding ~~calibration~~ RMC 1/13/14 calibration of water quality meter & turbidity meter (needed lot #'s of pH 7 solution & to calibrate turbidity / giving error message)
- Resolve error message

1100 - Leave office / J. Averitt & R. Clark

1130-1200 Obtain lunch

1200 - Arrive at residence located @ [redacted].

- Purged well and collected samples PW-060A-05 and PW-060B-05

1318 - Arrive at residence located @ [redacted]

- Purged well and collected samples PW-142A-05 and PW-142B-05
- Purged at post sample port of IRM system in basement / discharge purge water to drain in basement.

Location CTS of Asheville Date 1/13/14

Project / Client Water Supply Monitoring

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1400 - Arrive at residence located @ [redacted]. Purged ~~samples~~ well RMC 1/13/14 and collect samples PW-047A-05 and PW-047B-05

1440 - Arrive at residence located @ [redacted]. Purge well and collect samples PW-0408A-05 and PW-0408B-05

1600 - Arrive at residence located @ [redacted]. Purge well and collect samples PW-063A-05 and PW-063B-05

1700 - Arrive at residence located @ [redacted]. RMC 1/13/14 ~~Purge well and~~ RMC 1/13/14 ~~Sam collect samples~~ RMC 1/13/14 ~~PW-132A-05 and PW-132B-05~~

- Samantha Foster w/ EPA meets AMEC at residence for appointment.
- Begin purging @ exterior spigot but notice sediment in initial purge. J. Averitt and S. Kelly/AMEC go inside to look at IRM system.
- Basement is flooded. Homeowner indicates well was turned on ½ hour before arrival.
- Will sample residence next sampling event.

Location CTS of Asheville Date 1/14/14

Project / Client Water Supply Monitoring

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0800 - Calibrate water quality meter (YSI 63) and turbidity meter (HACL MP2100P)

0830 - arrive at CTS Site to meet w/ Lou VanOldenburg w/ OTIE

0900 - Arrive at [redacted] residence. Purge well and collect samples PW-039A-05 and PW-039B-05. AMEC personnel is R. Clark and J. Averitt w/ Lou VanOldenburg w/ OTIE.

1000 - Arrive at residence located at [redacted]. Meet Samantha Vaughurt-Foster w/ EPA at residence.
- Purge well and collect samples PW-058A-05 and PW-058B-05

1100 - Arrive at residence located at [redacted]. Purge well and collect samples ~~SW~~ PW-103A-05 RMC 2/26/14 and ~~SW~~ PW-103B-05 RMC 2/26/14

1200 - Fill out chain of custody

1230 - Deliver samples w/ chain of custody to laboratory (PACE)

1300 - Arrive at residence. Located @ [redacted]. Purge well & collect samples PW-149A-05 & PW-149B-05

Location CTS of Asheville Date 1/14/14

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1400 - Arrive at residence located at [redacted]. Purge Well and Collect samples FD-02-05 PW-091A-05 & PW-091B-05

1500 - Arrive at residence located @ [redacted]. Purge well and Collect samples PW-157A-05 and PW-157B-05.

1530 - Arrive at residence located at [redacted]. Purge well and Collect sample PW-087-05

1/14/14

Location CTS of Asheville Date 1/15/14

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0730 - Calibrate water quality meter (YSI 63) and turbidity meter (HACH 2100P)

0800 - Arrive at residence located at [redacted]. Purge well and collect samples PW-156A-05 and PW-156B-05

0900 Arrive at residence located at [redacted]. Homeowner does not show up during appointed time.

0945 - Arrive at residence located at [redacted]. Purge well and collect samples PW-119A-05 and PW-119B-05

1045 - Arrive at residence located at [redacted]. Purge Well and collect samples PW-136A-05 and PW-136B-05

1130 - Arrive at residence located at [redacted]. Collect samples PW-026A-05 and PW-026B-05 after purging well.

1200 Fillout chain of custody

1230 - lunch

1300-1400 - Deliver samples w/chain of

Location CTS of Asheville Date 1/15/14

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custody to laboratory

1430 - Arrive at residence located at [redacted]. Begin to purge well. Water quality meter (YSI 63) is not working properly

- Unable to calibrate meter

- 1540 - Receive replacement ~~new~~ water quality meter (HANNA HI 98129). ~~Re~~calibrate replacement water quality meter.

- Purge well and collect samples PW-014A-05, PW-014B-05 and FD-03-05

1650 Arrive at residence located at [redacted] Purge Well and Collect Samples PW-151A-05 and PW-151B-05

1/15/14

Location CTS of Asheville Date 1/16/14

Project / Client Water Supply Monitoring

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0800 - Arrive onsite/calibrate water quality meter (HI 98129) and turbidity meter (HACH 2100P) RMC 1/16/14

0815 - Arrive at residence located at [redacted]. Purge Well and collect samples PW-133A-05 and PW-133B-05

0920 - Arrive at residence located at [redacted]. Purge well and collect samples PW-101A-05 and PW-101B-05

- UV light ballast is beeping w/ A3 error message. J. Aulift resets alarm for 7 days.

1045 - Arrive at residence located at [redacted]. Purge well and collect samples PW-046-05. RMC 1/16/14

1130-1200 lunch

1200 - At office to copy sampling form and fill out chain of custody

1300 - Deliver samples w/ chain of custody to laboratory (PACE)

1340 - Arrive at residence located

Location CTS of Asheville Date 1/16/14

Project / Client Water Supply Monitoring

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at [redacted]. Purge well and collect samples PW-121A-05 and PW-121B-05 and FD-04-05

1430 - Arrive at residence located at [redacted]. Purge well and collect samples PW-143A-05 and PW-143B-05

1640 - Arrive at residence located at [redacted] Drive. Purge well and collect samples PW-146A-05 and PW-146B-05

1/16/14

Location CTS of Asheville Date 1/17/14

Project / Client Water Supply Monitoring

625212000G R.Clark/AMEC Page 1 of 1

1045 Arrive at [redacted]. Calibrate water quality meter (HI 98129) and turbidity meter (HACH 2100P). Purge well and collect samples PW-085A-05 and PW-085B-05 and FD-05-05.

1/17/14

FIELD INSTRUMENT CALIBRATION RECORD

Project Name: CTS of Asheville, Inc. Superfund Site Date: 1/13/14

Project Number: 6252-12-0006.0004 (Water Supply Monitoring - Q4) Name: JDA

Water Quality Meter Calibration

		Standard Value		Meter Value		Acceptance Criteria
Manufacturer:	YSI	pH: 4	SU (low)	pH: 3.95	SU	+/- 10% of standard
Model No.:	63	pH: 7	SU (med)	pH: 7.03	SU	+/- 10% of standard
Unit ID:	Pine 2646	pH: 10	SU (high)	pH: 10.08	SU	+/- 10% of standard
		Conductivity: 1.413	mS/cm	Conductivity: 1.413	mS/cm	+/- 10% of standard
		Thermometer Temperature:	C°	Temperature: 19.4	C°	+/- 2.0 C°

Turbidity Meter Calibration

		Standard Value		Meter Value		Acceptance Criteria
Manufacturer:	Hach	<0.1	NTU (low)	0.13	NTU	+/- 10% of standard
Model No.:	2100P	20	NTU (med)	20	NTU	+/- 10% of standard
Unit ID:	R11357	100	NTU (high)	100	NTU	+/- 10% of standard
		800	NTU (high)	802	NTU	+/- 10% of standard

Photoionization Detector

						Acceptance Criteria
Manufacturer:		Background:	ppmv	Meter:	ppmv	within 5 ppmv of Zero
Model No.:		Span Gas:	ppmv	Meter:	ppmv	+/- 10% of standard
Unit ID:						

Calibration Sources

	Source	Value		Lot Number	Expiration Date
pH (low)	Pine Env.	4	SU	3AH077	8/2015
pH (med)	Pine Env.	7	SU	3AL690	12/2015
pH (high)	Pine Env.	10	SU	3AI178	9/2015
Conductivity	Pine Env.	1.413	mS/cm	3AI362	9/2014
Turbidity (low)	Hach - Formazin	<0.1	NTU	A3038	2/2014
Turbidity (med):	Hach - Formazin	20	NTU	A3038	2/2014
Turbidity (high):	Hach - Formazin	100	NTU	A3056	2/2014
Turbidity (high):	Hach - Formazin	800	NTU	A3058	2/2014
PID gas:			ppmv		
Other:					

NOTES:

If a meter reading is not within acceptance criteria, clean or replace probe and re-calibrate, or use a different meter if available. If project requirements necessitate use of the instrument, clearly document on all data sheets and log book entries that the parameter was not calibrated to the acceptance criteria.

FIELD INSTRUMENT CALIBRATION RECORD

Project Name: CTS of Asheville, Inc. Superfund Site Date: 1/14/14

Project Number: 6252-12-0006.0004 (Water Supply Monitoring - Q4) Name: JDA

Water Quality Meter Calibration

		Standard Value		Meter Value		Acceptance Criteria
Manufacturer:	YSI	pH: 4	SU (low)	pH: 3.98	SU	+/- 10% of standard
Model No.:	63	pH: 7	SU (med)	pH: 7.00	SU	+/- 10% of standard
Unit ID:	Pine 2646	pH: 10	SU (high)	pH: 9.98	SU	+/- 10% of standard
		Conductivity: 1.413	mS/cm	Conductivity: 1.415	mS/cm	+/- 10% of standard
		Thermometer Temperature:	C°	Temperature: 18.5	C°	+/- 2.0 C°

Turbidity Meter Calibration

		Standard Value		Meter Value		Acceptance Criteria
Manufacturer:	Hach	<0.1	NTU (low)	0.11	NTU	+/- 10% of standard
Model No.:	2100P	20	NTU (med)	20	NTU	+/- 10% of standard
Unit ID:	R11357	100	NTU (high)	100	NTU	+/- 10% of standard
		800	NTU (high)	800	NTU	+/- 10% of standard

Photoionization Detector

						Acceptance Criteria
Manufacturer:		Background:	ppmv	Meter:	ppmv	within 5 ppmv of Zero
Model No.:		Span Gas:	ppmv	Meter:	ppmv	+/- 10% of standard
Unit ID:						

Calibration Sources

	Source	Value		Lot Number	Expiration Date
pH (low)	Pine Env.	4	SU	3AH077	8/2015
pH (med)	Pine Env.	7	SU	3AL690	12/2015
pH (high)	Pine Env.	10	SU	3AI178	9/2015
Conductivity	Pine Env.	1.413	mS/cm	3AI362	9/2014
Turbidity (low)	Hach - Formazin	<0.1	NTU	A3038	2/2014
Turbidity (med):	Hach - Formazin	20	NTU	A3038	2/2014
Turbidity (high):	Hach - Formazin	100	NTU	A3056	2/2014
Turbidity (high):	Hach - Formazin	800	NTU	A3058	2/2014
PID gas:			ppmv		
Other:					

NOTES:

If a meter reading is not within acceptance criteria, clean or replace probe and re-calibrate, or use a different meter if available. If project requirements necessitate use of the instrument, clearly document on all data sheets and log book entries that the parameter was not calibrated to the acceptance criteria.

FIELD INSTRUMENT CALIBRATION RECORD

Project Name: CTS of Asheville, Inc. Superfund Site Date: 1/15/14

Project Number: 6252-12-0006.0004 (Water Supply Monitoring - Q4) Name: JDA

Water Quality Meter Calibration

		Standard Value		Meter Value		Acceptance Criteria
Manufacturer:	YSI	pH: 4	SU (low)	pH: 3.97	SU *4.04	+/- 10% of standard
Model No.:	63	pH: 7	SU (med)	pH: 7.01	SU *7.10	+/- 10% of standard
Unit ID:	Pine 2646	pH: 10	SU (high)	pH: 9.89	SU	+/- 10% of standard
		Conductivity: 1.413	mS/cm	Conductivity: 1.413	mS/cm *1.410	+/- 10% of standard
		Thermometer Temperature:	C°	Temperature: 17.8	C°	+/- 2.0 C°

Turbidity Meter Calibration

		Standard Value		Meter Value		Acceptance Criteria
Manufacturer:	Hach	<0.1	NTU (low)	0.12	NTU	+/- 10% of standard
Model No.:	2100P	20	NTU (med)	20	NTU	+/- 10% of standard
Unit ID:	R11357	100	NTU (high)	100	NTU	+/- 10% of standard
		800	NTU (high)	801	NTU	+/- 10% of standard

Photoionization Detector

						Acceptance Criteria
Manufacturer:		Background:	ppmv	Meter:	ppmv	within 5 ppmv of Zero
Model No.:		Span Gas:	ppmv	Meter:	ppmv	+/- 10% of standard
Unit ID:						

Calibration Sources

	Source	Value		Lot Number	Expiration Date
pH (low)	Pine Env.	4	SU	3AH077	8/2015
pH (med)	Pine Env.	7	SU	3AL690	12/2015
pH (high)	Pine Env.	10	SU	3AI178	9/2015
Conductivity	Pine Env.	1.413	mS/cm	3AI362	9/2014
Turbidity (low)	Hach - Formazin	<0.1	NTU	A3038	2/2014
Turbidity (med):	Hach - Formazin	20	NTU	A3038	2/2014
Turbidity (high):	Hach - Formazin	100	NTU	A3056	2/2014
Turbidity (high):	Hach - Formazin	800	NTU	A3058	2/2014
PID gas:			ppmv		
Other:					

NOTES: YSI 63 MALFUNCTIONED AT [redacted] BEGAN USING HANNA HI 98129

* = CALIBRATION MEASUREMENTS FOR HANNA HI 98129

If a meter reading is not within acceptance criteria, clean or replace probe and re-calibrate, or use a different meter if available. If project requirements necessitate use of the instrument, clearly document on all data sheets and log book entries that the parameter was not calibrated to the acceptance criteria.

FIELD INSTRUMENT CALIBRATION RECORD

Project Name: CTS of Asheville, Inc. Superfund Site Date: 1/16/14

Project Number: 6252-12-0006.0004 (Water Supply Monitoring - Q4) Name: JDA

Water Quality Meter Calibration

Manufacturer: HANNA

Model No.: HI 98129

Unit ID: AMEC - ASHEVILLE

	Standard Value		Meter Value		Acceptance Criteria
pH:	4	SU (low)	pH: 4.04	SU	+/- 10% of standard
pH:	7	SU (med)	pH: 7.03	SU	+/- 10% of standard
pH:	10	SU (high)	pH: 10.01	SU	+/- 10% of standard
Conductivity:	1.413	mS/cm	Conductivity: 1.412	mS/cm	+/- 10% of standard
Thermometer Temperature:		C°	Temperature: 12.5	C°	+/- 2.0 C°

Turbidity Meter Calibration

Manufacturer: Hach

Model No.: 2100P

Unit ID: 211357

Standard Value		Meter Value		Acceptance Criteria
<0.1	NTU (low)	0.16	NTU	+/- 10% of standard
20	NTU (med)	20	NTU	+/- 10% of standard
100	NTU (high)	100	NTU	+/- 10% of standard
800	NTU (high)	792	NTU	+/- 10% of standard

Photoionization Detector

Manufacturer:

Model No.:

Unit ID:

				Acceptance Criteria
Background:	ppmv	Meter:	ppmv	within 5 ppmv of Zero
Span Gas:	ppmv	Meter:	ppmv	+/- 10% of standard

Calibration Sources

	Source	Value		Lot Number	Expiration Date
pH (low)	Pine Env.	4	SU	3AH077	8/2015
pH (med)	Pine Env.	7	SU	3AL690	12/2015
pH (high)	Pine Env.	10	SU	3AI178	9/2015
Conductivity	Pine Env.	1.413	mS/cm	3AI 162	9/2014
Turbidity (low)	Hach - Formazin	<0.1	NTU	A3038	2/2014
Turbidity (med):	Hach - Formazin	20	NTU	A3038	2/2014
Turbidity (high):	Hach - Formazin	100	NTU	A3056	2/2014
Turbidity (high):	Hach - Formazin	800	NTU	A3058	2/2014
PID gas:			ppmv		
Other:					

NOTES:

If a meter reading is not within acceptance criteria, clean or replace probe and re-calibrate, or use a different meter if available. If project requirements necessitate use of the instrument, clearly document on all data sheets and log book entries that the parameter was not calibrated to the acceptance criteria.

FIELD INSTRUMENT CALIBRATION RECORD

Project Name: CTS of Asheville, Inc. Superfund Site Date: 1/17/14

Project Number: 6252-12-0006.0004 (Water Supply Monitoring - Q4) Name: JDA

Water Quality Meter Calibration

Manufacturer: HANNA

Model No.: HI 98129

Unit ID: AMEC - ASHEVILLE

	Standard Value		Meter Value		Acceptance Criteria
pH:	4	SU (low)	pH: 4.03	SU	+/- 10% of standard
pH:	7	SU (med)	pH: 7.01	SU	+/- 10% of standard
pH:	10	SU (high)	pH: 10.02	SU	+/- 10% of standard
Conductivity:	1.413	mS/cm	Conductivity: 1.418	mS/cm	+/- 10% of standard
Thermometer Temperature:		C°	Temperature: 14.8	C°	+/- 2.0 C°

Turbidity Meter Calibration

Manufacturer: Hach

Model No.: 2100P

Unit ID: R 11357

Standard Value		Meter Value		Acceptance Criteria
<0.1	NTU (low)		NTU	+/- 10% of standard
20	NTU (med)		NTU	+/- 10% of standard
100	NTU (high)	101	NTU	+/- 10% of standard
800	NTU (high)	807	NTU	+/- 10% of standard

Photoionization Detector

Manufacturer:

Model No.:

Unit ID:

				Acceptance Criteria
Background:	ppmv	Meter:	ppmv	within 5 ppmv of Zero
Span Gas:	ppmv	Meter:	ppmv	+/- 10% of standard

Calibration Sources

	Source	Value		Lot Number	Expiration Date
pH (low)	Pine Env.	4	SU	3AH077	8/2015
pH (med)	Pine Env.	7	SU	3AL690	12/2015
pH (high)	Pine Env.	10	SU	3AI178	9/2015
Conductivity	Pine Env.	1.413	mS/cm	3AI362	9/2014
Turbidity (low)	Hach - Formazin	<0.1	NTU	A3038	2/2014
Turbidity (med):	Hach - Formazin	20	NTU	A3038	2/2014
Turbidity (high):	Hach - Formazin	100	NTU	A3056	2/2014
Turbidity (high):	Hach - Formazin	800	NTU	A3058	2/2014
PID gas:			ppmv		
Other:					

NOTES: TURBIDITY METER WOULD NOT READ THE LOW & MED CALIBRATION SOURCES LIKELY DUE TO COLD TEMPS & CONDENSATION ON CALIBRATION SOLUTION BOTTLES. WARMED UP THE SOLUTION BOTTLES & ATTEMPTED TO RECALIBRATE WITHOUT SUCCESS. ~~COTACT~~ JDA 1/17/14 CONTACTED PINE ENVIRONMENTAL, BUT WAS UNABLE TO FIX THE PROBLEM WITH THE METER

If a meter reading is not within acceptance criteria, clean or replace probe and re-calibrate, or use a different meter if available. If project requirements necessitate use of the instrument, clearly document on all data sheets and log book entries that the parameter was not calibrated to the acceptance criteria.

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRIT / R. CLARK

Well Address: [redacted] EPA Station ID: MGPW 060

Pre-filter Sample Location: SPIGOT @ WELLHEAD

Pre-filter Sample: PW-060A-05 Sample Date/Time: ~~11/~~ 1/13/14 13:05

Post-filter Sample Location: SPIGOT @ GARAGE

Post-filter Sample: PW-060B-05 Sample Date/Time: 1/13/14 13:00

Purge Start Time: 12:40 Purge Stop Time: 12:55

Flow Rate: 5.0 gpm (approximate) Volume Purged: 75 gallons (approximate)

QA/QC Sample(s): TB-01-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	8.14	15.1	437.1	1.0	
12:45	7.60	13.2	432.2	0.44	
12:50	7.56	12.2	433.7	0.36	
12:55	7.32	11.8	430.8	0.44	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT SPIGOT NEAR GARAGE

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S. AVRETT / R. CLARK

Well Address: [redacted] EPA Station ID: MGPW 142

Pre-filter Sample Location: PRE SYSTEM PORT

Pre-filter Sample: PW-142A-05 Sample Date/Time: 1/13/14 1345

Post-filter Sample Location: POST SYSTEM PORT

Post-filter Sample: PW-142B-05 Sample Date/Time: 1/13/14 1350

Purge Start Time: 13:25 Purge Stop Time: 1340

Flow Rate: 2.5 gpm (approximate) Volume Purged: ~~142.5~~ 37.5 gallons (approximate)

QA/QC Sample(s): TB-01-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.48	13.9	167.8	1.00	
1330	6.64	13.2	165.0	0.36	
1335	6.68	13.4	163.0	0.29	
1340	6.74	13.6	160.1	0.25	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT THE POST SYSTEM PORT

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT / R. CLARK

Well Address: [redacted] EPA Station ID: MGPW047

Pre-filter Sample Location: SPIGOT @ WELLHEAD

Pre-filter Sample: PW-047A-05 Sample Date/Time: 1/13/14 1425

Post-filter Sample Location: SPIGOT @ GARAGE

Post-filter Sample: PW-047B-05 Sample Date/Time: 1/13/14 1430

Purge Start Time: 1407 Purge Stop Time: 1422

Flow Rate: 4.5 gpm (approximate) Volume Purged: 67.5 gallons (approximate)

QA/QC Sample(s): TB-01-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.52	12.1	198.4	1.41	
1412	6.35	11.2	177.7	0.36	
1417	6.34	11.3	160.3	0.61	
1422	6.24	11.8	150.2	0.38	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT SPIGOT NEAR GARAGE

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT / R. CLARK

Well Address: [redacted] EPA Station ID: MGPW 048

Pre-filter Sample Location: PRE SYSTEM SAMPLE PORT

Pre-filter Sample: PW-048A-05 Sample Date/Time: 1/13/14 1500

Post-filter Sample Location: SPIGOT FRONT OF RESIDENCE

Post-filter Sample: PW-048B-05 Sample Date/Time: 1/13/14 1505

Purge Start Time: 1442 Purge Stop Time: 1457

Flow Rate: 5.0 gpm (approximate) Volume Purged: 75 gallons (approximate)

QA/QC Sample(s): TB-01-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.43	12.0	152.3	0.72	
1447	6.47	12.0	188.3	1.52	
1452	6.48	12.0	184.7	0.77	
1457	6.53	12.7	183.2	0.92	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT / R. CLARK

Well Address: [redacted] EPA Station ID: MGPW063

Pre-filter Sample Location: SPIGOT AT WELLHEAD

Pre-filter Sample: PW-063A-05 Sample Date/Time: 1/13/14 1630

Post-filter Sample Location: SPIGOT FRONT OF HOUSE

Post-filter Sample: PW-063B-05 Sample Date/Time: 1/13/14 1635

Purge Start Time: 1610 Purge Stop Time: 1625

Flow Rate: 4.0 gpm (approximate) Volume Purged: 60 gallons (approximate)

QA/QC Sample(s): TB-01-05 / FD-01-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	7.53	14.3	223.8	3.66	
1615	7.17	14.5	267.2	0.32	
1620	7.29	14.0	227.1	0.69	
1625	7.04	14.1	206.8	0.54	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT SPIGOT FRONT OF HOUSE NEAR WELL
FD-01-05 TAKEN AT SPIGOT AT WELL

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT / R. CLARK

Well Address: [redacted] EPA Station ID: MG PW 039

Pre-filter Sample Location: SPIGOT @ WELLHEAD

Pre-filter Sample: PW - 039A - 05 Sample Date/Time: ~~1/14/13~~ 1/14/14 SDA 09:50

Post-filter Sample Location: POST SYSTEM SAMPLE PORT

Post-filter Sample: PW - 039B - 05 Sample Date/Time: ~~1/14/13~~ 1/14/14 SDA 09:55

Purge Start Time: 09:30 Purge Stop Time: 09:45

Flow Rate: 2.0 gpm (approximate) Volume Purged: 30 gallons (approximate)

QA/QC Sample(s): TB - 01 - 05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.32	13.5	79.5	0.28	
09:35	5.96	14.4	65.8	0.25	
09:40	6.00	14.2	65.5	0.77	
09:45	6.03	14.1	65.0	0.30	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT POST SYSTEM SAMPLE PORT

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT / R. CLARK

Well Address: [redacted] EPA Station ID: MGPW058

Pre-filter Sample Location: SPIGOT AT WELLHEAD

Pre-filter Sample: PW-058A-05 Sample Date/Time: 1/14/14 10:35

Post-filter Sample Location: EXTERIOR SPIGOT

Post-filter Sample: PW-058B-05 Sample Date/Time: 1/14/14 10:40

Purge Start Time: 10:15 Purge Stop Time: 10:30

Flow Rate: 3.0 gpm (approximate) Volume Purged: 45 gallons (approximate)

QA/QC Sample(s): TB-01-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	7.32	9.5	133.5	3.09	
10:20	6.24	9.5	129.8	3.09	
10:25	6.36	9.5	130.4	0.28	
10:30	6.15	8.8	125.7	0.20	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT EXTERIOR SPIGOT ON SIDE OF HOUSE

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT / R. CLARK

Well Address: [redacted] EPA Station ID: MGPW 103

Pre-filter Sample Location: SPIGOT AT WELL

Pre-filter Sample: PW - 103A - 05 Sample Date/Time: 1/14/14 11:25

Post-filter Sample Location: EXTERIOR SPIGOT BESIDE YARDBARN

Post-filter Sample: PW - 103B - 05 Sample Date/Time: 1/14/14 11:30

Purge Start Time: 11:05 Purge Stop Time: 11:20

Flow Rate: 5.0 gpm (approximate) Volume Purged: 75 gallons (approximate)

QA/QC Sample(s): TB - 01 - 05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.51	14.4	90.1	0.39	
11:10	6.37	12.5	86.6	0.38	
11:15	6.43	13.3	88.5	0.22	
11:20	6.26	14.4	85.6	0.19	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT EXTERIOR SPIGOT BY YARDBARN

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT / R. CLARK

Well Address: [redacted] EPA Station ID: MG PW 149

Pre-filter Sample Location: SPIGOT @ WELLHEAD

Pre-filter Sample: PW - 149A - 05 Sample Date/Time: 1/14/14 1350

Post-filter Sample Location: SPIGOT @ FRONT CORNER OF RESIDENCE

Post-filter Sample: PW - 149B - 05 Sample Date/Time: 1/14/14 1355

Purge Start Time: 1330 Purge Stop Time: 1345

Flow Rate: 4.0 gpm (approximate) Volume Purged: 60 gallons (approximate)

QA/QC Sample(s): TB - 02 - 05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.29	14.0	~~549~~ 274.9 RMC 1/14/14	1.00	
1335	6.41	12.3	224.5	0.94	
1340	6.17	12.2	165.8	0.47	
1345	6.11	12.2	153.5	0.37	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT EXTERIOR SPIGOT FRONT CORNER OF RESIDENCE

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT / R. CLARK

Well Address: [redacted] EPA Station ID: MGPW 091

Pre-filter Sample Location: SPIGOT @ WELLHEAD

Pre-filter Sample: PW-091A-05 Sample Date/Time: 1/14/14 1435

Post-filter Sample Location: POST SYSTEM SAMPLE PORT.

Post-filter Sample: PW-091B-05 Sample Date/Time: 1/14/14 1440

Purge Start Time: 1415 Purge Stop Time: 1430

Flow Rate: 5.0 gpm (approximate) Volume Purged: 75 gallons (approximate)

QA/QC Sample(s): TB-02-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	5.99	10.7	168.2	0.25	
1420	6.07	11.1	164.2	1.55	
1425	6.15	12.8	159.7	0.99	
1430	6.20	14.3	156.9	0.33	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED @ POST SYSTEM SAMPLE PORT

FD-02-05 TAKEN AT WELLHEAD PRE SYSTEM (PW-091A-05)

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT / R. CLARK

Well Address: [redacted] EPA Station ID: MGPW 157

Pre-filter Sample Location: SPIGOT AT WELLHEAD

Pre-filter Sample: PW-157A-05 Sample Date/Time: 1/14/14 1525

Post-filter Sample Location: SPIGOT AT FRONT CORNER OF RESIDENCE

Post-filter Sample: PW-157B-05 Sample Date/Time: 1/14/14 1530

Purge Start Time: 1505 Purge Stop Time: 1520

Flow Rate: 4.0 gpm (approximate) Volume Purged: 60 gallons (approximate)

QA/QC Sample(s): TB-02-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	5.70	17.3	85.0	0.56	
1510	5.64	14.6	82.4	0.22	
1515	5.60	14.3	75.0	0.35	
1520	5.59	13.1	74.3	0.25	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT SPIGOT AT FRONT CORNER OF RESIDENCE

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT / R. CLARK

Well Address: [redacted] EPA Station ID: MGPW 087

Pre-filter Sample Location: SPIGOT AT WELL HEAD

Pre-filter Sample: PW-087-05 Sample Date/Time: 1/14/14 1645

Post-filter Sample Location: NA

Post-filter Sample: NA Sample Date/Time: NA

Purge Start Time: 1625 Purge Stop Time: 1640

Flow Rate: 4.0 gpm (approximate) Volume Purged: 60 gallons (approximate)

QA/QC Sample(s): TB-02-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	5.83	15.0	186.0	5.32	
1630	6.06	15.6	184.7	2.39	
1635	6.25	15.6	189.2	3.92	
1640	6.43	15.7	181.2	1.67	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT SPIGOT AT WELLHEAD

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT / R. CLARK

Well Address: [redacted] **EPA Station ID:** MGPW156

Pre-filter Sample Location: SPIGOT @ WELLHEAD

Pre-filter Sample: PW-156A-05 **Sample Date/Time:** 1/15/14 08:35

Post-filter Sample Location: KITCHEN SINK

Post-filter Sample: PW-156B-05 **Sample Date/Time:** 1/15/14 08:30

Purge Start Time: 0810 **Purge Stop Time:** 0825

Flow Rate: 2.5 gpm (approximate) **Volume Purged:** 37.5 gallons (approximate)

QA/QC Sample(s): TB-02-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.98	19.5	102.9	0.13	
0815	6.62	16.3	88.3	0.37	
0820	6.52	15.7	85.6	0.27	
0825	6.45	15.3	84.5	0.22	

If alternative units are indicated by meter, indicate the proper measurement units above.

°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT KITCHEN SINK

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT / R. CLARK

Well Address: [redacted] EPA Station ID: MGPW119

Pre-filter Sample Location: SPIGOT AT WELLHEAD

Pre-filter Sample: PW-119A-05 Sample Date/Time: 1/15/14 1020

Post-filter Sample Location: POST SYSTEM SAMPLE PORT

Post-filter Sample: PW-119B-05 Sample Date/Time: 1/15/14 1025

Purge Start Time: 0955 Purge Stop Time: 1015

Flow Rate: 5.0 gpm (approximate) Volume Purged: 75 gallons (approximate)

QA/QC Sample(s): TB-02-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	7.15	12.7	94.0	1.52	
1000	7.00	14.1	JBA 1/15/14 ~~11.8~~ 119.5	0.61	
1005	6.90	14.5	119.3	1.14	
1015	6.91	14.6	112.0	0.73	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT POST SYSTEM SAMPLE PORT

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT / R. CLARK

Well Address: [redacted] EPA Station ID: MCPW 136

Pre-filter Sample Location: PRE SYSTEM SAMPLE PORT

Pre-filter Sample: PW-136A-05 Sample Date/Time: 1/15/14 1110

Post-filter Sample Location: POST SYSTEM SAMPLE PORT

Post-filter Sample: PW-136B-05 Sample Date/Time: 1/15/14 1115

Purge Start Time: 1050 Purge Stop Time: 1105

Flow Rate: 6.0 gpm (approximate) Volume Purged: 90 gallons (approximate)

QA/QC Sample(s): TB-02-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	7.26	10.5	137.2	1.30	
1055	7.37	10.8	141.3	0.34	
1100	7.43	12.9	132.4	1.15	
1105	7.44	13.7	132.7	0.29	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT POST SYSTEM SAMPLE PORT

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT / R. CLARK

Well Address: [redacted] EPA Station ID: MGPW026

Pre-filter Sample Location: ~~PW-026A-05 PRE SYSTEM SAMPLE PORT~~ JDA 1/15/14 SPIGOT ~~POST~~

Pre-filter Sample: PW-026A-05 Sample Date/Time: 1/15/14 1155

Post-filter Sample Location: SPIGOT EXTERIOR OF BASEMENT

Post-filter Sample: PW-026B-05 Sample Date/Time: 1/15/14 1200

Purge Start Time: 1135 Purge Stop Time: 1150

Flow Rate: 3.0 gpm (approximate) Volume Purged: 45 gallons (approximate)

QA/QC Sample(s): TB-02-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	7.42	13.2	134.1	0.51	
1140	6.98	13.4	205.0	1.42	
1145	6.95	13.8	212.5	0.35	
1150	6.98	12.9	195.6	0.35	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT EXTERIOR SPIGOT

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT / R. CLARK

Well Address: [redacted] EPA Station ID: MGPW014

Pre-filter Sample Location: SPIGOT AT WELLHEAD

Pre-filter Sample: PW-014A-05 Sample Date/Time: 1/15/14 1615

Post-filter Sample Location: POST SYSTEM SAMPLE PORT

Post-filter Sample: PW-014B-05 Sample Date/Time: 1/15/14 1620

Purge Start Time: 1555 Purge Stop Time: 1610

Flow Rate: 4.0 gpm (approximate) Volume Purged: 60 gallons (approximate)

QA/QC Sample(s): TB-03-05 / FD-03-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.21	10.0	194	0.50	
1600	6.32	12.6	161	0.42	
1605	6.39	12.6	164	0.48	
1610	6.40	11.7	163	0.31	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED FROM POST SYSTEM SAMPLE PORT

* HI 98129 METER USED FOR PARAMETERS AS THE YSI 63 NOT OPERATING PROPERLY

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT / R. CLARK

Well Address: [redacted] EPA Station ID: MG PW 151

Pre-filter Sample Location: PRE SYSTEM SAMPLE PORT

Pre-filter Sample: PW-151A-05 Sample Date/Time: 1/15/14 1650

Post-filter Sample Location: POST SYSTEM SAMPLE PORT

Post-filter Sample: PW-151B-05 Sample Date/Time: 1/15/14 1655

Purge Start Time: 1630 Purge Stop Time: 1645

Flow Rate: 5.0 gpm (approximate) Volume Purged: 75 gallons (approximate)

QA/QC Sample(s): TB-03-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.19	12.7	155	0.35	
1635	6.06	11.1	144	0.32	
1640	6.01	12.1	143	0.39	
1645	6.06	11.5	143	0.42	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT POST SYSTEM SAMPLE PORT

* SPIGOT AT WELLHEAD HAD BEEN REMOVED HOMEOWNER STATED

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT | R. CLARK

Well Address: [redacted] **EPA Station ID:** MGPW 133

Pre-filter Sample Location: PRE SYSTEM SAMPLE PORT

Pre-filter Sample: PW-133A-05 **Sample Date/Time:** 1/16/14 0905

Post-filter Sample Location: EXTERIOR SPIGOT NEAR SYSTEM YARD BARN

Post-filter Sample: PW-133B-05 **Sample Date/Time:** 1/16/14 0910

Purge Start Time: 0845 **Purge Stop Time:** 0900

Flow Rate: 6.0 gpm (approximate) **Volume Purged:** 90 gallons (approximate)

QA/QC Sample(s): TB-03-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	5.93	11.0	156	0.59	
0850	5.79	11.9	115	0.36	
0855	5.81	11.6	116	0.39	
0900	5.71	11.6	110	0.35	

If alternative units are indicated by meter, indicate the proper measurement units above.

°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT EXTERIOR SPIGOT

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT | R. CLARK

Well Address: [redacted] **EPA Station ID:** MGPW101

Pre-filter Sample Location: PRE SYSTEM SAMPLE PORT

Pre-filter Sample: PW-101A-05 **Sample Date/Time:** ~~1/16/15~~ 1/16/14 JDA 0955

Post-filter Sample Location: POST SYSTEM SAMPLE PORT

Post-filter Sample: PW-101B-05 **Sample Date/Time:** ~~1/16/15~~ 1/16/14 JDA 1000

Purge Start Time: 0935 **Purge Stop Time:** 0950

Flow Rate: 2.5 gpm (approximate) **Volume Purged:** 37.5 gallons (approximate)

QA/QC Sample(s): TB-03-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	5.98	10.6	72	0.57	
0940	5.81	10.7	61	0.46	
0945	5.92	10.9	66	0.46	
0950	5.88	10.5	63	0.56	

If alternative units are indicated by meter, indicate the proper measurement units above.

°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT POST SYSTEM SAMPLE PORT

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT | R. CLARK

Well Address: [redacted] EPA Station ID: MG-PW046

Pre-filter Sample Location: SPIGOT AT WELLHEAD

Pre-filter Sample: PW-046-05 Sample Date/Time: ~~1/16/15~~ 1/16/14 JDA 1110

Post-filter Sample Location: NA

Post-filter Sample: NA Sample Date/Time: NA

Purge Start Time: 1050 Purge Stop Time: 1105

Flow Rate: 5.5 gpm (approximate) Volume Purged: 82.5 gallons (approximate)

QA/QC Sample(s): TB-03-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	5.96	9.0	140	7.72	
1055	6.25	11.1	138	5.70	
1100	6.69	11.4	143	11.63	
1105	6.69	12.0	144	7.4	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT SPIGOT AT WELLHEAD

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT / R. CLARK

Well Address: [redacted] **EPA Station ID:** MG-PW 121

Pre-filter Sample Location: JDA 1/16/15 ~~KEITC~~ FIRST SPIGOT AT TOP OF WELL HEAD

Pre-filter Sample: PW - 121A - 05 **Sample Date/Time:** 1/16/14 JDA ~~1/16/15~~ 1400

Post-filter Sample Location: KITCHEN SINK

Post-filter Sample: PW - 121B - 05 **Sample Date/Time:** 1/16/14 JDA ~~1/16/15~~ 1355

Purge Start Time: 1335 **Purge Stop Time:** 1350

Flow Rate: 2.5 gpm (approximate) **Volume Purged:** 37.5 gallons (approximate)

QA/QC Sample(s): TB - 04 - 05 / FD - 04 - 05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	7.59	17.0	153	0.58	
1340	7.91	14.9	153	0.37	
1345	7.97	14.0	153	0.47	
1350	7.94	14.6	157	0.45	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT KITCHEN SINK

FD-04-05 TAKEN AT PRE SYSTEM SAMPLE LOCATION

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT | R. CLARK

Well Address: [redacted] EPA Station ID: MGPW 143

Pre-filter Sample Location: SPIGOT AT WELLHEAD

Pre-filter Sample: PW-143A-05 Sample Date/Time: 1/16/14 1505

Post-filter Sample Location: EXTERIOR SPIGOT FRONT OF RESIDENCE

Post-filter Sample: PW-143B-05 Sample Date/Time: 1/16/14 1500

Purge Start Time: 1430 Purge Stop Time: 1445

Flow Rate: 5.5 gpm (approximate) Volume Purged: 82.5 gallons (approximate)

QA/QC Sample(s): TB-04-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.35	12.7	155	0.68	
1435	6.15	11.2	145	0.31	
1440	6.11	12.1	142	0.41	
1445	6.30	12.5	142	0.38	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT SPIGOT AT FRONT OF RESIDENCE

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT / R. CLARK

Well Address: [redacted] EPA Station ID: MG PW 146

Pre-filter Sample Location: PRE SYSTEM SAMPLE PORT

Pre-filter Sample: PW - 146A - 05 Sample Date/Time: 1/16/14 1605

Post-filter Sample Location: EXTERIOR SPIGOT SIDE OF RESIDENCE NEAR GARAGE

Post-filter Sample: PW-146B-05 Sample Date/Time: 1/16/14 1610

Purge Start Time: 1547 Purge Stop Time: 1602

Flow Rate: 4.0 gpm (approximate) Volume Purged: 60 gallons (approximate)

QA/QC Sample(s): TB-04-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.68	16.4	122	0.71	
1552	6.68	12.9	121	0.45	
1557	6.65	11.9	118	1.16	
1602	6.59	11.4	114	0.70	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT POST SYSTEM SAMPLE LOCATION (EXTERIOR SPIGOT)

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: J. AVRITT / R. CLARK

Well Address: [redacted] EPA Station ID: MG-PW 085

Pre-filter Sample Location: PRE SYSTEM SAMPLE PORT

Pre-filter Sample: PW-085A-05 Sample Date/Time: 1/17/14 1120

Post-filter Sample Location: POST SYSTEM SAMPLE PORT

Post-filter Sample: PW-085B-05 Sample Date/Time: 1/17/14 1125

Purge Start Time: 1102 Purge Stop Time: 1117

Flow Rate: 3.0 gpm (approximate) Volume Purged: 45 gallons (approximate)

QA/QC Sample(s): TB-04-05 / FD-05-05

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.58	14.3	209	1.65	
1107	6.86	14.3	196	0.38	
1112	6.88	13.8	190	0.28	
1117	6.73	12.7	116	0.28	

If alternative units are indicated by meter, indicate the proper measurement units above.
°C - degrees Celcius; mS/cm - milliSiemens per centimeter; NTU - nephelometric turbidity units

Notes/Comments:

PURGED AT POST SYSTEM SAMPLE PORT

FD-05-05 TAKEN AT PRE SYSTEM SAMPLE LOCATION

WATER SUPPLY MONITORING - SAMPLE SUMMARY FORM

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Sample ID	Sampler's Initials	Sample Date	Sample Time	Associated QA/QC Sample(s)	Notes/Comments
PW-060A-05	JA	1/13/14	1305	TB-01-05	
PW-060B-05	JA	1/13/14	1300	TB-01-05	
PW-142A-05	JA	1/13/14	1345	TB-01-05	
PW-142B-05	JA	1/13/14	1340	TB-01-05	
PW-047A-05	JA	1/13/14	1425	TB-01-05	
PW-047B-05	JA	1/13/14	1430	TB-01-05	
PW-048A-05	JA	1/13/14	1500	TB-01-05	
PW-048B-05	JA	1/13/14	1505	TB-01-05	
PW-063A-05	JA	1/13/14	1630	TB-01-05	
PW-063B-05	JA	1/13/14	1635	TB-01-05	
FD-01-05	JA	1/13/14	00:00	TB-01-05	COLLECTED @ PRE SYSTEM SAMPLE LOCATION (PW-063A-05)
PW-039A-05	JA	1/14/14	09:50	TB-01-05	
PW-039B-05	JA	1/14/14	09:55	TB-01-05	
PW-058A-05	JA	1/14/14	10:35	TB-01-05	
PW-058B-05	JA	1/14/14	10:40	TB-01-05	
PW-103A-05	JA	1/14/14	11:25	TB-01-05	
PW-103B-05	JA	1/14/14	11:30	TB-01-05	
TB-01-05		LAB	PREP		
PW-149A-05	JA	1/14/14	13:50	TB-02-05	
PW-149B-05	JA	1/14/14	1355	TB-02-05	
PW-091A-05	JA	1/14/14	1435	TB-02-05	
PW-091B-05	JA	1/14/14	1440	TB-02-05	
FD-02-05	JA	1/14/14	00:00	TB-02-05	COLLECTED AT PRESYSTEM SAMPLE LOCATION (PW-091A-05)
PW-157A-05	JA	1/14/14	1525	TB-02-05	
PW-157B-05	JA	1/14/14	1530	TB-02-05	

WATER SUPPLY MONITORING - SAMPLE SUMMARY FORM

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Sample ID	Sampler's Initials	Sample Date	Sample Time	Associated QA/QC Sample(s)	Notes/Comments
PW-087-05	JA	11/14/14	1645	TB-02-05	
PW-156A-05	JA	1/15/14	0835	TB-02-05	
PW-156B-05	JA	1/15/14	0830	TB-02-05	
PW-119A-05	JA	1/15/14	1020	TB-02-05	
PW-119B-05	JA	1/15/14	1025	TB-02-05	
PW-136A-05	JA	1/15/14	1110	TB-02-05	
PW-136B-05	JA	1/15/14	1115	TB-02-05	
PW-026A-05	JA	1/15/14	1155	TB-02-05	
PW-026B-05	JA	1/15/14	1200	TB-02-05	
TB-02-05		LAB	PREP		
PW-014A-05	JA	1/15/14	1615	TB-02-05	
PW-014B-05	JA	1/15/14	1620	TB-03-05	
FD-03-05	JA	1/15/14	00:00	TB-03-05	TAKEN AT PRE SYSTEM SAMPLE LOCATION (PW-014A-05)
PW-151A-05	JA	1/15/14	1650	TB-03-05	
PW-151B-05	JA	1/15/14	1655	TB-03-05	
PW-133A-05	JA	1/16/14	0905	TB-03-05	
PW-133B-05	JA	1/16/14	0910	TB-03-05	
PW-101A-05	JA	1/16/14	0955	TB-03-05	
PW-101B-05	JA	1/16/14	1000	TB-03-05	
PW-046-05	JA	1/16/14	1110	TB-03-05	
TB-03-05		LAB	PREP		
PW-121A-05	JA	1/16/14	1400	TB-04-05	
PW-121B-05	JA	1/16/14	1355	TB-04-05	
PW-143A-05	JA	1/16/14	1505	TB-04-05	
PW-143B-05	JA	1/16/14	1500	TB-04-05	

WATER SUPPLY MONITORING - SAMPLE SUMMARY FORM

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Sample ID	Sampler's Initials	Sample Date	Sample Time	Associated QA/QC Sample(s)	Notes/Comments
FD-04-05	JA	1/16/14	00:00	TB-04-05	COLLECTED AT PRE SYSTEM SAMPLE LOCATION (PW-121A-05)
PW-146A-05	JA	1/16/14	1605	TB-04-05	
PW-146B-05	JA	1/16/14	1610	TB-04-05	
PW-085A-05	JA	1/17/14	1120	TB-04-05	
PW-085B-05	JA	1/17/14	1125	TB-04-05	
FD-05-05	JA	1/17/14	00:00	TB-04-05	COLLECTED AT PRE SYSTEM SAMPLE LOCATION (PW-085A-05)
TB-04-05		LAB	PREP		

APPENDIX B

LABORATORY ANALYTICAL REPORTS

Pace Analytical Services, Inc.
205 East Meadow Road - Suite A
Eden, NC 27288
(336)623-8921

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

January 17, 2014

Ms. Susan Kelly
AMEC- Asheville
1308 Patton Avenue
Asheville, NC 28806

RE: Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Dear Ms. Kelly:
Enclosed are the analytical results for sample(s) received by the laboratory on January 14, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kevin Godwin

kevin.godwin@pacelabs.com
Project Manager

Enclosures

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205 East Meadow Road - Suite A
Eden, NC 27288
(336)623-8921

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project:	CTS OF ASHEVILLE 6252120005
Pace Project No.:	92186304

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

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SAMPLE SUMMARY

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92186304001	**PW-060A-05**	Water	01/13/14 13:05	01/14/14 12:46
92186304002	**PW-060B-05**	Water	01/13/14 13:00	01/14/14 12:46
92186304003	**PW-142A-05**	Water	01/13/14 13:45	01/14/14 12:46
92186304004	**PW-142B-05**	Water	01/13/14 13:40	01/14/14 12:46
92186304005	**PW-047A-05**	Water	01/13/14 14:25	01/14/14 12:46
92186304006	**PW-047B-05**	Water	01/13/14 14:30	01/14/14 12:46
92186304007	**PW-048A-05**	Water	01/13/14 15:00	01/14/14 12:46
92186304008	**PW-048B-05**	Water	01/13/14 15:05	01/14/14 12:46
92186304009	**PW-063A-05**	Water	01/13/14 16:30	01/14/14 12:46
92186304010	**PW-063B-05**	Water	01/13/14 16:35	01/14/14 12:46
92186304011	**FD-01-05**	Water	01/13/14 00:00	01/14/14 12:46
92186304012	**PW-039A-05**	Water	01/14/14 09:50	01/14/14 12:46
92186304013	**PW-039B-05**	Water	01/14/14 09:55	01/14/14 12:46
92186304014	**PW-058A-05**	Water	01/14/14 10:35	01/14/14 12:46
92186304015	**PW-058B-05**	Water	01/14/14 10:40	01/14/14 12:46
92186304016	**PW-103A-05**	Water	01/14/14 11:25	01/14/14 12:46
92186304017	**PW-103B-05**	Water	01/14/14 11:30	01/14/14 12:46
92186304018	**TB-01-05**	Water	01/13/14 00:00	01/14/14 12:46

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SAMPLE ANALYTE COUNT

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92186304001	**PW-060A-05**	EPA 8260	CAH	11	PASI-C
92186304002	**PW-060B-05**	EPA 8260	CAH	11	PASI-C
92186304003	**PW-142A-05**	EPA 8260	CAH	11	PASI-C
92186304004	**PW-142B-05**	EPA 8260	CAH	11	PASI-C
92186304005	**PW-047A-05**	EPA 8260	CAH	11	PASI-C
92186304006	**PW-047B-05**	EPA 8260	CAH	11	PASI-C
92186304007	**PW-048A-05**	EPA 8260	CAH	11	PASI-C
92186304008	**PW-048B-05**	EPA 8260	CAH	11	PASI-C
92186304009	**PW-063A-05**	EPA 8260	CAH	11	PASI-C
92186304010	**PW-063B-05**	EPA 8260	CAH	11	PASI-C
92186304011	**FD-01-05**	EPA 8260	MCK	11	PASI-C
92186304012	**PW-039A-05**	EPA 8260	MCK	11	PASI-C
92186304013	**PW-039B-05**	EPA 8260	MCK	11	PASI-C
92186304014	**PW-058A-05**	EPA 8260	MCK	11	PASI-C
92186304015	**PW-058B-05**	EPA 8260	MCK	11	PASI-C
92186304016	**PW-103A-05**	EPA 8260	MCK	11	PASI-C
92186304017	**PW-103B-05**	EPA 8260	MCK	11	PASI-C
92186304018	**TB-01-05**	EPA 8260	MCK	11	PASI-C

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PROJECT NARRATIVE

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Method: **EPA 8260**
Description: 8260 MSV Low Level
Client: AMEC, Asheville
Date: January 17, 2014

General Information:
18 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Sample: PW-060A-05 **Lab ID: 92186304001** Collected: 01/13/14 13:05 Received: 01/14/14 12:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/15/14 23:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/15/14 23:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/15/14 23:26	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/15/14 23:26	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/15/14 23:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/15/14 23:26	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/15/14 23:26	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/15/14 23:26	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		01/15/14 23:26	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		01/15/14 23:26	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		01/15/14 23:26	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Sample: PW-060B-05 **Lab ID: 92186304002** Collected: 01/13/14 13:00 Received: 01/14/14 12:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/15/14 23:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/15/14 23:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/15/14 23:43	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/15/14 23:43	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/15/14 23:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/15/14 23:43	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/15/14 23:43	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/15/14 23:43	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		01/15/14 23:43	460-00-4	
1,2-Dichloroethane-d4 (S)	114	%	70-130		1		01/15/14 23:43	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		01/15/14 23:43	2037-26-5	

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Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Sample: PW-142A-05 **Lab ID: 92186304003** Collected: 01/13/14 13:45 Received: 01/14/14 12:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/15/14 23:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/15/14 23:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/15/14 23:59	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/15/14 23:59	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/15/14 23:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/15/14 23:59	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/15/14 23:59	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/15/14 23:59	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/15/14 23:59	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	70-130		1		01/15/14 23:59	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		01/15/14 23:59	2037-26-5	

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(828)254-7176

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Sample: PW-142B-05 **Lab ID: 92186304004** Collected: 01/13/14 13:40 Received: 01/14/14 12:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 00:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 00:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 00:16	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 00:16	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 00:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 00:16	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 00:16	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 00:16	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		01/16/14 00:16	460-00-4	
1,2-Dichloroethane-d4 (S)	114	%	70-130		1		01/16/14 00:16	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		01/16/14 00:16	2037-26-5	

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(704)875-9092

ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Sample: PW-047A-05 **Lab ID: 92186304005** Collected: 01/13/14 14:25 Received: 01/14/14 12:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 00:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 00:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 00:32	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 00:32	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 00:32	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 00:32	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 00:32	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 00:32	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/16/14 00:32	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	70-130		1		01/16/14 00:32	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		01/16/14 00:32	2037-26-5	

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(704)875-9092

ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Sample: PW-047B-05 **Lab ID: 92186304006** Collected: 01/13/14 14:30 Received: 01/14/14 12:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 00:49	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 00:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 00:49	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 00:49	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 00:49	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 00:49	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 00:49	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 00:49	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		01/16/14 00:49	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	70-130		1		01/16/14 00:49	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		01/16/14 00:49	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Sample: PW-048A-05 **Lab ID: 92186304007** Collected: 01/13/14 15:00 Received: 01/14/14 12:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 01:05	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 01:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 01:05	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 01:05	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 01:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 01:05	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 01:05	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 01:05	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		01/16/14 01:05	460-00-4	
1,2-Dichloroethane-d4 (S)	114	%	70-130		1		01/16/14 01:05	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		01/16/14 01:05	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Sample: PW-048B-05 **Lab ID: 92186304008** Collected: 01/13/14 15:05 Received: 01/14/14 12:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 01:22	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 01:22	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 01:22	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 01:22	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 01:22	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 01:22	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 01:22	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 01:22	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		01/16/14 01:22	460-00-4	
1,2-Dichloroethane-d4 (S)	115	%	70-130		1		01/16/14 01:22	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		01/16/14 01:22	2037-26-5	

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2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Sample: PW-063A-05 **Lab ID: 92186304009** Collected: 01/13/14 16:30 Received: 01/14/14 12:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 01:39	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 01:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 01:39	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 01:39	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 01:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 01:39	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 01:39	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 01:39	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/16/14 01:39	460-00-4	
1,2-Dichloroethane-d4 (S)	115	%	70-130		1		01/16/14 01:39	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		01/16/14 01:39	2037-26-5	

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(704)875-9092

ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Sample: PW-063B-05 **Lab ID: 92186304010** Collected: 01/13/14 16:35 Received: 01/14/14 12:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 01:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 01:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 01:55	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 01:55	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 01:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 01:55	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 01:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 01:55	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/16/14 01:55	460-00-4	
1,2-Dichloroethane-d4 (S)	117	%	70-130		1		01/16/14 01:55	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		01/16/14 01:55	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Sample: FD-01-05 **Lab ID: 92186304011** Collected: 01/13/14 00:00 Received: 01/14/14 12:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/15/14 17:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/15/14 17:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/15/14 17:44	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/15/14 17:44	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/15/14 17:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/15/14 17:44	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/15/14 17:44	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/15/14 17:44	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		01/15/14 17:44	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		01/15/14 17:44	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		01/15/14 17:44	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Sample: PW-039A-05 **Lab ID: 92186304012** Collected: 01/14/14 09:50 Received: 01/14/14 12:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/15/14 18:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/15/14 18:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/15/14 18:00	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/15/14 18:00	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/15/14 18:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/15/14 18:00	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/15/14 18:00	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/15/14 18:00	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		01/15/14 18:00	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		01/15/14 18:00	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/15/14 18:00	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Sample: PW-039B-05 **Lab ID: 92186304013** Collected: 01/14/14 09:55 Received: 01/14/14 12:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/15/14 18:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/15/14 18:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/15/14 18:16	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/15/14 18:16	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/15/14 18:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/15/14 18:16	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/15/14 18:16	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/15/14 18:16	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		01/15/14 18:16	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		01/15/14 18:16	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		01/15/14 18:16	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Sample: PW-058A-05 **Lab ID: 92186304014** Collected: 01/14/14 10:35 Received: 01/14/14 12:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/15/14 18:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/15/14 18:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/15/14 18:33	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/15/14 18:33	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/15/14 18:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/15/14 18:33	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/15/14 18:33	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/15/14 18:33	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		01/15/14 18:33	460-00-4	
1,2-Dichloroethane-d4 (S)	89	%	70-130		1		01/15/14 18:33	17060-07-0	
Toluene-d8 (S)	110	%	70-130		1		01/15/14 18:33	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Sample: PW-058B-05 **Lab ID: 92186304015** Collected: 01/14/14 10:40 Received: 01/14/14 12:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/15/14 18:49	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/15/14 18:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/15/14 18:49	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/15/14 18:49	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/15/14 18:49	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/15/14 18:49	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/15/14 18:49	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/15/14 18:49	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		01/15/14 18:49	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		01/15/14 18:49	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		01/15/14 18:49	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Sample: PW-103A-05 **Lab ID: 92186304016** Collected: 01/14/14 11:25 Received: 01/14/14 12:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/15/14 19:05	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/15/14 19:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/15/14 19:05	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/15/14 19:05	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/15/14 19:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/15/14 19:05	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/15/14 19:05	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/15/14 19:05	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		01/15/14 19:05	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		01/15/14 19:05	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		01/15/14 19:05	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Sample: PW-103B-05 **Lab ID: 92186304017** Collected: 01/14/14 11:30 Received: 01/14/14 12:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/15/14 19:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/15/14 19:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/15/14 19:21	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/15/14 19:21	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/15/14 19:21	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/15/14 19:21	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/15/14 19:21	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/15/14 19:21	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		01/15/14 19:21	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		01/15/14 19:21	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/15/14 19:21	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Sample: TB-01-05 **Lab ID: 92186304018** Collected: 01/13/14 00:00 Received: 01/14/14 12:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/15/14 19:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/15/14 19:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/15/14 19:37	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/15/14 19:37	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/15/14 19:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/15/14 19:37	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/15/14 19:37	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/15/14 19:37	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		01/15/14 19:37	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		01/15/14 19:37	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		01/15/14 19:37	2037-26-5	

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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

QC Batch: MSV/25507 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92186304001, 92186304002, 92186304003, 92186304004, 92186304005, 92186304006, 92186304007, 92186304008, 92186304009, 92186304010

METHOD BLANK: 1121646 — Matrix: Water
Associated Lab Samples: 92186304001, 92186304002, 92186304003, 92186304004, 92186304005, 92186304006, 92186304007, 92186304008, 92186304009, 92186304010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	01/15/14 17:39	
1,1-Dichloroethene	ug/L	ND	1.0	01/15/14 17:39	
cis-1,2-Dichloroethene	ug/L	ND	1.0	01/15/14 17:39	
Tetrachloroethene	ug/L	ND	1.0	01/15/14 17:39	
Toluene	ug/L	ND	1.0	01/15/14 17:39	
trans-1,2-Dichloroethene	ug/L	ND	1.0	01/15/14 17:39	
Trichloroethene	ug/L	ND	1.0	01/15/14 17:39	
Vinyl chloride	ug/L	ND	1.0	01/15/14 17:39	
1,2-Dichloroethane-d4 (S)	%	109	70-130	01/15/14 17:39	
4-Bromofluorobenzene (S)	%	97	70-130	01/15/14 17:39	
Toluene-d8 (S)	%	102	70-130	01/15/14 17:39	

LABORATORY CONTROL SAMPLE: 1121647

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	49.6	99	70-130	
1,1-Dichloroethene	ug/L	50	48.9	98	70-132	
cis-1,2-Dichloroethene	ug/L	50	48.5	97	70-131	
Tetrachloroethene	ug/L	50	44.9	90	70-130	
Toluene	ug/L	50	46.8	94	70-130	
trans-1,2-Dichloroethene	ug/L	50	47.9	96	70-130	
Trichloroethene	ug/L	50	47.3	95	70-130	
Vinyl chloride	ug/L	50	47.8	96	69-130	
1,2-Dichloroethane-d4 (S)	%			100	70-130	
4-Bromofluorobenzene (S)	%			102	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1122233 — 1122234

Parameter	Units	92186409021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	54.1	53.7	108	107	70-166	1	30	
Toluene	ug/L	ND	50	50	46.6	46.1	93	92	70-155	1	30	
Trichloroethene	ug/L	ND	50	50	49.3	48.6	99	97	69-151	2	30	
1,2-Dichloroethane-d4 (S)	%						112	112	70-130			
4-Bromofluorobenzene (S)	%						98	96	70-130			
Toluene-d8 (S)	%						100	100	70-130			

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205 East Meadow Road - Suite A
Eden, NC 27288
(336)623-8921

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

QC Batch: MSV/25513 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92186304011, 92186304012, 92186304013, 92186304014, 92186304015, 92186304016, 92186304017, 92186304018

METHOD BLANK: 1121680 — Matrix: Water
Associated Lab Samples: 92186304011, 92186304012, 92186304013, 92186304014, 92186304015, 92186304016, 92186304017, 92186304018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	01/15/14 17:12	
1,1-Dichloroethene	ug/L	ND	1.0	01/15/14 17:12	
cis-1,2-Dichloroethene	ug/L	ND	1.0	01/15/14 17:12	
Tetrachloroethene	ug/L	ND	1.0	01/15/14 17:12	
Toluene	ug/L	ND	1.0	01/15/14 17:12	
trans-1,2-Dichloroethene	ug/L	ND	1.0	01/15/14 17:12	
Trichloroethene	ug/L	ND	1.0	01/15/14 17:12	
Vinyl chloride	ug/L	ND	1.0	01/15/14 17:12	
1,2-Dichloroethane-d4 (S)	%	96	70-130	01/15/14 17:12	
4-Bromofluorobenzene (S)	%	102	70-130	01/15/14 17:12	
Toluene-d8 (S)	%	99	70-130	01/15/14 17:12	

LABORATORY CONTROL SAMPLE: 1121681

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	51.4	103	70-130	
1,1-Dichloroethene	ug/L	50	53.2	106	70-132	
cis-1,2-Dichloroethene	ug/L	50	50.5	101	70-131	
Tetrachloroethene	ug/L	50	42.4	85	70-130	
Toluene	ug/L	50	45.3	91	70-130	
trans-1,2-Dichloroethene	ug/L	50	49.9	100	70-130	
Trichloroethene	ug/L	50	48.6	97	70-130	
Vinyl chloride	ug/L	50	62.2	124	69-130	
1,2-Dichloroethane-d4 (S)	%			113	70-130	
4-Bromofluorobenzene (S)	%			107	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1122444 — 1122445

Parameter	Units	92186304012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	41.7	44.0	83	88	70-166	6	30	
Toluene	ug/L	ND	50	50	52.3	59.7	105	119	70-155	13	30	
Trichloroethene	ug/L	ND	50	50	57.4	57.9	115	116	69-151	1	30	
1,2-Dichloroethane-d4 (S)	%						96	92	70-130			
4-Bromofluorobenzene (S)	%						100	101	70-130			
Toluene-d8 (S)	%						101	119	70-130			

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QUALIFIERS

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-C Pace Analytical Services - Charlotte

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Eden, NC 27288
(336)623-8921

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CTS OF ASHEVILLE 6252120005
Pace Project No.: 92186304

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92186304001	**PW-060A-05**	EPA 8260	MSV/25507		
92186304002	**PW-060B-05**	EPA 8260	MSV/25507		
92186304003	**PW-142A-05**	EPA 8260	MSV/25507		
92186304004	**PW-142B-05**	EPA 8260	MSV/25507		
92186304005	**PW-047A-05**	EPA 8260	MSV/25507		
92186304006	**PW-047B-05**	EPA 8260	MSV/25507		
92186304007	**PW-048A-05**	EPA 8260	MSV/25507		
92186304008	**PW-048B-05**	EPA 8260	MSV/25507		
92186304009	**PW-063A-05**	EPA 8260	MSV/25507		
92186304010	**PW-063B-05**	EPA 8260	MSV/25507		
92186304011	**FD-01-05**	EPA 8260	MSV/25513		
92186304012	**PW-039A-05**	EPA 8260	MSV/25513		
92186304013	**PW-039B-05**	EPA 8260	MSV/25513		
92186304014	**PW-058A-05**	EPA 8260	MSV/25513		
92186304015	**PW-058B-05**	EPA 8260	MSV/25513		
92186304016	**PW-103A-05**	EPA 8260	MSV/25513		
92186304017	**PW-103B-05**	EPA 8260	MSV/25513		
92186304018	**TB-01-05**	EPA 8260	MSV/25513		

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Pace Analytical www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: June 4, 2013 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.11	Issuing Authorities: Pace Asheville Quality Office

Client Name: AMEC

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

Courier (Circle): Fed Ex UPS USPS Client Commercial Pace Other_____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other_____

Circle Thermometer Used: IR Gun#3 -130265963 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

IR Gun #2- 80344039

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 3.8 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 1/14/14 J.G.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☑Yes ☐No ☐N/A	7. Standard
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: Water		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	
Samples checked for dechlorination:	☑Yes ☐No ☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☑Yes ☐No ☐N/A	16. Yes
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	Yes
Pace Trip Blank Lot # (if purchased):_____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: J.G. **Date:** 1/14/14

SRF Review: J.G. **Date:** 1/15/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

WO#: 92186304

92186304

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 2

1746057

Section A Required Client Information:

Company: AMEC
Address: 1308 Patton Avenue, Asheville, NC 28806
Email To: susan.kelly@amec.com, ~~Rodney.Clark@amec.com~~
Phone: 828-252-8130 Fax:
Requested Due Date/TAT: STANDARD

Section B Required Project Information:

Report To: SUSAN KELLY
Copy To:
Purchase Order No.: C0121101936
Project Name: CTS of Asheville
Project Number: 60521120006

Section C Invoice Information:

Attention: SUSAN KELLY
Company Name: AMEC
Address: 1308 PATTON AVENUE
Pace Quote Reference:
Pace Project Manager: KEVIN GODWIN
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER ____

Site Location STATE: NC

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test: #8260 VOCs (Requested Analysis Filtered Y/N: N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
				RMC 1/14/13 GRAB																
1	PW-060A-05	WT	G	1/13/14	1305				3				X					X		92184304001
2	PW-060B-05	WT	G	1/13/14	1300				3				X					X		002
3	PW-142A-05	WT	G	1/13/14	1345				3				X					X		003
4	PW-142B-05	WT	G	1/13/14	1340				3				X					X		004
5	PW-047A-05	WT	G	1/13/14	1425				3				X					X		005
6	PW-047B-05	WT	G	1/13/14	1430				3				X					X		006
7	PW-048A-05	WT	G	1/13/14	1500				3				X					X		007
8	PW-048B-05	WT	G	1/13/14	1505				3				X					X		008
9	PW-063A-05	WT	G	1/13/14	1630				3				X					X		009
10	PW-063B-05	WT	G	1/13/14	1635			RMC 1/14/13	3				X					X		010
11	FD-01-05	WT	G	1/13/14	00:00				3				X					X		011
12	PW-039A-05	WT	G	1/14/14	0950				3				X					X		012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
*SITE SPECIFIC	Rodney Clark / AMEC	1/14/14	1246	[signature]	1/14/14	1246	3.8	Y	Y	Y
COMPOUND LIST										

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Rodney M. Clark
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 1/14/14

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 2 of 2

1746059

Section A Required Client Information:

Company: AMEC
Address: 1308 Patton Avenue
Email To: susan.kelly@amec.com
Phone: 828-252-8130 Fax:
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Susan Kelly
Copy To:
Purchase Order No.: C012101936
Project Name: CTS of Asheville
Project Number: 6252-12-0005

Section C Invoice Information:

Attention: Susan Kelly
Company Name: AMEC
Address: 1308 Patton Avenue
Pace Quote Reference:
Pace Project Manager: Kevin Godwin
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER ____

Site Location STATE: NC

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N): Analysis Test: * VOCs 8260

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start Date	Composite Start Time	Composite End/Grab Date	Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	* VOCs 8260	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	PW-039B-05	WT	G			1/14/14	0955		3				X					X		92186304 013
2	PW-058A-05	WT	G			1/14/14	1035		3				X					X		014
3	PW-058B-05	WT	G			1/14/14	1040		3				X					X		015
4	PW-103A-05	WT	G			1/14/14	1125		3				X					X		016
5	PW-103B-05	WT	G			1/14/14	1130		3				X					X		017
6	TB-01-05	WT	G			LAB	PREP		2				X					X		018
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* SITE SPECIFIC COMPOUND LIST	AMEC	1/14/14	1246		1/14/14	1246	3.8	4	4	4

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: JASON AVRITT

SIGNATURE of SAMPLER: Jason Avritt

DATE Signed (MM/DD/YY): 1/14/14

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

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(336)623-8921

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

January 21, 2014

Ms. Susan Kelly
AMEC- Asheville
1308 Patton Avenue
Asheville, NC 28806

RE: Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Dear Ms. Kelly:
Enclosed are the analytical results for sample(s) received by the laboratory on January 15, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

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Eden, NC 27288
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2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

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2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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9800 Kincey Ave. Suite 100
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(704)875-9092

SAMPLE SUMMARY

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92186500001	**PW-149A-05**	Water	01/14/14 13:50	01/15/14 13:28
92186500002	**PW-149B-05**	Water	01/14/14 13:55	01/15/14 13:28
92186500003	**PW-091A-05**	Water	01/14/14 14:35	01/15/14 13:28
92186500004	**PW-091B-05**	Water	01/14/14 14:40	01/15/14 13:28
92186500005	**FD-02-05**	Water	01/14/14 00:00	01/15/14 13:28
92186500006	**PW-157A-05**	Water	01/14/14 15:25	01/15/14 13:28
92186500007	**PW-157B-05**	Water	01/14/14 15:30	01/15/14 13:28
92186500008	**PW-087-05**	Water	01/14/14 16:45	01/15/14 13:28
92186500009	**PW-156A-05**	Water	01/15/14 08:35	01/15/14 13:28
92186500010	**PW-156B-05**	Water	01/15/14 08:30	01/15/14 13:28
92186500011	**PW-119A-05**	Water	01/15/14 10:20	01/15/14 13:28
92186500012	**PW-119B-05**	Water	01/15/14 10:25	01/15/14 13:28
92186500013	**PW-136A-05**	Water	01/15/14 11:10	01/15/14 13:28
92186500014	**PW-136B-05**	Water	01/15/14 11:15	01/15/14 13:28
92186500015	**PW-026A-05**	Water	01/15/14 11:55	01/15/14 13:28
92186500016	**PW-026B-05**	Water	01/15/14 12:00	01/15/14 13:28
92186500017	**TB-02-05**	Water	01/14/14 00:00	01/15/14 13:28

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Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92186500001	**PW-149A-05**	EPA 8260	MCK	11	PASI-C
92186500002	**PW-149B-05**	EPA 8260	MCK	11	PASI-C
92186500003	**PW-091A-05**	EPA 8260	MCK	11	PASI-C
92186500004	**PW-091B-05**	EPA 8260	MCK	11	PASI-C
92186500005	**FD-02-05**	EPA 8260	MCK	11	PASI-C
92186500006	**PW-157A-05**	EPA 8260	MCK	11	PASI-C
92186500007	**PW-157B-05**	EPA 8260	CAH	11	PASI-C
92186500008	**PW-087-05**	EPA 8260	CAH	11	PASI-C
92186500009	**PW-156A-05**	EPA 8260	CAH	11	PASI-C
92186500010	**PW-156B-05**	EPA 8260	CAH	11	PASI-C
92186500011	**PW-119A-05**	EPA 8260	CAH	11	PASI-C
92186500012	**PW-119B-05**	EPA 8260	CAH	11	PASI-C
92186500013	**PW-136A-05**	EPA 8260	CAH	11	PASI-C
92186500014	**PW-136B-05**	EPA 8260	CAH	11	PASI-C
92186500015	**PW-026A-05**	EPA 8260	CAH	11	PASI-C
92186500016	**PW-026B-05**	EPA 8260	CAH	11	PASI-C
92186500017	**TB-02-05**	EPA 8260	CAH	11	PASI-C

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Eden, NC 27288
(336)623-8921

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Method: **EPA 8260**
Description: 8260 MSV Low Level
Client: AMEC, Asheville
Date: January 21, 2014

General Information:
17 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/25528

A matrix spike and/or matrix sp ke duplicate (MS/MSD) were performed on the following sample(s): 92186500016

R1: RPD value was outside control limits.

- MSD (Lab ID: 1123174)
  - 1,1-Dichloroethene
  - Toluene
  - Trichloroethene

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Sample: PW-149A-05 **Lab ID: 92186500001** Collected: 01/14/14 13:50 Received: 01/15/14 13:28 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 22:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 22:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 22:43	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 22:43	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 22:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 22:43	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 22:43	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 22:43	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		01/16/14 22:43	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		01/16/14 22:43	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		01/16/14 22:43	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Sample: PW-149B-05 **Lab ID: 92186500002** Collected: 01/14/14 13:55 Received: 01/15/14 13:28 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 22:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 22:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 22:59	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 22:59	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 22:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 22:59	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 22:59	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 22:59	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		01/16/14 22:59	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		01/16/14 22:59	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		01/16/14 22:59	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Sample: PW-091A-05 **Lab ID: 92186500003** Collected: 01/14/14 14:35 Received: 01/15/14 13:28 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 23:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 23:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 23:16	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 23:16	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 23:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 23:16	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 23:16	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 23:16	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		01/16/14 23:16	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		01/16/14 23:16	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		01/16/14 23:16	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Sample: PW-091B-05 **Lab ID: 92186500004** Collected: 01/14/14 14:40 Received: 01/15/14 13:28 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 23:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 23:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 23:32	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 23:32	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 23:32	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 23:32	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 23:32	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 23:32	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		01/16/14 23:32	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		01/16/14 23:32	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/16/14 23:32	2037-26-5	

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Asheville, NC 28804
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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Sample: FD-02-05 **Lab ID: 92186500005** Collected: 01/14/14 00:00 Received: 01/15/14 13:28 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 23:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 23:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 23:48	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 23:48	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 23:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 23:48	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 23:48	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 23:48	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		01/16/14 23:48	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		01/16/14 23:48	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		01/16/14 23:48	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Sample: PW-157A-05 **Lab ID: 92186500006** Collected: 01/14/14 15:25 Received: 01/15/14 13:28 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/17/14 00:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/17/14 00:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/17/14 00:04	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/17/14 00:04	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/17/14 00:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/17/14 00:04	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/17/14 00:04	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/17/14 00:04	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		01/17/14 00:04	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		01/17/14 00:04	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		01/17/14 00:04	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Sample: PW-157B-05 **Lab ID: 92186500007** Collected: 01/14/14 15:30 Received: 01/15/14 13:28 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 16:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 16:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 16:14	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 16:14	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 16:14	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 16:14	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 16:14	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 16:14	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		01/16/14 16:14	460-00-4	
1,2-Dichloroethane-d4 (S)	123	%	70-130		1		01/16/14 16:14	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		01/16/14 16:14	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Sample: PW-087-05 **Lab ID: 92186500008** Collected: 01/14/14 16:45 Received: 01/15/14 13:28 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 16:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 16:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 16:47	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 16:47	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 16:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 16:47	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 16:47	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 16:47	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		01/16/14 16:47	460-00-4	
1,2-Dichloroethane-d4 (S)	125	%	70-130		1		01/16/14 16:47	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		01/16/14 16:47	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Sample: PW-156A-05 **Lab ID: 92186500009** Collected: 01/15/14 08:35 Received: 01/15/14 13:28 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 16:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 16:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 16:30	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 16:30	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 16:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 16:30	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 16:30	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 16:30	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		01/16/14 16:30	460-00-4	
1,2-Dichloroethane-d4 (S)	124	%	70-130		1		01/16/14 16:30	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		01/16/14 16:30	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Sample: PW-156B-05 **Lab ID: 92186500010** Collected: 01/15/14 08:30 Received: 01/15/14 13:28 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 17:03	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 17:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 17:03	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 17:03	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 17:03	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 17:03	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 17:03	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 17:03	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		01/16/14 17:03	460-00-4	
1,2-Dichloroethane-d4 (S)	124	%	70-130		1		01/16/14 17:03	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		01/16/14 17:03	2037-26-5	

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Eden, NC 27288
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2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Sample: PW-119A-05 **Lab ID: 92186500011** Collected: 01/15/14 10:20 Received: 01/15/14 13:28 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 17:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 17:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 17:20	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 17:20	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 17:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 17:20	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 17:20	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 17:20	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		01/16/14 17:20	460-00-4	
1,2-Dichloroethane-d4 (S)	125	%	70-130		1		01/16/14 17:20	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		01/16/14 17:20	2037-26-5	

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Asheville, NC 28804
(828)254-7176

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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Sample: PW-119B-05 **Lab ID: 92186500012** Collected: 01/15/14 10:25 Received: 01/15/14 13:28 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 17:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 17:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 17:36	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 17:36	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 17:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 17:36	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 17:36	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 17:36	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		01/16/14 17:36	460-00-4	
1,2-Dichloroethane-d4 (S)	129	%	70-130		1		01/16/14 17:36	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		01/16/14 17:36	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Sample: PW-136A-05 **Lab ID: 92186500013** Collected: 01/15/14 11:10 Received: 01/15/14 13:28 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 17:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 17:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 17:53	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 17:53	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 17:53	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 17:53	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 17:53	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 17:53	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/16/14 17:53	460-00-4	
1,2-Dichloroethane-d4 (S)	126	%	70-130		1		01/16/14 17:53	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		01/16/14 17:53	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Sample: PW-136B-05 **Lab ID: 92186500014** Collected: 01/15/14 11:15 Received: 01/15/14 13:28 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 18:10	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 18:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 18:10	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 18:10	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 18:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 18:10	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 18:10	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 18:10	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		01/16/14 18:10	460-00-4	
1,2-Dichloroethane-d4 (S)	128	%	70-130		1		01/16/14 18:10	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		01/16/14 18:10	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Sample: PW-026A-05 **Lab ID: 92186500015** Collected: 01/15/14 11:55 Received: 01/15/14 13:28 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 18:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 18:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 18:26	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 18:26	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 18:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 18:26	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 18:26	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 18:26	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		01/16/14 18:26	460-00-4	
1,2-Dichloroethane-d4 (S)	128	%	70-130		1		01/16/14 18:26	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		01/16/14 18:26	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Sample: PW-026B-05 **Lab ID: 92186500016** Collected: 01/15/14 12:00 Received: 01/15/14 13:28 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 18:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 18:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 18:43	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 18:43	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 18:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 18:43	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 18:43	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 18:43	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		01/16/14 18:43	460-00-4	
1,2-Dichloroethane-d4 (S)	129	%	70-130		1		01/16/14 18:43	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		01/16/14 18:43	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Sample: TB-02-05 **Lab ID: 92186500017** Collected: 01/14/14 00:00 Received: 01/15/14 13:28 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/16/14 18:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/16/14 18:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/16/14 18:59	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/16/14 18:59	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/16/14 18:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/16/14 18:59	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/16/14 18:59	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/16/14 18:59	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		01/16/14 18:59	460-00-4	
1,2-Dichloroethane-d4 (S)	128	%	70-130		1		01/16/14 18:59	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		01/16/14 18:59	2037-26-5	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

QC Batch: MSV/25527 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92186500001, 92186500002, 92186500003, 92186500004, 92186500005, 92186500006

METHOD BLANK: 1122435 Matrix: Water
Associated Lab Samples: 92186500001, 92186500002, 92186500003, 92186500004, 92186500005, 92186500006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	01/16/14 15:27	
1,1-Dichloroethene	ug/L	ND	1.0	01/16/14 15:27	
cis-1,2-Dichloroethene	ug/L	ND	1.0	01/16/14 15:27	
Tetrachloroethene	ug/L	ND	1.0	01/16/14 15:27	
Toluene	ug/L	ND	1.0	01/16/14 15:27	
trans-1,2-Dichloroethene	ug/L	ND	1.0	01/16/14 15:27	
Trichloroethene	ug/L	ND	1.0	01/16/14 15:27	
Vinyl chloride	ug/L	ND	1.0	01/16/14 15:27	
1,2-Dichloroethane-d4 (S)	%	102	70-130	01/16/14 15:27	
4-Bromofluorobenzene (S)	%	102	70-130	01/16/14 15:27	
Toluene-d8 (S)	%	95	70-130	01/16/14 15:27	

LABORATORY CONTROL SAMPLE: 1122436

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	47.1	94	70-130	
1,1-Dichloroethene	ug/L	50	48.3	97	70-132	
cis-1,2-Dichloroethene	ug/L	50	45.8	92	70-131	
Tetrachloroethene	ug/L	50	47.7	95	70-130	
Toluene	ug/L	50	47.6	95	70-130	
trans-1,2-Dichloroethene	ug/L	50	45.1	90	70-130	
Trichloroethene	ug/L	50	48.5	97	70-130	
Vinyl chloride	ug/L	50	52.5	105	69-130	
1,2-Dichloroethane-d4 (S)	%			101	70-130	
4-Bromofluorobenzene (S)	%			97	70-130	
Toluene-d8 (S)	%			103	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1122437 1122438

Parameter	Units	92186580001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	48.4	43.8	97	88	70-166	10	30	
Toluene	ug/L	ND	50	50	51.3	49.2	103	98	70-155	4	30	
Trichloroethene	ug/L	ND	50	50	54.8	53.3	110	107	69-151	3	30	
1,2-Dichloroethane-d4 (S)	%						97	93	70-130			
4-Bromofluorobenzene (S)	%						104	101	70-130			
Toluene-d8 (S)	%						101	102	70-130			

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

QC Batch: MSV/25528 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92186500007, 92186500008, 92186500009, 92186500010, 92186500011, 92186500012, 92186500013, 92186500014, 92186500015, 92186500016, 92186500017

METHOD BLANK: 1122448 — Matrix: Water
Associated Lab Samples: 92186500007, 92186500008, 92186500009, 92186500010, 92186500011, 92186500012, 92186500013, 92186500014, 92186500015, 92186500016, 92186500017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	01/16/14 12:39	
1,1-Dichloroethene	ug/L	ND	1.0	01/16/14 12:39	
cis-1,2-Dichloroethene	ug/L	ND	1.0	01/16/14 12:39	
Tetrachloroethene	ug/L	ND	1.0	01/16/14 12:39	
Toluene	ug/L	ND	1.0	01/16/14 12:39	
trans-1,2-Dichloroethene	ug/L	ND	1.0	01/16/14 12:39	
Trichloroethene	ug/L	ND	1.0	01/16/14 12:39	
Vinyl chloride	ug/L	ND	1.0	01/16/14 12:39	
1,2-Dichloroethane-d4 (S)	%	119	70-130	01/16/14 12:39	
4-Bromofluorobenzene (S)	%	99	70-130	01/16/14 12:39	
Toluene-d8 (S)	%	102	70-130	01/16/14 12:39	

LABORATORY CONTROL SAMPLE: 1122449

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	51.2	102	70-130	
1,1-Dichloroethene	ug/L	50	48.5	97	70-132	
cis-1,2-Dichloroethene	ug/L	50	47.0	94	70-131	
Tetrachloroethene	ug/L	50	42.5	85	70-130	
Toluene	ug/L	50	44.4	89	70-130	
trans-1,2-Dichloroethene	ug/L	50	43.8	88	70-130	
Trichloroethene	ug/L	50	45.9	92	70-130	
Vinyl chloride	ug/L	50	43.8	88	69-130	
1,2-Dichloroethane-d4 (S)	%			107	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1123173 — 1123174

Parameter	Units	92186500016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	58.7	40.8	117	82	70-166	36	30	R1
Toluene	ug/L	ND	50	50	54.5	37.7	109	75	70-155	36	30	R1
Trichloroethene	ug/L	ND	50	50	56.3	38.8	113	78	69-151	37	30	R1
1,2-Dichloroethane-d4 (S)	%						103	101	70-130			
4-Bromofluorobenzene (S)	%						100	100	70-130			
Toluene-d8 (S)	%						99	98	70-130			

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QUALIFIERS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

R1	RPD value was outside control limits.

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Eden, NC 27288
(336)623-8921

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186500

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92186500001	**PW-149A-05**	EPA 8260	MSV/25527		
92186500002	**PW-149B-05**	EPA 8260	MSV/25527		
92186500003	**PW-091A-05**	EPA 8260	MSV/25527		
92186500004	**PW-091B-05**	EPA 8260	MSV/25527		
92186500005	**FD-02-05**	EPA 8260	MSV/25527		
92186500006	**PW-157A-05**	EPA 8260	MSV/25527		
92186500007	**PW-157B-05**	EPA 8260	MSV/25528		
92186500008	**PW-087-05**	EPA 8260	MSV/25528		
92186500009	**PW-156A-05**	EPA 8260	MSV/25528		
92186500010	**PW-156B-05**	EPA 8260	MSV/25528		
92186500011	**PW-119A-05**	EPA 8260	MSV/25528		
92186500012	**PW-119B-05**	EPA 8260	MSV/25528		
92186500013	**PW-136A-05**	EPA 8260	MSV/25528		
92186500014	**PW-136B-05**	EPA 8260	MSV/25528		
92186500015	**PW-026A-05**	EPA 8260	MSV/25528		
92186500016	**PW-026B-05**	EPA 8260	MSV/25528		
92186500017	**TB-02-05**	EPA 8260	MSV/25528		

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Pace Analytical® www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: June 4, 2013 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.11	Issuing Authorities: Pace Asheville Quality Office

Client Name: AMES 1/15/14 C

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

Courier (Circle): Fed Ex UPS USPS (Client) Commercial Pace Other_____

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other_____

Circle Thermometer Used: IR (Gun#3 - 130265963) **Type of Ice:** (Wet) Blue None ☑ Samples on ice, cooling process has begun

IR Gun #2- 80344039

Temp Correction Factor: Add / Subtract 0 C

Corrected Cooler Temp.: 0.7 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 1/15/14 RP

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: (VOA), coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☑Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):_____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: [signature] **Date:** 1/15/14

SRF Review: [signature] **Date:** 1/16/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

WO#: 92186500

92186500

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 2

1746063

Section A Required Client Information:

Company: AMEC
Address: 1308 PATTON AVE
ASHEVILLE, NC 28806
Email To: susan.kelly@amec.com
Phone: 828.352.8130 Fax:
Requested Due Date/TAT: STANDARD

Section B Required Project Information:

Report To: SUSAN KELLY
Copy To:
Purchase Order No.: C012101936
Project Name: CTS OF ASHEVILLE
Project Number: 6252120006

Section C Invoice Information:

Attention: SUSAN KELLY
Company Name: AMEC
Address: 1308 PATTON AVE ASHEVILLE
Pace Quote Reference:
Pace Project Manager: KEVIN GODWIN
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: NC

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N): Analysis Test: 8260 VOC's *

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	COLLECTED Composite Start TIME	COLLECTED Composite End/Grab DATE	COLLECTED Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	8260 VOC's *	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	PW-149A-05	WT	G			1/14/14	1350		3				X					X		001
2	PW-149B-05	WT	G			1/14/14	1355		3				X					X		002
3	PW-091A-05	WT	G			1/14/14	1435		3				X					X		003
4	PW-091B-05	WT	G			1/14/14	1440		3				X					X		004
5	FD-02-05	WT	G			1/14/14	00:00		3				X					X		005
6	PW-157A-05	WT	G			1/14/14	1525		3				X					X		006
7	PW-157B-05	WT	G			1/14/14	1530		3				X					X		007
8	PW-087-05	WT	G			1/14/14	1645		3				X					X		008
9	PW-156A-05	WT	G			1/15/14	0835		3				X					X		009
10	PW-156B-05	WT	G			1/15/14	0840		3				X					X		010
11	PW-119A-05	WT	G			1/15/14	1020		3				X					X		011
12	PW-119B-05	WT	G			1/15/14	1025		3				X					X		012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* SITE SPECIFIC COMPOUND LIST	Jason Avritt	1/15/14	1328	Kevin Patton	1/15/14	1328	0.7	Y	Y	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: JASON AVRITT
SIGNATURE of SAMPLER: Jason Avritt
DATE Signed (MM/DD/YY): 1/15/14

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 2 of 2

1746064

Section A Required Client Information:

Company: AMEC
Address: 1308 PATTON AVE
ASHEVILLE, NC 28806
Email To: susan.kelly@amec.com
Phone: 828-252-8130 Fax:
Requested Due Date/TAT: STANDARD

Section B Required Project Information:

Report To: SUSAN KELLY
Copy To:
Purchase Order No.: C012101936
Project Name: CTS OF ASHEVILLE
Project Number: 6252120006

Section C Invoice Information:

Attention: SUSAN KELLY
Company Name: AMEC
Address: 1308 PATTON AVE ASHEVILLE
Pace Quote Reference:
Pace Project Manager: KEVIN GODWIN
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NC

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start Date	Composite Start Time	Composite End/Grab Date	Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N) 8260 VOC's *	Residual Chlorine (Y/N)	Pace Project No./Lab I.D.
1	PW-136A-05	WT	G			1/15/14	1110		3				X					X		92185500
2	PW-136B-05	WT	G			1/15/14	1115		3				X					X		01
3	PW-026A-05	WT	G			1/15/14	1155		3				X					X		02
4	PW-026B-05	WT	G			1/15/14	1200		3				X					X		03
5	TB-02-05	WT	G			LAB	PREP		2				X					X		04
6																				05
7																				06
8																				07
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* SITE SPECIFIC COMPOUND LIST	Jason Avritt	1/15/14	1328	Lori Patton	1/15/14	1328	0.7	Y	Y	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: JASON AVRITT

SIGNATURE of SAMPLER: Jason Avritt DATE Signed (MM/DD/YY): 1/15/14

ORIGINAL

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Pace Analytical Services, Inc.
205 East Meadow Road - Suite A
Eden, NC 27288
(336)623-8921

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

January 23, 2014

Ms. Susan Kelly
AMEC- Asheville
1308 Patton Avenue
Asheville, NC 28806

RE: Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

Dear Ms. Kelly:
Enclosed are the analytical results for sample(s) received by the laboratory on January 16, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

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Huntersville, NC 28078
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CERTIFICATIONS

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

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(704)875-9092

SAMPLE SUMMARY

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92186670001	**PW-014A-05**	Water	01/15/14 16:15	01/16/14 13:05
92186670002	**PW-014B-05**	Water	01/15/14 16:20	01/16/14 13:05
92186670003	**PW-151A-05**	Water	01/15/14 16:50	01/16/14 13:05
92186670004	**PW-151B-05**	Water	01/15/14 16:55	01/16/14 13:05
92186670005	**PW-133A-05**	Water	01/16/14 09:05	01/16/14 13:05
92186670006	**PW-133B-05**	Water	01/16/14 09:10	01/16/14 13:05
92186670007	**PW-101A-05**	Water	01/16/14 09:55	01/16/14 13:05
92186670008	**PW-101B-05**	Water	01/16/14 10:00	01/16/14 13:05
92186670009	**PW-046-05**	Water	01/16/14 11:10	01/16/14 13:05
92186670010	**FD-03-05**	Water	01/15/14 00:00	01/16/14 13:05
92186670011	**TB-03-05**	Water	01/15/14 00:00	01/16/14 13:05

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SAMPLE ANALYTE COUNT

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92186670001	**PW-014A-05**	EPA 8260	MCK	11	PASI-C
92186670002	**PW-014B-05**	EPA 8260	MCK	11	PASI-C
92186670003	**PW-151A-05**	EPA 8260	MCK	11	PASI-C
92186670004	**PW-151B-05**	EPA 8260	MCK	11	PASI-C
92186670005	**PW-133A-05**	EPA 8260	MCK	11	PASI-C
92186670006	**PW-133B-05**	EPA 8260	MCK	11	PASI-C
92186670007	**PW-101A-05**	EPA 8260	MCK	11	PASI-C
92186670008	**PW-101B-05**	EPA 8260	MCK	11	PASI-C
92186670009	**PW-046-05**	EPA 8260	MCK	11	PASI-C
92186670010	**FD-03-05**	EPA 8260	MCK	11	PASI-C
92186670011	**TB-03-05**	EPA 8260	MCK	11	PASI-C

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PROJECT NARRATIVE

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

Method: **EPA 8260**
Description: 8260 MSV Low Level
Client: AMEC, Asheville
Date: January 23, 2014

General Information:
11 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: MSV/25549

S3: Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

- TB-03-05 (Lab ID: 92186670011)
  - 1,2-Dichloroethane-d4 (S)

QC Batch: MSV/25560

S2: Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

- PW-046-05 (Lab ID: 92186670009)
  - Toluene-d8 (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/25560

A matrix spike and/or matrix sp ke duplicate (MS/MSD) were performed on the following sample(s): 92186932001

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 1124670)
  - 1,1-Dichloroethene
- MSD (Lab ID: 1124671)

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PROJECT NARRATIVE

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

Method: **EPA 8260**
Description: 8260 MSV Low Level
Client: AMEC, Asheville
Date: January 23, 2014

QC Batch: MSV/25560

A matrix spike and/or matrix sp ke duplicate (MS/MSD) were performed on the following sample(s): 92186932001

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- 1,1-Dichloroethene

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

Sample: PW-014A-05 **Lab ID: 92186670001** Collected: 01/15/14 16:15 Received: 01/16/14 13:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/17/14 15:39	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/17/14 15:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/17/14 15:39	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/17/14 15:39	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/17/14 15:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/17/14 15:39	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/17/14 15:39	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/17/14 15:39	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		01/17/14 15:39	460-00-4	
1,2-Dichloroethane-d4 (S)	117	%	70-130		1		01/17/14 15:39	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/17/14 15:39	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

Sample: PW-014B-05 **Lab ID: 92186670002** Collected: 01/15/14 16:20 Received: 01/16/14 13:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/17/14 15:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/17/14 15:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/17/14 15:55	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/17/14 15:55	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/17/14 15:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/17/14 15:55	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/17/14 15:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/17/14 15:55	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/17/14 15:55	460-00-4	
1,2-Dichloroethane-d4 (S)	117	%	70-130		1		01/17/14 15:55	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/17/14 15:55	2037-26-5	

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Asheville, NC 28804
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Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

Sample: PW-151A-05 **Lab ID: 92186670003** Collected: 01/15/14 16:50 Received: 01/16/14 13:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/17/14 16:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/17/14 16:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/17/14 16:12	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/17/14 16:12	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/17/14 16:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/17/14 16:12	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/17/14 16:12	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/17/14 16:12	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		01/17/14 16:12	460-00-4	
1,2-Dichloroethane-d4 (S)	118	%	70-130		1		01/17/14 16:12	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/17/14 16:12	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

Sample: PW-151B-05 **Lab ID: 92186670004** Collected: 01/15/14 16:55 Received: 01/16/14 13:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/17/14 16:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/17/14 16:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/17/14 16:28	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/17/14 16:28	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/17/14 16:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/17/14 16:28	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/17/14 16:28	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/17/14 16:28	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/17/14 16:28	460-00-4	
1,2-Dichloroethane-d4 (S)	120	%	70-130		1		01/17/14 16:28	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/17/14 16:28	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

Sample: PW-133A-05 **Lab ID: 92186670005** Collected: 01/16/14 09:05 Received: 01/16/14 13:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/17/14 16:45	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/17/14 16:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/17/14 16:45	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/17/14 16:45	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/17/14 16:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/17/14 16:45	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/17/14 16:45	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/17/14 16:45	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		01/17/14 16:45	460-00-4	
1,2-Dichloroethane-d4 (S)	121	%	70-130		1		01/17/14 16:45	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/17/14 16:45	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

Sample: PW-133B-05 **Lab ID: 92186670006** Collected: 01/16/14 09:10 Received: 01/16/14 13:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/17/14 17:01	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/17/14 17:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/17/14 17:01	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/17/14 17:01	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/17/14 17:01	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/17/14 17:01	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/17/14 17:01	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/17/14 17:01	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/17/14 17:01	460-00-4	
1,2-Dichloroethane-d4 (S)	121	%	70-130		1		01/17/14 17:01	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		01/17/14 17:01	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

Sample: PW-101A-05 **Lab ID: 92186670007** Collected: 01/16/14 09:55 Received: 01/16/14 13:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/21/14 17:22	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/21/14 17:22	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/21/14 17:22	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/21/14 17:22	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/21/14 17:22	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/21/14 17:22	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/21/14 17:22	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/21/14 17:22	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		01/21/14 17:22	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		01/21/14 17:22	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		01/21/14 17:22	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

Sample: PW-101B-05 **Lab ID: 92186670008** Collected: 01/16/14 10:00 Received: 01/16/14 13:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/17/14 18:41	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/17/14 18:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/17/14 18:41	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/17/14 18:41	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/17/14 18:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/17/14 18:41	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/17/14 18:41	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/17/14 18:41	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/17/14 18:41	460-00-4	
1,2-Dichloroethane-d4 (S)	123	%	70-130		1		01/17/14 18:41	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/17/14 18:41	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

Sample: PW-046-05 **Lab ID: 92186670009** Collected: 01/16/14 11:10 Received: 01/16/14 13:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/21/14 17:38	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/21/14 17:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/21/14 17:38	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/21/14 17:38	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/21/14 17:38	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/21/14 17:38	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/21/14 17:38	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/21/14 17:38	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	91	%	70-130		1		01/21/14 17:38	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		01/21/14 17:38	17060-07-0	
Toluene-d8 (S)	61	%	70-130		1		01/21/14 17:38	2037-26-5	S2

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ANALYTICAL RESULTS

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

Sample: FD-03-05 **Lab ID: 92186670010** Collected: 01/15/14 00:00 Received: 01/16/14 13:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/17/14 19:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/17/14 19:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/17/14 19:14	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/17/14 19:14	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/17/14 19:14	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/17/14 19:14	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/17/14 19:14	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/17/14 19:14	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/17/14 19:14	460-00-4	
1,2-Dichloroethane-d4 (S)	126	%	70-130		1		01/17/14 19:14	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/17/14 19:14	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

Sample: TB-03-05 **Lab ID: 92186670011** Collected: 01/15/14 00:00 Received: 01/16/14 13:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/17/14 19:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/17/14 19:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/17/14 19:30	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/17/14 19:30	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/17/14 19:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/17/14 19:30	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/17/14 19:30	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/17/14 19:30	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/17/14 19:30	460-00-4	
1,2-Dichloroethane-d4 (S)	126	%	70-130		1		01/17/14 19:30	17060-07-0	S3
Toluene-d8 (S)	99	%	70-130		1		01/17/14 19:30	2037-26-5	

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QUALITY CONTROL DATA

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

QC Batch: MSV/25540 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92186670001, 92186670002, 92186670003, 92186670004, 92186670005, 92186670006

METHOD BLANK: 1123311 Matrix: Water
Associated Lab Samples: 92186670001, 92186670002, 92186670003, 92186670004, 92186670005, 92186670006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	01/17/14 12:21	
1,1-Dichloroethene	ug/L	ND	1.0	01/17/14 12:21	
cis-1,2-Dichloroethene	ug/L	ND	1.0	01/17/14 12:21	
Tetrachloroethene	ug/L	ND	1.0	01/17/14 12:21	
Toluene	ug/L	ND	1.0	01/17/14 12:21	
trans-1,2-Dichloroethene	ug/L	ND	1.0	01/17/14 12:21	
Trichloroethene	ug/L	ND	1.0	01/17/14 12:21	
Vinyl chloride	ug/L	ND	1.0	01/17/14 12:21	
1,2-Dichloroethane-d4 (S)	%	108	70-130	01/17/14 12:21	
4-Bromofluorobenzene (S)	%	96	70-130	01/17/14 12:21	
Toluene-d8 (S)	%	100	70-130	01/17/14 12:21	

LABORATORY CONTROL SAMPLE: 1123312

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	48.9	98	70-130	
1,1-Dichloroethene	ug/L	50	45.8	92	70-132	
cis-1,2-Dichloroethene	ug/L	50	44.7	89	70-131	
Tetrachloroethene	ug/L	50	46.2	92	70-130	
Toluene	ug/L	50	44.0	88	70-130	
trans-1,2-Dichloroethene	ug/L	50	42.0	84	70-130	
Trichloroethene	ug/L	50	45.5	91	70-130	
Vinyl chloride	ug/L	50	42.8	86	69-130	
1,2-Dichloroethane-d4 (S)	%			105	70-130	
4-Bromofluorobenzene (S)	%			102	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1124621 1124622

Parameter	Units	92186670003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	38.0	39.2	76	78	70-166	3	30	
Toluene	ug/L	ND	50	50	56.0	49.6	112	99	70-155	12	30	
Trichloroethene	ug/L	ND	50	50	57.5	51.9	115	104	69-151	10	30	
1,2-Dichloroethane-d4 (S)	%						101	99	70-130			
4-Bromofluorobenzene (S)	%						108	108	70-130			
Toluene-d8 (S)	%						116	102	70-130			

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(336)623-8921

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

QC Batch: MSV/25549 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92186670008, 92186670010, 92186670011

METHOD BLANK: 1123575 Matrix: Water
Associated Lab Samples: 92186670008, 92186670010, 92186670011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	01/17/14 12:37	
1,1-Dichloroethene	ug/L	ND	1.0	01/17/14 12:37	
cis-1,2-Dichloroethene	ug/L	ND	1.0	01/17/14 12:37	
Tetrachloroethene	ug/L	ND	1.0	01/17/14 12:37	
Toluene	ug/L	ND	1.0	01/17/14 12:37	
trans-1,2-Dichloroethene	ug/L	ND	1.0	01/17/14 12:37	
Trichloroethene	ug/L	ND	1.0	01/17/14 12:37	
Vinyl chloride	ug/L	ND	1.0	01/17/14 12:37	
1,2-Dichloroethane-d4 (S)	%	108	70-130	01/17/14 12:37	
4-Bromofluorobenzene (S)	%	96	70-130	01/17/14 12:37	
Toluene-d8 (S)	%	100	70-130	01/17/14 12:37	

LABORATORY CONTROL SAMPLE: 1123576

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	47.8	96	70-130	
1,1-Dichloroethene	ug/L	50	45.6	91	70-132	
cis-1,2-Dichloroethene	ug/L	50	44.2	88	70-131	
Tetrachloroethene	ug/L	50	44.9	90	70-130	
Toluene	ug/L	50	43.9	88	70-130	
trans-1,2-Dichloroethene	ug/L	50	44.0	88	70-130	
Trichloroethene	ug/L	50	44.7	89	70-130	
Vinyl chloride	ug/L	50	43.3	87	69-130	
1,2-Dichloroethane-d4 (S)	%			104	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1124619 1124620

Parameter	Units	92186436001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L				38.0	40.6				7	30	
Toluene	ug/L	ND	50	50	46.8	50.0	94	100	70-155	7	30	
Trichloroethene	ug/L				50.0	53.5				7	30	
1,2-Dichloroethane-d4 (S)	%						96	97	70-130			
4-Bromofluorobenzene (S)	%						108	105	70-130			
Toluene-d8 (S)	%						102	102	70-130			

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(828)254-7176

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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

QC Batch: MSV/25560 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92186670007, 92186670009

METHOD BLANK: 1124668 — Matrix: Water
Associated Lab Samples: 92186670007, 92186670009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	01/21/14 13:37	
1,1-Dichloroethene	ug/L	ND	1.0	01/21/14 13:37	
cis-1,2-Dichloroethene	ug/L	ND	1.0	01/21/14 13:37	
Tetrachloroethene	ug/L	ND	1.0	01/21/14 13:37	
Toluene	ug/L	ND	1.0	01/21/14 13:37	
trans-1,2-Dichloroethene	ug/L	ND	1.0	01/21/14 13:37	
Trichloroethene	ug/L	ND	1.0	01/21/14 13:37	
Vinyl chloride	ug/L	ND	1.0	01/21/14 13:37	
1,2-Dichloroethane-d4 (S)	%	98	70-130	01/21/14 13:37	
4-Bromofluorobenzene (S)	%	105	70-130	01/21/14 13:37	
Toluene-d8 (S)	%	104	70-130	01/21/14 13:37	

LABORATORY CONTROL SAMPLE: 1124669

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	47.8	96	70-130	
1,1-Dichloroethene	ug/L	50	46.9	94	70-132	
cis-1,2-Dichloroethene	ug/L	50	44.6	89	70-131	
Tetrachloroethene	ug/L	50	49.2	98	70-130	
Toluene	ug/L	50	46.0	92	70-130	
trans-1,2-Dichloroethene	ug/L	50	44.0	88	70-130	
Trichloroethene	ug/L	50	47.1	94	70-130	
Vinyl chloride	ug/L	50	52.8	106	69-130	
1,2-Dichloroethane-d4 (S)	%			103	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1124670 — 1124671

Parameter	Units	92186932001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	30.9	32.0	62	64	70-166	4	30	M0
Toluene	ug/L	ND	50	50	47.4	60.7	95	121	70-155	25	30	
Trichloroethene	ug/L	ND	50	50	49.5	57.8	99	116	69-151	15	30	
1,2-Dichloroethane-d4 (S)	%						94	93	70-130			
4-Bromofluorobenzene (S)	%						105	110	70-130			
Toluene-d8 (S)	%						102	126	70-130			

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QUALIFIERS

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
S2	Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).
S3	Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

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Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CTS OF ASHVEVILLE 6252120006
Pace Project No.: 92186670

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92186670001	**PW-014A-05**	EPA 8260	MSV/25540		
92186670002	**PW-014B-05**	EPA 8260	MSV/25540		
92186670003	**PW-151A-05**	EPA 8260	MSV/25540		
92186670004	**PW-151B-05**	EPA 8260	MSV/25540		
92186670005	**PW-133A-05**	EPA 8260	MSV/25540		
92186670006	**PW-133B-05**	EPA 8260	MSV/25540		
92186670007	**PW-101A-05**	EPA 8260	MSV/25560		
92186670008	**PW-101B-05**	EPA 8260	MSV/25549		
92186670009	**PW-046-05**	EPA 8260	MSV/25560		
92186670010	**FD-03-05**	EPA 8260	MSV/25549		
92186670011	**TB-03-05**	EPA 8260	MSV/25549		

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Pace Analytical® www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: June 4, 2013 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.11	Issuing Authorities: Pace Asheville Quality Office

Client Name: AMEC

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

Courier (Circle): Fed Ex UPS USPS Client Commercial Pace Other_____

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other_____

Circle Thermometer Used: IR Gun#3 -130265963 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

IR Gun #2- 80344039

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 1.6 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 1/16/14 DLS.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☑Yes ☐No ☐N/A	7. Standard
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: Water	☑Yes ☐No ☐N/A	12.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	
Samples checked for dechlorination:	☑Yes ☐No ☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☑Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):_____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: [signature] **Date:** 1/16/14

SRF Review: [signature] **Date:** 1/17/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

WO#: 92186670

92186670

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1746058

Section A Required Client Information:

Company: AMEC
Address: 1308 PATTON AVE
ASHEVILLE NC 28806
Email To: susan.kelly@amec.com
Phone: 828-252-8130 Fax:
Requested Due Date/TAT: STANDARD

Section B Required Project Information:

Report To: SUSAN KELLY
Copy To:
Purchase Order No.: C012101936
Project Name: CTS OF ASHEVILLE
Project Number: 62521200006

Section C Invoice Information:

Attention: SUSAN KELLY
Company Name: AMEC
Address: 1308 PATTON AVE ASHEVILLE
Pace Quote Reference:
Pace Project Manager: KEVIN GODWIN
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NC

Requested Analysis Filtered (Y/N)

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test ↓ (Y/N)	8260 VOC's *	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	PW-014A-05	WT	G			1/15/14	1625		3				X						X		92181670001
2	PW-014B-05	WT	G			1/15/14	1620		3				X						X		002
3	PW-151A-05	WT	G			1/15/14	1650		3				X						X		003
4	PW-151B-05	WT	G			1/15/14	1655		3				X						X		004
5	PW-133A-05	WT	G			1/16/14	0905		3				X						X		005
6	PW-133B-05	WT	G			1/16/14	0910		3				X						X		006
7	PW-101A-05	WT	G			1/16/14	0955		3				X						X		007
8	PW-101B-05	WT	G			1/16/14	1000		3				X						X		008
9	PW-046-05	WT	G			1/16/14	1110		3				X						X		009
10	FD-03-05	WT	G			1/15/14	00:00		3				X						X		010
11	TB-03-05	WT	G			LAB	PREP	X	2				X						X		011
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* SITE SPECIFIC COMPOUND	Jason Avritt	1/16/14	13:05	[illegible]	1/16/14	1305	1.6	Y	Y	Y
LIST										

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: JASON AVRITT
SIGNATURE of SAMPLER: Jason Avritt
DATE Signed (MM/DD/YY): 1/16/14

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

TABLE 1
Target Compounds and Reporting Limits
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

Analyte	CAS Number	PQL	MDL	Comparison Value (basis)
1,1-Dichloroethene	75-35-4	1	0.56	7 (MCL)
cis-1,2-Dichloroethene	156-59-2	1	0.19	70 (MCL)
trans-1,2-Dichloroethene	156-60-5	1	0.49	100 (MCL)
Tetrachloroethene	127-18-4	1	0.46	5 (MCL)
1,1,1-Trichloroethane	71-55-6	1	0.48	200 (MCL)
Trichloroethene	79-01-6	1	0.47	5 (MCL)
Vinyl chloride	75-01-4	1	0.62	2 (MCL)

Notes:
CAS - Chemical Abstracts Service
PQL - Pratical Quantitative Limit
MDL - Method Detection Limit
MCL - Maximum Contaminant Level
Concentrations are in micrograms per liter (µg/L)

Prepared By: SEK 8/22/12
Checked By: LRD 8/22/12

+ Toluene per Susan Kelly (1-2-13).

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2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

January 24, 2014

Ms. Susan Kelly
AMEC- Asheville
1308 Patton Avenue
Asheville, NC 28806

RE: Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

Dear Ms. Kelly:
Enclosed are the analytical results for sample(s) received by the laboratory on January 17, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

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Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

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SAMPLE SUMMARY

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92186932001	**PW-121A-05**	Water	01/16/14 14:00	01/17/14 14:52
92186932002	**PW-121B-05**	Water	01/16/14 13:55	01/17/14 14:52
92186932003	**PW-143A-05**	Water	01/16/14 15:05	01/17/14 14:52
92186932004	**PW-143B-05**	Water	01/16/14 15:00	01/17/14 14:52
92186932005	**PW-146A-05**	Water	01/16/14 16:05	01/17/14 14:52
92186932006	**PW-146B-05**	Water	01/16/14 16:10	01/17/14 14:52
92186932007	**PW-085A-05**	Water	01/17/14 11:20	01/17/14 14:52
92186932008	**PW-085B-05**	Water	01/17/14 11:25	01/17/14 14:52
92186932009	**FD-04-05**	Water	01/16/14 00:00	01/17/14 14:52
92186932010	**FD-05-05**	Water	01/17/14 00:00	01/17/14 14:52
92186932011	**TB-04-05**	Water	01/16/14 00:00	01/17/14 14:52

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Huntersville, NC 28078
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SAMPLE ANALYTE COUNT

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92186932001	**PW-121A-05**	EPA 8260	MCK	11	PASI-C
92186932002	**PW-121B-05**	EPA 8260	MCK	11	PASI-C
92186932003	**PW-143A-05**	EPA 8260	MCK	11	PASI-C
92186932004	**PW-143B-05**	EPA 8260	MCK	11	PASI-C
92186932005	**PW-146A-05**	EPA 8260	MCK	11	PASI-C
92186932006	**PW-146B-05**	EPA 8260	MCK	11	PASI-C
92186932007	**PW-085A-05**	EPA 8260	MCK	11	PASI-C
92186932008	**PW-085B-05**	EPA 8260	MCK	11	PASI-C
92186932009	**FD-04-05**	EPA 8260	MCK	11	PASI-C
92186932010	**FD-05-05**	EPA 8260	MCK	11	PASI-C
92186932011	**TB-04-05**	EPA 8260	MCK	11	PASI-C

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Eden, NC 27288
(336)623-8921

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

Method: **EPA 8260**
Description: 8260 MSV Low Level
Client: AMEC, Asheville
Date: January 24, 2014

General Information:
11 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/25560

A matrix spike and/or matrix sp ke duplicate (MS/MSD) were performed on the following sample(s): 92186932001

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 1124670)
  - 1,1-Dichloroethene
- MSD (Lab ID: 1124671)
  - 1,1-Dichloroethene

QC Batch: MSV/25576

A matrix spike and/or matrix sp ke duplicate (MS/MSD) were performed on the following sample(s): 92186932010

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 1125794)
  - 1,1-Dichloroethene
- MSD (Lab ID: 1125795)
  - 1,1-Dichloroethene

Additional Comments:

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(828)254-7176

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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

Method: **EPA 8260**
Description: 8260 MSV Low Level
Client: AMEC, Asheville
Date: January 24, 2014

This data package has been reviewed for quality and completeness and is approved for release.

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Asheville, NC 28804
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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

Sample: PW-121A-05 **Lab ID: 92186932001** Collected: 01/16/14 14:00 Received: 01/17/14 14:52 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/21/14 17:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/21/14 17:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/21/14 17:54	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/21/14 17:54	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/21/14 17:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/21/14 17:54	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/21/14 17:54	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/21/14 17:54	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		01/21/14 17:54	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		01/21/14 17:54	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		01/21/14 17:54	2037-26-5	

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(704)875-9092

ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

Sample: PW-121B-05 **Lab ID: 92186932002** Collected: 01/16/14 13:55 Received: 01/17/14 14:52 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/21/14 18:11	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/21/14 18:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/21/14 18:11	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/21/14 18:11	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/21/14 18:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/21/14 18:11	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/21/14 18:11	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/21/14 18:11	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		01/21/14 18:11	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		01/21/14 18:11	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		01/21/14 18:11	2037-26-5	

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Asheville, NC 28804
(828)254-7176

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Huntersville, NC 28078
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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

Sample: PW-143A-05 **Lab ID: 92186932003** Collected: 01/16/14 15:05 Received: 01/17/14 14:52 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/21/14 18:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/21/14 18:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/21/14 18:27	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/21/14 18:27	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/21/14 18:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/21/14 18:27	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/21/14 18:27	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/21/14 18:27	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		01/21/14 18:27	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		01/21/14 18:27	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		01/21/14 18:27	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

Sample: PW-143B-05 **Lab ID: 92186932004** Collected: 01/16/14 15:00 Received: 01/17/14 14:52 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/22/14 20:11	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/22/14 20:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/22/14 20:11	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/22/14 20:11	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/22/14 20:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/22/14 20:11	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/22/14 20:11	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/22/14 20:11	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		01/22/14 20:11	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		1		01/22/14 20:11	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		01/22/14 20:11	2037-26-5	

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Huntersville, NC 28078
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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

Sample: PW-146A-05 **Lab ID: 92186932005** Collected: 01/16/14 16:05 Received: 01/17/14 14:52 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/21/14 18:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/21/14 18:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/21/14 18:59	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/21/14 18:59	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/21/14 18:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/21/14 18:59	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/21/14 18:59	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/21/14 18:59	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		01/21/14 18:59	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		01/21/14 18:59	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		01/21/14 18:59	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

Sample: PW-146B-05 **Lab ID: 92186932006** Collected: 01/16/14 16:10 Received: 01/17/14 14:52 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/21/14 19:15	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/21/14 19:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/21/14 19:15	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/21/14 19:15	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/21/14 19:15	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/21/14 19:15	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/21/14 19:15	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/21/14 19:15	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		1		01/21/14 19:15	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		01/21/14 19:15	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/21/14 19:15	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

Sample: PW-085A-05 **Lab ID: 92186932007** Collected: 01/17/14 11:20 Received: 01/17/14 14:52 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/21/14 19:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/21/14 19:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/21/14 19:31	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/21/14 19:31	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/21/14 19:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/21/14 19:31	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/21/14 19:31	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/21/14 19:31	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		01/21/14 19:31	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		01/21/14 19:31	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/21/14 19:31	2037-26-5	

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(704)875-9092

ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

Sample: PW-085B-05 **Lab ID: 92186932008** Collected: 01/17/14 11:25 Received: 01/17/14 14:52 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/21/14 19:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/21/14 19:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/21/14 19:47	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/21/14 19:47	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/21/14 19:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/21/14 19:47	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/21/14 19:47	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/21/14 19:47	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		01/21/14 19:47	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		01/21/14 19:47	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		01/21/14 19:47	2037-26-5	

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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

Sample: FD-04-05 **Lab ID: 92186932009** Collected: 01/16/14 00:00 Received: 01/17/14 14:52 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/21/14 20:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/21/14 20:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/21/14 20:04	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/21/14 20:04	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/21/14 20:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/21/14 20:04	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/21/14 20:04	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/21/14 20:04	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		01/21/14 20:04	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		01/21/14 20:04	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/21/14 20:04	2037-26-5	

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(828)254-7176

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

Sample: FD-05-05 **Lab ID: 92186932010** Collected: 01/17/14 00:00 Received: 01/17/14 14:52 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/22/14 20:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/22/14 20:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/22/14 20:27	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/22/14 20:27	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/22/14 20:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/22/14 20:27	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/22/14 20:27	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/22/14 20:27	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		1		01/22/14 20:27	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	70-130		1		01/22/14 20:27	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		01/22/14 20:27	2037-26-5	

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Eden, NC 27288
(336)623-8921

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

Sample: TB-04-05 **Lab ID: 92186932011** Collected: 01/16/14 00:00 Received: 01/17/14 14:52 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		01/21/14 20:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		01/21/14 20:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		01/21/14 20:36	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/21/14 20:36	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/21/14 20:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/21/14 20:36	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/21/14 20:36	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/21/14 20:36	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		01/21/14 20:36	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		01/21/14 20:36	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		01/21/14 20:36	2037-26-5	

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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

QC Batch: MSV/25560 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92186932001, 92186932002, 92186932003, 92186932005, 92186932006, 92186932007, 92186932008, 92186932009, 92186932011

METHOD BLANK: 1124668 — Matrix: Water
Associated Lab Samples: 92186932001, 92186932002, 92186932003, 92186932005, 92186932006, 92186932007, 92186932008, 92186932009, 92186932011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	01/21/14 13:37	
1,1-Dichloroethene	ug/L	ND	1.0	01/21/14 13:37	
cis-1,2-Dichloroethene	ug/L	ND	1.0	01/21/14 13:37	
Tetrachloroethene	ug/L	ND	1.0	01/21/14 13:37	
Toluene	ug/L	ND	1.0	01/21/14 13:37	
trans-1,2-Dichloroethene	ug/L	ND	1.0	01/21/14 13:37	
Trichloroethene	ug/L	ND	1.0	01/21/14 13:37	
Vinyl chloride	ug/L	ND	1.0	01/21/14 13:37	
1,2-Dichloroethane-d4 (S)	%	98	70-130	01/21/14 13:37	
4-Bromofluorobenzene (S)	%	105	70-130	01/21/14 13:37	
Toluene-d8 (S)	%	104	70-130	01/21/14 13:37	

LABORATORY CONTROL SAMPLE: 1124669

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	47.8	96	70-130	
1,1-Dichloroethene	ug/L	50	46.9	94	70-132	
cis-1,2-Dichloroethene	ug/L	50	44.6	89	70-131	
Tetrachloroethene	ug/L	50	49.2	98	70-130	
Toluene	ug/L	50	46.0	92	70-130	
trans-1,2-Dichloroethene	ug/L	50	44.0	88	70-130	
Trichloroethene	ug/L	50	47.1	94	70-130	
Vinyl chloride	ug/L	50	52.8	106	69-130	
1,2-Dichloroethane-d4 (S)	%			103	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1124670 — 1124671

Parameter	Units	92186932001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	30.9	32.0	62	64	70-166	4	30	M0
Toluene	ug/L	ND	50	50	47.4	60.7	95	121	70-155	25	30	
Trichloroethene	ug/L	ND	50	50	49.5	57.8	99	116	69-151	15	30	
1,2-Dichloroethane-d4 (S)	%						94	93	70-130			
4-Bromofluorobenzene (S)	%						105	110	70-130			
Toluene-d8 (S)	%						102	126	70-130			

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Eden, NC 27288
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Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

QC Batch: MSV/25576
Analysis Method: EPA 8260
QC Batch Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92186932004, 92186932010

METHOD BLANK: 1125792
Matrix: Water
Associated Lab Samples: 92186932004, 92186932010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	01/22/14 16:26	
1,1-Dichloroethene	ug/L	ND	1.0	01/22/14 16:26	
cis-1,2-Dichloroethene	ug/L	ND	1.0	01/22/14 16:26	
Tetrachloroethene	ug/L	ND	1.0	01/22/14 16:26	
Toluene	ug/L	ND	1.0	01/22/14 16:26	
trans-1,2-Dichloroethene	ug/L	ND	1.0	01/22/14 16:26	
Trichloroethene	ug/L	ND	1.0	01/22/14 16:26	
Vinyl chloride	ug/L	ND	1.0	01/22/14 16:26	
1,2-Dichloroethane-d4 (S)	%	93	70-130	01/22/14 16:26	
4-Bromofluorobenzene (S)	%	103	70-130	01/22/14 16:26	
Toluene-d8 (S)	%	98	70-130	01/22/14 16:26	

LABORATORY CONTROL SAMPLE: 1125793

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	46.2	92	70-130	
1,1-Dichloroethene	ug/L	50	43.4	87	70-132	
cis-1,2-Dichloroethene	ug/L	50	43.7	87	70-131	
Tetrachloroethene	ug/L	50	49.2	98	70-130	
Toluene	ug/L	50	46.2	92	70-130	
trans-1,2-Dichloroethene	ug/L	50	42.1	84	70-130	
Trichloroethene	ug/L	50	48.1	96	70-130	
Vinyl chloride	ug/L	50	52.3	105	69-130	
1,2-Dichloroethane-d4 (S)	%			98	70-130	
4-Bromofluorobenzene (S)	%			102	70-130	
Toluene-d8 (S)	%			103	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1125794 1125795

Parameter	Units	92186932010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	23.8	21.3	48	43	70-166	11	30	M0
Toluene	ug/L	ND	50	50	57.0	47.3	114	95	70-155	19	30	
Trichloroethene	ug/L	ND	50	50	57.1	47.2	114	94	69-151	19	30	
1,2-Dichloroethane-d4 (S)	%						95	88	70-130			
4-Bromofluorobenzene (S)	%						108	103	70-130			
Toluene-d8 (S)	%						116	106	70-130			

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

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205 East Meadow Road - Suite A
Eden, NC 27288
(336)623-8921

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92186932

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92186932001	**PW-121A-05**	EPA 8260	MSV/25560		
92186932002	**PW-121B-05**	EPA 8260	MSV/25560		
92186932003	**PW-143A-05**	EPA 8260	MSV/25560		
92186932004	**PW-143B-05**	EPA 8260	MSV/25576		
92186932005	**PW-146A-05**	EPA 8260	MSV/25560		
92186932006	**PW-146B-05**	EPA 8260	MSV/25560		
92186932007	**PW-085A-05**	EPA 8260	MSV/25560		
92186932008	**PW-085B-05**	EPA 8260	MSV/25560		
92186932009	**FD-04-05**	EPA 8260	MSV/25560		
92186932010	**FD-05-05**	EPA 8260	MSV/25576		
92186932011	**TB-04-05**	EPA 8260	MSV/25560		

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Pace Analytical® www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: June 4, 2013 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.11	Issuing Authorities: Pace Asheville Quality Office

Client Name: AMEC

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

Courier (Circle): Fed Ex UPS USPS (Client) Commercial Pace Other_____

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other_____

Circle Thermometer Used: (IR Gun#3 -130265963) **Type of Ice:** (Wet) Blue None ☑ Samples on ice, cooling process has begun

IR Gun #2- 80344039

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 1.3 C **Biological Tissue is Frozen:** Yes No (N/A)

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 1/17/14 JLG

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☑No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☑No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☑No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☑Yes ☐No ☐N/A	7. Standard
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☑No ☐N/A	9.
-Pace Containers Used:	☑Yes ☑No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: Water	☑Yes ☐No ☐N/A	12.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	
Samples checked for dechlorination:	☑Yes ☐No ☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☑Yes ☑No ☐N/A	16.
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):_____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: JLG **Date:** 1/17/14

SRF Review: JLG **Date:** 1/17/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

WO# : 92186932

92186932

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1746062

Section A Required Client Information:

Company: AMEC
Address: 1308 PATTON AVE
ASHEVILLE NC 28806
Email To: Susan.Kelly@amec.com
Phone: 828-252-8130 Fax:
Requested Due Date/TAT: STANDARD

Section B Required Project Information:

Report To: SUSAN KELLY
Copy To:
Purchase Order No.: C012101936
Project Name: CTS OF ASHEVILLE
Project Number: 6252120006

Section C Invoice Information:

Attention: SUSAN KELLY
Company Name: AMEC
Address: 1308 PATTON AVE ASHEVILLE
Pace Quote Reference:
Pace Project Manager: KEVIN GODWIN
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NC

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N) 8260 VOC's *	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92186032
1	PW-121A-05	WT	G			1/16/14	1400		3				X					X		001
2	PW-121B-05	WT	G			1/16/14	1355		3				X					X		002
3	PW-143A-05	WT	G			1/16/14	1505		3				X					X		003
4	PW-143B-05	WT	G			1/16/14	1500		3				X					X		004
5	PW-146A-05	WT	G			1/16/14	1605		3				X					X		005
6	PW-146B-05	WT	G			1/16/14	1610		3				X					X		006
7	PW-085A-05	WT	G			1/17/14	1130		3				X					X		007
8	PW-085B-05	WT	G			1/17/14	1125		3				X					X		008
9	FD-04-05	WT	G			1/16/14	00:00		3				X					X		009
10	FD-05-05	WT	G			1/17/14	00:00		3				X					X		010
11	TB-04-05	WT	G			LAB	PREP		2				X					X		011
12																				

J.S. 1/17/14

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* SITE SPECIFIC COMPOUND LIST	Jason Averitt	1/17/14	1452	Joseph	1/17/14	1452	1.8	Y	~~N~~ Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: JASON AVERITT

SIGNATURE of SAMPLER: Jason Averitt DATE Signed (MM/DD/YY): 1/17/14

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

APPENDIX C

DATA VALIDATION REPORT

DATA VALIDATION REPORT
January 2014 Water Supply Monitoring
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina

Introduction

Water samples were collected at the CTS of Asheville, Inc., site in Asheville, North Carolina in January 2014 and submitted for off-site laboratory analysis. Samples were analyzed by Pace Analytical Services, Inc., located in Huntersville, North Carolina. Results were reported in the following Sample Delivery Groups (SDGs): 92186304, 92186500, 92186670, and 9216932.

A listing of samples included in this Data Validation Report is presented in Table C.1. The project quality control limits are included in Table C.2. A summary of the analytical results is presented in Table C.3. A summary of data qualification actions is presented in Table C.4. Samples were analyzed by the following method:

- Volatile organic compounds (VOCs) by USEPA Method 8260 (project list only)

Data validation was completed based on procedures in the USEPA Region 4 Data Validation Standard Operating Procedures (SOP) for Organic Analysis (USEPA, 2008), Method 8260, and the CTS of Asheville Quality Assurance Project Plan (QAPP; AMEC, 2012). The validation included the following evaluations:

- Lab report narrative
- Sample collection and chain of custody
- Data package completeness
- Holding times
- Instrument tuning
- Initial and continuing calibrations
- QC blanks
- System monitoring compound recovery
- Laboratory control samples
- Matrix spike/matrix spike duplicates
- Field duplicates
- Internal standard response and retention time
- Data transcription
- Raw data and calculation checks
- Electronic data reporting
- Data qualification

The following laboratory or data validation qualifiers are used in the final data presentation.

U = target analyte is not detected at the reported detection limit
UJ = target analyte is not detected at the reported detection limit and is estimated

Results are interpreted to be usable as reported by the laboratory unless discussed in the following section.

Data Validation Results

Instrument Tuning

Instrument tune criteria for mass/charge (m/z) 50/95 and m/z 176/174 did not meet percent relative abundance criteria in Method 8260B. The m/z criteria referenced by the laboratory on the tuning summary form did not match criteria in Method 8260B. The laboratory was contacted for an explanation and responded that they are using criteria generated from Contract Laboratory Program (CLP) document OLC03.2, December 2000. Based on calculation checks and system performance reviews completed during the Level IV validation, and a reduced target analyte list, professional judgment was used to accept sample results reported using the CLP tuning criteria.

System Monitoring Compound Recovery

Surrogate toluene-d8 percent recovery for sample PW-046-05 (61) was less than the lower quality control (QC) limit of 70. Reporting limits for associated analytes, toluene and tetrachloroethene, in sample PW-046-05 were qualified estimated (UJ). Qualified samples are summarized in Table C.4 with reason code SS-L.

Matrix Spike/Matrix Spike Duplicate

Sample PW-121A-05 was selected by the laboratory for MS/MSD analysis. The MS/MSD percent recoveries of 1,1-dichloroethene (62 and 64) were less than the lower QC limit of 70. The 1,1-dichloroethene reporting limits in associated samples PW-121A-05 and the associated field duplicate FD-04-05 were qualified estimated (UJ).

Sample FD-05-05 was selected by the laboratory for MS/MSD analysis. The MS/MSD percent recoveries of 1,1-dichloroethene (48 and 43) were less than the lower QC limit of 70. The 1,1-dichloroethene reporting limits in associated samples FD-05-05 and the associated sample PW-085A-05 were qualified estimated (UJ).

Qualified samples are summarized in Table C.4 with reason code MS-L.

References

AMEC, 2012. "Quality Assurance Project Plan for Water Supply Monitoring"; February 24, 2012.

USEPA Region 4, 2008. "Data Validation Standard Operating Procedures for Organic Analysis" Science and Ecosystem Support Division, Quality Assurance Section, MTSB, Revision 3.1.

Data Validator: Wolfgang Calicchio

Date: 2/26/2014

Reviewed by Chris Ricardi, NRCC-EAC

Date: 3/3/2014

TABLE C.1
Data Validation Report: Sample Summary (January 2014)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

Sample Delivery Group	Field Sample ID	Sample Date	Lab Sample ID	VOCs EPA 8260
92186304	PW-060A-05	1/13/14	92186304001	8
92186304	FD-01-05	1/13/14	92186304011	8
92186304	TB-01-05	1/13/14	92186304018	8
92186304	PW-060B-05	1/13/14	92186304002	8
92186304	PW-142B-05	1/13/14	92186304004	8
92186304	PW-142A-05	1/13/14	92186304003	8
92186304	PW-047A-05	1/13/14	92186304005	8
92186304	PW-047B-05	1/13/14	92186304006	8
92186304	PW-048A-05	1/13/14	92186304007	8
92186304	PW-048B-05	1/13/14	92186304008	8
92186304	PW-063A-05	1/13/14	92186304009	8
92186304	PW-063B-05	1/13/14	92186304010	8
92186500	FD-02-05	1/14/14	92186500005	8
92186500	TB-02-05	1/14/14	92186500017	8
92186304	PW-039A-05	1/14/14	92186304012	8
92186304	PW-039B-05	1/14/14	92186304013	8
92186304	PW-058A-05	1/14/14	92186304014	8
92186304	PW-058B-05	1/14/14	92186304015	8
92186304	PW-103A-05	1/14/14	92186304016	8
92186304	PW-103B-05	1/14/14	92186304017	8
92186500	PW-149A-05	1/14/14	92186500001	8
92186500	PW-149B-05	1/14/14	92186500002	8
92186500	PW-091A-05	1/14/14	92186500003	8
92186500	PW-091B-05	1/14/14	92186500004	8
92186500	PW-157A-05	1/14/14	92186500006	8
92186500	PW-157B-05	1/14/14	92186500007	8
92186500	PW-087-05	1/14/14	92186500008	8
92186670	FD-03-05	1/15/14	92186670010	8
92186670	TB-03-05	1/15/14	92186670011	8
92186500	PW-156B-05	1/15/14	92186500010	8
92186500	PW-156A-05	1/15/14	92186500009	8
92186500	PW-119A-05	1/15/14	92186500011	8
92186500	PW-119B-05	1/15/14	92186500012	8
92186500	PW-136A-05	1/15/14	92186500013	8
92186500	PW-136B-05	1/15/14	92186500014	8
92186500	PW-026A-05	1/15/14	92186500015	8
92186500	PW-026B-05	1/15/14	92186500016	8
92186670	PW-014A-05	1/15/14	92186670001	8
92186670	PW-014B-05	1/15/14	92186670002	8
92186670	PW-151A-05	1/15/14	92186670003	8
92186670	PW-151B-05	1/15/14	92186670004	8

TABLE C.1
Data Validation Report: Sample Summary (January 2014)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

Sample Delivery Group	Field Sample ID	Sample Date	Lab Sample ID	VOCs EPA 8260
92186932	FD-04-05	1/16/14	92186932009	8
92186932	TB-04-05	1/16/14	92186932011	8
92186670	PW-133A-05	1/16/14	92186670005	8
92186670	PW-133B-05	1/16/14	92186670006	8
92186670	PW-101A-05	1/16/14	92186670007	8
92186670	PW-101B-05	1/16/14	92186670008	8
92186670	PW-046-05	1/16/14	92186670009	8
92186932	PW-121B-05	1/16/14	92186932002	8
92186932	PW-121A-05	1/16/14	92186932001	8
92186932	PW-143B-05	1/16/14	92186932004	8
92186932	PW-143A-05	1/16/14	92186932003	8
92186932	PW-146A-05	1/16/14	92186932005	8
92186932	PW-146B-05	1/16/14	92186932006	8
92186932	FD-05-05	1/17/14	92186932010	8
92186932	PW-085A-05	1/17/14	92186932007	8
92186932	PW-085B-05	1/17/14	92186932008	8

Note:
1. Number listed under method indicates the number of target analytes reported.

Prepared By: WCG 2/26/14
Checked By: WDC 2/26/14

TABLE C.2
Data Validation Report: Quality Control Limits
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

Parameter	QC Test	%R	RPD
VOC	Surrogate	70-130	
	LCS/LCSD	70-130	30
	MS/MSD	70-130	30
	Field Duplicate		30

Notes:
LCS = laboratory control sample
LCSD = laboratory control sample duplicate
MS = matrix spike
MSD = matrix spike duplicate
%R = percent recovery
RPD = relative percent difference

Prepared By: WDC 2/26/14
Checked By: WCG 2/26/14

TABLE C.3
Data Validation Report: Final Results Summary (January 2014)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

		Location:	MGPW014		MGPW014		MGPW014		MGPW026		MGPW026		MGPW039	
		Date:	01/15/14		01/15/14		01/15/14		01/15/14		01/15/14		01/14/14	
		Field Sample ID:	FD-03-05		PW-014A-05		PW-014B-05		PW-026A-05		PW-026B-05		PW-039A-05	
Method	**Parameter**	**Unit**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**
EPA 8260	1,1,1-Trichloroethane	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	1,1-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	cis-1,2-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Tetrachloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Toluene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	trans-1,2-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Trichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Vinyl chloride	ug/L	1	U	1	U	1	U	1	U	1	U	1	U

Notes:
ug/L = microgram per liter
U = not detected at the reporting limit
UJ = not detected at the reporting limit, estimated

Prepared By: WCG 2/28/14
Checked By: WDC 2/28/14

TABLE C.3
Data Validation Report: Final Results Summary (January 2014)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

		Location:	MGPW039		MGPW046		MGPW047		MGPW047		MGPW048		MGPW048	
		Date:	01/14/14		01/16/14		01/13/14		01/13/14		01/13/14		01/13/14	
		Field Sample ID:	PW-039B-05		PW-046-05		PW-047A-05		PW-047B-05		PW-048A-05		PW-048B-05	
Method	**Parameter**	**Unit**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**
EPA 8260	1,1,1-Trichloroethane	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	1,1-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	cis-1,2-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Tetrachloroethene	ug/L	1	U	1	UJ	1	U	1	U	1	U	1	U
EPA 8260	Toluene	ug/L	1	U	1	UJ	1	U	1	U	1	U	1	U
EPA 8260	trans-1,2-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Trichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Vinyl chloride	ug/L	1	U	1	U	1	U	1	U	1	U	1	U

Notes:
ug/L = microgram per liter
U = not detected at the reporting limit
UJ = not detected at the reporting limit, estimate

Prepared By: WCG 2/28/14
Checked By: WDC 2/28/14

TABLE C.3
Data Validation Report: Final Results Summary (January 2014)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

		Location:	MGPW058		MGPW058		MGPW060		MGPW060		MGPW063		MGPW063	
		Date:	01/14/14		01/14/14		01/13/14		01/13/14		01/13/14		01/13/14	
		Field Sample ID:	PW-058A-05		PW-058B-05		PW-060B-05		PW-060A-05		FD-01-05		PW-063A-05	
Method	**Parameter**	**Unit**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**
EPA 8260	1,1,1-Trichloroethane	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	1,1-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	cis-1,2-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Tetrachloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Toluene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	trans-1,2-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Trichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Vinyl chloride	ug/L	1	U	1	U	1	U	1	U	1	U	1	U

Notes:
ug/L = microgram per liter
U = not detected at the reporting limit
UJ = not detected at the reporting limit, estimate

Prepared By: WCG 2/28/14
Checked By: WDC 2/28/14

TABLE C.3
Data Validation Report: Final Results Summary (January 2014)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

		Location:	MGPW063		MGPW085		MGPW085		MGPW085		MGPW087		MGPW091	
		Date:	01/13/14		01/17/14		01/17/14		01/17/14		01/14/14		01/14/14	
		Field Sample ID:	PW-063B-05		FD-05-05		PW-085A-05		PW-085B-05		PW-087-05		FD-02-05	
Method	**Parameter**	**Unit**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**
EPA 8260	1,1,1-Trichloroethane	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	1,1-Dichloroethene	ug/L	1	U	1	UJ	1	UJ	1	U	1	U	1	U
EPA 8260	cis-1,2-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Tetrachloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Toluene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	trans-1,2-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Trichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Vinyl chloride	ug/L	1	U	1	U	1	U	1	U	1	U	1	U

Notes:
ug/L = microgram per liter
U = not detected at the reporting limit
UJ = not detected at the reporting limit, estimate

Prepared By: WCG 2/28/14
Checked By: WDC 2/28/14

TABLE C.3
Data Validation Report: Final Results Summary (January 2014)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

		Location:	MGPW091		MGPW091		MGPW101		MGPW101		MGPW103		MGPW103	
		Date:	01/14/14		01/14/14		01/16/14		01/16/14		01/14/14		01/14/14	
		Field Sample ID:	PW-091A-05		PW-091B-05		PW-101A-05		PW-101B-05		PW-103A-05		PW-103B-05	
Method	**Parameter**	**Unit**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**
EPA 8260	1,1,1-Trichloroethane	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	1,1-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	cis-1,2-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Tetrachloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Toluene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	trans-1,2-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Trichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Vinyl chloride	ug/L	1	U	1	U	1	U	1	U	1	U	1	U

Notes:
ug/L = microgram per liter
U = not detected at the reporting limit
UJ = not detected at the reporting limit, estimate

Prepared By: WCG 2/28/14
Checked By: WDC 2/28/14

TABLE C.3
Data Validation Report: Final Results Summary (January 2014)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

		Location:	MGPW119		MGPW119		MGPW121		MGPW121		MGPW121		MGPW133	
		Date:	01/15/14		01/15/14		01/16/14		01/16/14		01/16/14		01/16/14	
		Field Sample ID:	PW-119A-05		PW-119B-05		FD-04-05		PW-121B-05		PW-121A-05		PW-133A-05	
Method	**Parameter**	**Unit**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**
EPA 8260	1,1,1-Trichloroethane	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	1,1-Dichloroethene	ug/L	1	U	1	U	1	UJ	1	U	1	UJ	1	U
EPA 8260	cis-1,2-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Tetrachloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Toluene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	trans-1,2-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Trichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Vinyl chloride	ug/L	1	U	1	U	1	U	1	U	1	U	1	U

Notes:
ug/L = microgram per liter
U = not detected at the reporting limit
UJ = not detected at the reporting limit, estimate

Prepared By: WCG 2/28/14
Checked By: WDC 2/28/14

TABLE C.3
Data Validation Report: Final Results Summary (January 2014)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

		Location:	MGPW133		MGPW136		MGPW136		MGPW142		MGPW142		MGPW143	
		Date:	01/16/14		01/15/14		01/15/14		01/13/14		01/13/14		01/16/14	
		Field Sample ID:	PW-133B-05		PW-136A-05		PW-136B-05		PW-142B-05		PW-142A-05		PW-143B-05	
Method	**Parameter**	**Unit**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**
EPA 8260	1,1,1-Trichloroethane	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	1,1-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	cis-1,2-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Tetrachloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Toluene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	trans-1,2-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Trichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Vinyl chloride	ug/L	1	U	1	U	1	U	1	U	1	U	1	U

Notes:
ug/L = microgram per liter
U = not detected at the reporting limit
UJ = not detected at the reporting limit, estimate

Prepared By: WCG 2/28/14
Checked By: WDC 2/28/14

TABLE C.3
Data Validation Report: Final Results Summary (January 2014)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

		Location:	MGPW143		MGPW146		MGPW146		MGPW149		MGPW149		MGPW151	
		Date:	01/16/14		01/16/14		01/16/14		01/14/14		01/14/14		01/15/14	
		Field Sample ID:	PW-143A-05		PW-146A-05		PW-146B-05		PW-149A-05		PW-149B-05		PW-151A-05	
Method	**Parameter**	**Unit**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**
EPA 8260	1,1,1-Trichloroethane	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	1,1-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	cis-1,2-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Tetrachloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Toluene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	trans-1,2-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Trichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Vinyl chloride	ug/L	1	U	1	U	1	U	1	U	1	U	1	U

Notes:
ug/L = microgram per liter
U = not detected at the reporting limit
UJ = not detected at the reporting limit, estimate

Prepared By: WCG 2/28/14
Checked By: WDC 2/28/14

TABLE C.3
Data Validation Report: Final Results Summary (January 2014)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

		Location:	MGPW151		MGPW156		MGPW156		MGPW157		MGPW157		QC	
		Date:	01/15/14		01/15/14		01/15/14		01/14/14		01/14/14		01/13/14	
		Field Sample ID:	PW-151B-05		PW-156B-05		PW-156A-05		PW-157A-05		PW-157B-05		TB-01-05	
Method	**Parameter**	**Unit**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**
EPA 8260	1,1,1-Trichloroethane	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	1,1-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	cis-1,2-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Tetrachloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Toluene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	trans-1,2-Dichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Trichloroethene	ug/L	1	U	1	U	1	U	1	U	1	U	1	U
EPA 8260	Vinyl chloride	ug/L	1	U	1	U	1	U	1	U	1	U	1	U

Notes:
ug/L = microgram per liter
U = not detected at the reporting limit
UJ = not detected at the reporting limit, estimate

Prepared By: WCG 2/28/14
Checked By: WDC 2/28/14

TABLE C.3
Data Validation Report: Final Results Summary (January 2014)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

		Location:	QC		QC		QC	
		Date:	01/14/14		01/15/14		01/16/14	
		Field Sample ID:	TB-02-05		TB-03-05		TB-04-05	
Method	**Parameter**	**Unit**	**Result**	**Qual**	**Result**	**Qual**	**Result**	**Qual**
EPA 8260	1,1,1-Trichloroethane	ug/L	1	U	1	U	1	U
EPA 8260	1,1-Dichloroethene	ug/L	1	U	1	U	1	U
EPA 8260	cis-1,2-Dichloroethene	ug/L	1	U	1	U	1	U
EPA 8260	Tetrachloroethene	ug/L	1	U	1	U	1	U
EPA 8260	Toluene	ug/L	1	U	1	U	1	U
EPA 8260	trans-1,2-Dichloroethene	ug/L	1	U	1	U	1	U
EPA 8260	Trichloroethene	ug/L	1	U	1	U	1	U
EPA 8260	Vinyl chloride	ug/L	1	U	1	U	1	U

Notes:
ug/L = microgram per liter
U = not detected at the reporting limit
UJ = not detected at the reporting limit, estimate

Prepared By: WCG 2/28/14
Checked By: WDC 2/28/14

TABLE C.4
Data Validation Report: Summary of Data Qualification Actions
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

Field Sample ID	Lab Sample ID	SDG	Method	Parameter	Result	Lab Qual	Final Qual	Reason Code
PW-046-05	92186670009	92186670	EPA 8260	Toluene	1	U	UJ	SS-L
PW-046-05	92186670009	92186670	EPA 8260	Tetrachloroethene	1	U	UJ	SS-L
PW-121A-05	92186932001	92186932	EPA 8260	1,1-Dichloroethene	1	U	UJ	MS-L
PW-085A-05	92186932007	92186932	EPA 8260	1,1-Dichloroethene	1	U	UJ	MS-L
FD-04-05	92186932009	92186932	EPA 8260	1,1-Dichloroethene	1	U	UJ	MS-L
FD-05-05	92186932010	92186932	EPA 8260	1,1-Dichloroethene	1	U	UJ	MS-L

Notes:
Validation Qualifiers:
U = result is non-detected or qualified as non-detect due to blank contamination
J = estimated value
Validation Qualifier Reason Codes:
SS-L = Surrogate recovery below limits
MS-L = Matrix spike and/or matrix spike duplicate recovery below limit

Prepared By: WCG 2/28/14
Checked By: WDC 2/28/14