WATER SUPPLY MONITORING REPORT: SECOND QUARTER 2013

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

May 30, 2013

amec

May 30, 2013

Ms. Samantha Urquhart-Foster
Superfund Remedial and Site Evaluation Branch
U.S. Environmental Protection Agency
61 Forsyth Street, S.W.
Atlanta, Georgia 30303-8960
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Subject: **Water Supply Monitoring Report: Second Quarter 2013**
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: Second Quarter 2013 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 ENGINEER MATTHEW E. WALLACE 5/30/13

SEK/MEW:sek

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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
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 second quarter 2013 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 one water supply well/spring sampling 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 21 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 due to a property owner's request to be sampled at a later date, 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: Second Quarter 2013 (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 one water supply 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 April 1, 2013, 100 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 April 1, 2013, an additional four locations had been added to the monitoring program.

2.2 SAMPLING ACTIVITIES

Sampling activities were conducted from April 8 through 15, 2013. A USEPA contractor representative accompanied AMEC during the sampling activities conducted on April 8 through 11, 2013. There were 24 locations planned for the sampling event (one sampling location was postponed from the first quarter 2013 sampling event to this sampling event). However, samples were not obtained from the following three locations: 35 Chapel Hill Church Road, 25 Beckingham Lane, and 623 School Road. A sample could not be collected at 35 Chapel Hill Church Road due to recent plumbing modifications at the wellhead, including removal of the wellhead spigot that was previously used by USEPA contractors for collection of water supply samples. A sample could not be collected at 25 Beckingham Lane due to an inoperable well pump. The property owner at 623 School Road requested that we sample their well during the next quarterly monitoring event. These 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 Record Field Data Record (FDR). Copies of the equipment calibration FDRs, sampling FDRs, and the logbook for the sampling activities are included in Appendix A. Photographs of the sampling activities are included in Appendix B. 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 data validation and data usability. The laboratory analytical reports are included as Appendix C.

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 D. Percent differences between the initial calibration average relative response factors (RRFs) and continuing calibration RRFs for trans-1,2-dichloroethene (21) and 1,1,1-trichloroethane (25) were above the USEPA Region 4 control limit of 20. These analytes were not detected in associated samples, and reporting limits for trans-1,2-dichloroethene and 1,1,1-trichloroethane were qualified as estimated.

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 three of the chain-of-custody records; however, 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 gap:

- A water supply sample was not collected from 35 Chapel Hill Church Road.

- A water supply sample was not collected from 25 Beckingham Lane.
- A water supply sample was not collected from 623 School Road.

One data quality issue was identified during the data validation process, and the reporting limits for trans-1,2-dichloroethene and 1,1,1-trichloroethane were qualified as estimated in five samples. However, the quantitative uncertainty of the detection limit 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 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 July 2013. In addition to the scheduled sampling locations, samples will be collected from the following locations, which were not accessible during this monitoring event: 35 Chapel Hill Church Road, 25 Beckingham Lane, and 623 School Road.

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
24 Moriah Lane	MGPW015	PW-015A-02	4/8/2013	spigot on wellhead	TB-01-02
24 Moriah Lane	MGPW015	PW-015B-02	4/8/2013	spigot on house	TB-01-02
615 School Road	MGPW141	PW-141A-02	4/8/2013	spigot on wellhead	TB-01-02
615 School Road	MGPW141	PW-141B-02	4/8/2013	sample port on IRM system	TB-01-02
16 Gilmore Drive	MGPW095	PW-095A-02	4/8/2013	spigot on wellhead	TB-01-02 FD-01-02
16 Gilmore Drive	MGPW095	PW-095B-02	4/8/2013	spigot on house	TB-01-02
24 Pinners Cove Road	MGPW017	PW-017A-02	4/9/2013	spigot on pressure tank	TB-02-02
24 Pinners Cove Road	MGPW017	PW-017B-02	4/9/2013	spigot on house	TB-02-02
2 Brae Burn Way	MGPW038	PW-038A-02	4/9/2013	spigot on wellhead	TB-02-02
2 Brae Burn Way	MGPW038	PW-038B-02	4/9/2013	spigot on house	TB-02-02
10 Brae Burn Way	MGPW036	PW-036A-02	4/9/2013	spigot on wellhead	TB-02-02
10 Brae Burn Way	MGPW036	PW-036B-02	4/9/2013	spigot on house	TB-02-02
8 Bethel Drive	MGPW088	PW-088A-02	4/9/2013	sample port on IRM system	TB-02-02 FD-02-02
8 Bethel Drive	MGPW088	PW-088B-02	4/9/2013	spigot on house	TB-02-02
644 School Road	MGPW114	PW-114A-02	4/9/2013	spigot adjacent to wellhead	TB-02-02
644 School Road	MGPW114	PW-114B-02	4/9/2013	sample port on IRM system	TB-02-02
16 Bethel Drive	MGPW021	PW-021-02	4/9/2013	spigot adjacent to wellhead	TB-02-02
20 Moriah Lane	MGPW073	PW-073A-02	4/9/2013	spigot on wellhead	TB-02-02
20 Moriah Lane	MGPW073	PW-073B-02	4/9/2013	spigot on house	TB-02-02
25 Moriah Lane	MGPW084	PW-084A-02	4/9/2013	sample port on IRM system	TB-02-02
25 Moriah Lane	MGPW084	PW-084B-02	4/9/2013	spigot on house	TB-02-02
149 Pinners Cove Road	MGPW123	PW-123A-02	4/10/2013	spigot on wellhead	TB-03-02
149 Pinners Cove Road	MGPW123	PW-123B-02	4/10/2013	sample port on IRM system	TB-03-02
3182 Sweeten Creek Road	MGPW065	PW-065A-02	4/10/2013	sample port on IRM system	TB-03-02
3182 Sweeten Creek Road	MGPW065	PW-065B-02	4/10/2013	sample port on IRM system	TB-03-02
16 Forest Run Drive	MGPW083	PW-083A-02	4/10/2013	spigot on wellhead	TB-03-02 FD-03-02
16 Forest Run Drive	MGPW083	PW-083B-02	4/10/2013	spigot on house	TB-03-02
14 Forest Run Drive	MGPW025	PW-025A-02	4/10/2013	spigot on wellhead	TB-03-02
14 Forest Run Drive	MGPW025	PW-025B-02	4/10/2013	spigot on house	TB-03-02
19 Forest Run Drive	MGPW099	PW-099A-02	4/10/2013	spigot on wellhead	TB-03-02
19 Forest Run Drive	MGPW099	PW-099B-02	4/10/2013	spigot on house	TB-03-02
28 North Oak Terrace	MGPW107	PW-107A-02	4/10/2013	spigot on wellhead	TB-03-02
28 North Oak Terrace	MGPW107	PW-107B-02	4/10/2013	spigot on house	TB-03-02
6 Walsh Trace Drive	MGPW050	PW-050A-02	4/11/2013	spigot on wellhead	TB-04-02
6 Walsh Trace Drive	MGPW050	PW-050B-02	4/11/2013	spigot on house	TB-04-02
108 Russet Lane	MGPW049	PW-049A-02	4/11/2013	spigot on wellhead	TB-04-02
108 Russet Lane	MGPW049	PW-049B-02	4/11/2013	sample port on IRM system	TB-04-02
15 Moriah Lane	MGPW001	PW-001A-02	4/15/2013	sample port on IRM system	TB-05-02 FD-04-02
15 Moriah Lane	MGPW001	PW-001B-02	4/15/2013	spigot on house	TB-05-02
559 School Road	MGPW098	PW-098A-02	4/15/2013	sample port on IRM system	TB-05-02
559 School Road	MGPW098	PW-098B-02	4/15/2013	sample port on IRM system	TB-05-02

Notes:

Prepared By: SEK 4/15/13

Checked By: LRG 4/16/13

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

Sampling Quarter Key

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

Locations included in quarterly monitoring updated 1/28/13.

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

DRAWN: SEK	DATE: MAY 2013
DFT CHECK: MEW	SCALE: NOT TO SCALE
ENG CHECK: --	PROJ: 6252-12-0006
APPROVAL: MEW	FIGURE: 1

REFERENCE: Parcels from Buncombe County GIS.

LEGEND

Well Sampled in April 2013

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DRINKING WATER WELLS SAMPLED IN APRIL 2013
CTS OF ASHEVILLE, INC. SUPERFUND SITE
ASHEVILLE, NORTH CAROLINA

DRAWN: SEK	DATE: MAY 2013
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 GTS of Asheville Date 4/8/13

Project / Client Water Supply Monitoring - Q2

6252120006 S. Kelly/AMEC page 1 of 2

12:30 S. Kelly/AMEC at Earthfare
- Ryan Stubbies/OTHE (EPA contractor) arrives
- weather today expected to be sunny, upper 60's F
- water quality and turbidity meters were calibrated before leaving (at office; see calibration FDR)

1250 - to 24 Moriah Lane
- purchase ice on the way for sample preservation

1300 - arrive at 24 Moriah Lane
- purge and collect sample PW-015A-02 (13:20) and PW-015B-02 (13:25)

1340 - leave 24 Moriah Lane; to 615 School Road
- purge and collect samples PW-141A-02 (14:20) and PW-141B-02 (14:25)

1435 - leave 615 School Road; to 16 Gilmore Drive
- purge and collect sample PW-095A-02 (15:05),

Location CTS of Asheville Date 4/8/13

Project / Client Water Supply Monitoring - Q2

6252120006 S.Kelly/AMEC Page 2 of 2

PW-095B-02 (15:10) and collect duplicate FD-01-02 at PW-095A-02

15:25 leave 16 Gilmore

- S.Kelly drives to lab (Pace)
- en route, stop and complete chain-of-custody and pack cooler

16:05 - arrive at lab and sign over samples/cooler to lab custodian

- lab personnel will courier cooler/samples to Charlotte Pace lab for analysis

16:15 - S.Kelly leaves lab

- finished for the day

Amanda S 4/8/13

Location CTS of Asheville Date 4/9/13

Project / Client Water Supply Monitoring - Q2

6252120006 S.Kelly/AMEC Page 1 of 4

830 - S.Kelly/AMEC arrives at Earthfare

- calibrate turbidity meter (see calibration FDR)
- multi-meter calibrated at home before leaving (see calibration FDR) this morning
- weather today is expected to be sunny, low to mid 70s F

845 - J.Arrift/AMEC arrives to assist with sampling activities

850 - leave for 24 Pinners Cove

- purchase ice en route for sample preservation

900 - arrive at 24 Pinners Cove Rd

- R.Stubbs/OTIE arrives
- purge and collect samples PW-017A-02 (9:20) and PW-017B-02 (9:25)

930 - leave 24 Pinners Cove Rd.

- to 2 Brae Burn Way
- purge and collect samples PW-038A-02 (10:00) and PW-038B-02 (10:05)

10:10 - leave 2 Brae Burn way, to 10 Brae Burnway

Location CTS of Asheville Date 4/9/13

Project / Client Water Supply Monitoring - Q2

6252120006 S.Kelly/AMEC Page 2 of 4

- collect samples PW-036A-02 (10:40) and PW-036A-02 (10:30)

10:45 leave 10 Brae Burn Way
- to 8 Bethel Drive
- at 8 Bethel Drive purge and collect samples PW-088A-02 (11:10) and PW-088B-02 (11:15), and ~~PA~~ SD 4/9/13 FD-02-02 (at PW-088A-02)

1125: leave 8 Bethel Drive
S.Kelly, J.Avritt, R.Stubbs take lunch; will meet for next appointment at 1300

1300 - arrive at 644 School Road
- purge and collect samples PW-114A-02 (13:20) and PW-114B-02 (13:25)

1330 - leave 644 School Road
- to 623 School Road School Rd
- homeowner at 623 is quite distraught over recent passing her husband's
- she questions the purpose of us sampling her well again, etc. and I suggest we sample next

Location CTS of Asheville Date 4/9/13

Project / Client Water Supply Monitoring - Q2

6252120006 S.Kelly/AMEC Page 3 of 4

quarter (Q3 - July 2013)
- homeowner is receptive to this suggestion
- discuss with R.Stubbs/OTIE and he agrees with this approach

1335 - to 16 Bethel Drive
- purge and collect sample PW-021-02 (13:55)

1400 - leave 16 Bethel Drive
- to 20 Moriah Lane
- purge and collect samples PW-073A-02 (14:20) and PW-073B-02 (14:25)
- leave 20 Moriah Lane
- to store for break

1440 - to 25 Moriah Lane
- purge and collect samples PW-084A-02 (15:05) and PW-084B-02 (15:10)

1515 - leave 25 Moriah Lane
- to Earthfare to fill out chain-of-custody and pack cooler

1545 - J.Avritt leaves, finished for day
- S.Kelly to lab (Pace)

Location: CTS of Asheville Date 4/9/13

Project / Client Water Supply monitoring - Q2

6252120006 S.Kelly/AMEC Page 4 of 4

16:20 - at lab; sign over samples to lab custodian
- lab will courier samples to Pace lab in charlotte for analysis

16:30 - leave lab
- talk to Samantha Urquhart-Foster (EPA PM) regarding postponing sampling at 623 School Road due to distraught resident; S. Foster agrees with this approach
- talk to M. Wallace (AMEC PM) regarding data gap by not sampling 623 School Road and that EPA is okay with ~~this~~ 4/9/13 postponing sample collection until next quarter (July '13)
- finished for the day

MWallace 4/9/13

Location CTS of Asheville Date 4/10/13

Project / Client Water Supply monitoring - Q2

6252120006 S.Kelly/AMEC Page 1 of 3

830 - arrives at 149 Pinners Cove Rd. S.Kelly/AMEC
- Ryan Stubbs/OTIE (EPA contractor) is at residence
- weather today is expected to be sunny and mid 70s F
- S.Kelly calibrated water quality and turbidity meters prior to leaving home for site (see calibration FDR)
- at 149 Pinners Cove Road collect samples PW-123A-02 (9:00) and PW-123B-02 (9:05)

9:10 - leave 149 Pinners Cove Road
- to Earnhardt to pick up Jason Avritt/AMEC
920 - to ~~3126~~ 3182 Sweeten Creek Road 4/10/13
925 - arrive at 3182 Sweeten Creek Rd.
- purge and collect samples PW-065A-02 (10:00) and PW-065B-02 (10:05) in office building system

10:10 to 16 Forest Run Drive
- purge and collect samples

Location CTS of Asheville Date 4/10/13
Project / Client Water Supply Monitoring - Q2
6252120006 Sikelly/AMEC Page 2 of 3

PW-083A-02 (10:45), PW-083B-02 (10:50) and FD-03-02 at PW-083A-02
1100: leave 16 Forest Run Drive
- take lunch
11:55 - to 14 Forest Run Drive
- purge and collect samples PW-025A-02 (12:25) and PW-025B-02 (12:30)
12:35 - to 19 Forest Run Drive
- purge and collect samples PW-099A-02 (12:50) and PW-099B-02 (12:55)
1305 - to 28 North Oak Terrace
~~1350~~ 4/10/13 - collect samples PW-107A-02 (13:35) and PW-107B-02 (13:40)
1350 - leave 28 North Oak Terrace
- to Earnheare
- J. Avritt leaves
- Sikelly completes chain-of-custody and packs cooler
1415 - leave for lab (Pace)
1440 - arrive at lab
- sign over samples to

Location CTS of Asheville Date 4/10/13
Project / Client Water Supply Monitoring - Q2
6252120006 Sikelly/AMEC Page 3 of 3

lab custodian
- lab will carrier samples to Pace Charlotte lab for analysis
- 1450 - leave lab
- talk to M. Wallace AMEC PM regarding collecting sample at 559 School Road on Monday (4/15/13)
- resident at this location has had the IPM filtration system in bypass due to plumbing issues not related to system
- the system will not be re-started (taken out of bypass) until late afternoon on 4/11/13
- sampling will be conducted at another location on Monday, so adding another sample Monday will be okay
1500 - done for the day

pre-scheduled due to resident out of town this week

MMWallace 4/10/13

Location CTS of Asheville Date 4/11/13

Project / Client Water Supply monitoring - Q2

62521200006 S.Kelly/AMEC page 1 of 2

815 S.Kelly/AMEC arrives at 6 Walsh Trace; R. Stubbs (OTIE (EPA contractor) is at residence

- weather today is expected to be sunny and mid-70sF until late afternoon
- S.Kelly calibrated turbidity and water quality meters before leaving home this morning

820 - purge and collect samples PW-050A-02 (8:35) and PW-050B-02 (8:40)

845 - to 108 Russet Lane

- purge and collect samples PW-049A-02 (9:10) and PW-049B-02 (9:15)

9:20 - R. Stubbs leaves (driving back to Atlanta)

- S.Kelly leaves; to office

9:45 - at office; complete COC & pack cooler

1215 - to lab (Pace)

1230 - at lab; sign over samples to custodian

Location CTS of Asheville Date 4/11/13

Project / Client Water Supply Monitoring - Q2

62521200006 S.Kelly/AMEC Page 2 of 2

- lab will courier samples to Pace Charlotte lab for analysis

1235 - leave lab for office

1300 - at office

Amended 4/11/13

Location CTS of Asheville Date 4/15/13
Project / Client Water Supply Monitoring - Q2
6252120006 S. Kelly / AMEC Page 1 of 2

1250 - arrive at Earthfare to meet S. Kelly / AMEC & J. Avritt / AMEC
- weather today expected to be sunny upper 60s F
- S. Kelly calibrated water quality and turbidity meters prior to leaving office (see calibration FDR)
1255 - to 15 Moriah Lane, purchase ice en route
1300 - at 15 Moriah Lane
- purge and collect samples PW-001A-02 (13:25) and PW-001B-02 (13:30) and FD-04-02 (at PW-001A-02)
1340 - to 559 School Road
- purge and collect samples PW-098A-02 (14:10) and PW-098B-02 (14:15)
1425 - leave 559 School Road
1430 - at Earthfare
- J. Avritt leaves
- S. Kelly completes COC and packs cooler
1450 - S. Kelly to lab (Pace)
1515 - at lab

Location CTS of Asheville Date 4/15/13
Project / Client Water Supply Monitoring - Q2
6252120006 S. Kelly / AMEC Page 2 of 2

- sign over samples to sample custodian
- lab will courier samples to Pace Charlotte lab for analysis
- pack water quality and turbidity meters for return shipment to Pine Env.
1530 - leave lab
1545 - at FedEx, drop off shipment to Pine
1550 - leave FedEx
- to office
16:00 - at office
- finished for the day

4/15/13

FIELD INSTRUMENT CALIBRATION RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Date: 4/8/13

Project Number: 6252-12-0006.0004 (Water Supply Monitoring - Q2)

Name: S. Kelly

Water Quality Meter Calibration

		Standard Value		Meter Value		Acceptance Criteria
Manufacturer: YSI	pH:	4	SU (low)	pH: 3.94	SU	+/- 10% of standard
Model No.: 63	pH:	7	SU (med)	pH: 7.02	SU	+/- 10% of standard
Unit ID: 8938 (Pine Env.)	pH:	10	SU (high)	pH: 10.32	SU	+/- 10% of standard
	Conductivity:	1.413	mS/cm	Conductivity: 1.417	mS/cm	+/- 10% of standard
	Thermometer Temperature:	—	C°	Temperature: —	C°	+/- 2.0 C°

Turbidity Meter Calibration

	Standard Value		Meter Value		Acceptance Criteria
Manufacturer: Hach	<0.1	NTU (low)	0.14	NTU	+/- 10% of standard
Model No.: 2100P	20	NTU (med)	20.4	NTU	+/- 10% of standard
Unit ID: 13042 (Pine Env.)	100	NTU (high)	98.8	NTU	+/- 10% of standard
	800	NTU (high)	793	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	4347	4/2017
pH (med)	Pine Env.	7	SU	9736	6/2013
pH (high)	Pine Env.	10	SU	9912	9/2013
Conductivity	Pine Env.	1.413	mS/cm	2AE883	5/2013
Turbidity (low)	Hach - Formazin	<0.1	NTU	A3038	2/2014
Turbidity (med):	Hach - Formazin	20	NTU	A3058	2/2014
Turbidity (high):	Hach - Formazin	100	NTU	A3052	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: 4/9/13

Project Number: 6252-12-0006.0004 (Water Supply Monitoring - Q2)

Name: S. Kelly

Water Quality Meter Calibration

Manufacturer: YSI

Model No.: 63

Unit ID: 8938 (Pine Env.)

	Standard Value		Meter Value		Acceptance Criteria
pH:	4	SU (low)	pH: 3.99	SU	+/- 10% of standard
pH:	7	SU (med)	pH: 7.02	SU	+/- 10% of standard
pH:	10	SU (high)	pH: 10.11	SU	+/- 10% of standard
Conductivity:	1.413	mS/cm	Conductivity: 1.415	mS/cm	+/- 10% of standard
Thermometer Temperature:	—	C°	Temperature: —	C°	+/- 2.0 C°

Turbidity Meter Calibration

Manufacturer: Hach

Model No.: 2100P

Unit ID: 13042 (Pine Env.)

Standard Value		Meter Value		Acceptance Criteria
<0.1	NTU (low)	0.16	NTU	+/- 10% of standard
20	NTU (med)	20.7	NTU	+/- 10% of standard
100	NTU (high)	102	NTU	+/- 10% of standard
800	NTU (high)	798	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	4347	4/2017
pH (med)	Pine Env.	7	SU	9736	6/2013
pH (high)	Pine Env.	10	SU	9912	9/2013
Conductivity	Pine Env.	1.413	mS/cm	2AE883	5/2013
Turbidity (low)	Hach - Formazin	<0.1	NTU	A3038	2/2014
Turbidity (med):	Hach - Formazin	20	NTU	A3058	2/2014
Turbidity (high):	Hach - Formazin	100	NTU	A3052	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: 4/10/13

Project Number: 6252-12-0006.0004 (Water Supply Monitoring - Q2)

Name: Sikelly

Water Quality Meter Calibration

		Standard Value		Meter Value		Acceptance Criteria
Manufacturer: YSI	pH:	4	SU (low)	pH: 3.89	SU	+/- 10% of standard
Model No.: 63	pH:	7	SU (med)	pH: 4.92	SU	+/- 10% of standard
Unit ID: 8938 (Pine Env.)	pH:	10	SU (high)	pH: 10.02	SU	+/- 10% of standard
	Conductivity:	1.413	mS/cm	Conductivity: 1.415	mS/cm	+/- 10% of standard
	Thermometer Temperature:	—	C°	Temperature: —	C°	+/- 2.0 C°

Turbidity Meter Calibration

	Standard Value		Meter Value		Acceptance Criteria
Manufacturer: Hach	<0.1	NTU (low)	0.19	NTU	+/- 10% of standard
Model No.: 2100P	20	NTU (med)	20.1	NTU	+/- 10% of standard
Unit ID: 13042 (Pine Env.)	100	NTU (high)	98.9	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	4347	4/2017
pH (med)	Pine Env.	7	SU	2AE340	5/2014
pH (high)	Pine Env.	10	SU	9912	9/2013
Conductivity	Pine Env.	1.413	mS/cm	2AE883	5/2013
Turbidity (low)	Hach - Formazin	<0.1	NTU	A3038	2/2014
Turbidity (med):	Hach - Formazin	20	NTU	A3058	2/2014
Turbidity (high):	Hach - Formazin	100	NTU	A3052	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: 9/11/13

Project Number: 6252-12-0006.0004 (Water Supply Monitoring - Q2)

Name: S. Kelly

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: 7.09	SU	+/- 10% of standard
Unit ID: 8938 (Pine Env.)	pH:	10	SU (high)	pH: 10.05	SU	+/- 10% of standard
	Conductivity:	1.413	mS/cm	Conductivity: 1.414	mS/cm	+/- 10% of standard
	Thermometer Temperature:	—	C°	Temperature: —	C°	+/- 2.0 C°

Turbidity Meter Calibration

	Standard Value		Meter Value		Acceptance Criteria
Manufacturer: Hach	<0.1	NTU (low)	0.14	NTU	+/- 10% of standard
Model No.: 2100P	20	NTU (med)	20.4	NTU	+/- 10% of standard
Unit ID: 13042 (Pine Env.)	100	NTU (high)	103	NTU	+/- 10% of standard
	800	NTU (high)	799	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	4347	4/2017
pH (med)	Pine Env.	7	SU	2AE340	5/2014
pH (high)	Pine Env.	10	SU	2AE261	5/2014
Conductivity	Pine Env.	1.413	mS/cm	2AE883	5/2013
Turbidity (low)	Hach - Formazin	<0.1	NTU	A3038	2/2014
Turbidity (med):	Hach - Formazin	20	NTU	A3058	2/2014
Turbidity (high):	Hach - Formazin	100	NTU	A3052	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: 4/15/13

Project Number: 6252-12-0006.0004 (Water Supply Monitoring - Q2)

Name: S. Kelly

Water Quality Meter Calibration

		Standard Value		Meter Value		Acceptance Criteria
Manufacturer:	YSI	pH: 4	SU (low)	pH: 3.99	SU	+/- 10% of standard
Model No.:	63	pH: 7	SU (med)	pH: 7.13	SU	+/- 10% of standard
Unit ID:	8938 (Pine Env.)	pH: 10	SU (high)	pH: 9.98	SU	+/- 10% of standard
		Conductivity: 1.413	mS/cm	Conductivity: 1.414	mS/cm	+/- 10% of standard
		Thermometer Temperature: –	C°	Temperature: –	C°	+/- 2.0 C°

Turbidity Meter Calibration

		Standard Value		Meter Value		Acceptance Criteria
Manufacturer:	Hach	<0.1	NTU (low)	0.16	NTU	+/- 10% of standard
Model No.:	2100P	20	NTU (med)	20.2	NTU	+/- 10% of standard
Unit ID:	13042 (Pine Env.)	100	NTU (high)	99.2	NTU	+/- 10% of standard
		800	NTU (high)	792	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	4347	4/2017
pH (med)	Pine Env.	7	SU	2AE340	5/2014
pH (high)	Pine Env.	10	SU	2AE261	5/2014
Conductivity	Pine Env.	1.413	mS/cm	2AE883	5/2013
Turbidity (low)	Hach - Formazin	<0.1	NTU	A3038	2/2014
Turbidity (med):	Hach - Formazin	20	NTU	A3058	2/2014
Turbidity (high):	Hach - Formazin	100	NTU	A3052	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.

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S. Kelly

Well Address: 24 Moriah Lane **EPA Station ID:** MGPW015

Pre-filter Sample Location: wellhead

Pre-filter Sample: PW-015A-02 **Sample Date/Time:** 4/8/13 13:20

Post-filter Sample Location: spigot on house

Post-filter Sample: PW-015B-02 **Sample Date/Time:** 4/8/13 13:25

Purge Start Time: 13:05 **Purge Stop Time:** 13:23

Flow Rate: 1 gpm (approximate) **Volume Purged:** 90 gallons (approximate)

QA/QC Sample(s): TB-01-02

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.51	17.6	233.9	0.68	
13:11	6.55	15.6	234.0	0.84	
13:16	6.56	14.8	246.2	0.64	
13:21	6.56	15.2	257.4	0.87	

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:

purge from spigot on house.

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S. Kelly

Well Address: 615 School Road **EPA Station ID:** MGPW141

Pre-filter Sample Location: wellhead

Pre-filter Sample: PW-141A-02 **Sample Date/Time:** 4/8/13 14:20

Post-filter Sample Location: post system sample port

Post-filter Sample: PW-141B-02 **Sample Date/Time:** 4/8/13 14:25

Purge Start Time: 14:02 **Purge Stop Time:** 14:20

Flow Rate: 3.3 gpm (approximate) **Volume Purged:** 60 gallons (approximate)

QA/QC Sample(s): TB-01-02

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	7.13	15.4	329.6	0.68	
14:08	7.14	15.3	330.5	0.78	
14:13	7.17	14.6	326.0	0.74	
14:18	7.17	14.0	327.9	0.71	

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:

- purge from post-system sample port

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S. Kelly

Well Address: 16 Gilmore Drive **EPA Station ID:** MGPW095

Pre-filter Sample Location: wellhead

Pre-filter Sample: PW-095A-02 **Sample Date/Time:** 4/8/13 15:05

Post-filter Sample Location: spigot on house

Post-filter Sample: PW-095B-02 **Sample Date/Time:** 4/8/13 15:10

Purge Start Time: 14:48 **Purge Stop Time:** 15:04

Flow Rate: 5 gpm (approximate) **Volume Purged:** 80 gallons (approximate)

QA/QC Sample(s): TB-01-02; FD-01-02 (PW-095A-02)

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	7.33	13.7	176.2	0.71	
14:53	7.51	12.9	178.5	4.31	
14:58	7.57	12.6	178.4	4.20	
15:03	7.55	13.1	179.1	4.16	

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:

- purge from spigot on house

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S. Kelly & J. Avritt

Well Address: 24 Pinners Cove Road **EPA Station ID:** MGPW017

Pre-filter Sample Location: pre-IRM system, spigot at pressure tank

Pre-filter Sample: PW-017A-02 **Sample Date/Time:** 4/9/13 9:20

Post-filter Sample Location: exterior spigot on house

Post-filter Sample: PW-017B-02 **Sample Date/Time:** 4/9/13 9:25

Purge Start Time: 9:04 **Purge Stop Time:** 9:21

Flow Rate: 4 gpm (approximate) **Volume Purged:** 4/9/13 ~~4~~ 68 gallons (approximate)

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

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.03	18.2	61.9	0.51	
9:09	5.92	15.9	53.0	0.51	
9:14	5.87	15.7	51.4	0.52	
9:19	5.91	15.0	50.9	0.60	

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:

- purge from spigot on house

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S. Kelly & J. Avrit

Well Address: 2 Brae Burn Way **EPA Station ID:** MGPW038

Pre-filter Sample Location: wellhead

Pre-filter Sample: PW-038A-02 **Sample Date/Time:** 4/9/13 10:00

Post-filter Sample Location: spigot on house

Post-filter Sample: PW-038B-02 **Sample Date/Time:** 4/9/13 10:05

Purge Start Time: 9:40 **Purge Stop Time:** 9:55

Flow Rate: 4 gpm (approximate) **Volume Purged:** 60 gallons (approximate)

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

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.79	16.5	179.9	0.70	
9:45	6.85	13.7	175.3	0.47	
9:50	6.86	12.5	180.0	0.64	
9:55	6.75	12.9	182.2	0.61	

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:

- purge from spigot on house (leave spigot on while sampling at wellhead)

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S.Kelly & J.Avritt

Well Address: 10 BraeBurn Way **EPA Station ID:** MGPW036

Pre-filter Sample Location: wellhead

Pre-filter Sample: PW-036A-02 **Sample Date/Time:** 4/9/13 10:40

Post-filter Sample Location: spigot on house

Post-filter Sample: PW-036B-02 **Sample Date/Time:** 4/9/13 10:30

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

Flow Rate: 6 gpm (approximate) **Volume Purged:** 90 gallons (approximate)

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

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.60	14.8	153.7	0.62	
10:20	6.61	12.8	147.5	0.38	
10:25	6.65	10.7	147.1	0.37	
10:30	6.50	11.8	147.2	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:

- purge from spigot on house (leave spigot on while sampling from wellhead)

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S. Kelly & J. Avritt

Well Address: 8 Bethel Drive **EPA Station ID:** MGPW088

Pre-filter Sample Location: pre-IRM system sample port

Pre-filter Sample: PW-088A-02 **Sample Date/Time:** 4/9/13 11:10

Post-filter Sample Location: spigot on house

Post-filter Sample: PW-088B-02 **Sample Date/Time:** 4/9/13 11:15

Purge Start Time: 10:55 **Purge Stop Time:** 11:10

Flow Rate: 4 gpm (approximate) **Volume Purged:** 60 gallons (approximate)

QA/QC Sample(s): TB-02-02; FD-02-02 (at PW-088A-02)

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.82	17.2	157.3	0.92	
11:00	6.69	15.7	155.6	0.79	
11:05	6.72	14.5	156.6	0.45	
11:10	6.67	15.0	158.5	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:

purge from spigot on house

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S. Kelly & J. Avritt

Well Address: 644 School Road **EPA Station ID:** MGPW114

Pre-filter Sample Location: spigot adjacent to wellhead

Pre-filter Sample: PW-114A-02 **Sample Date/Time:** 4/9/13 13:20

Post-filter Sample Location: post-system sample port

Post-filter Sample: PW-114B-02 **Sample Date/Time:** 4/9/13 13:25

Purge Start Time: 13:04 **Purge Stop Time:** 13:20

Flow Rate: 5 gpm (approximate) **Volume Purged:** 80 gallons (approximate)

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

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.59	16.7	130.4	1.02	
13:09	6.58	15.6	157.5	0.63	
13:14	6.57	15.1	123.5	0.75	
13:19	6.56	14.6	99.3	1.01	

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:

- purge from post-system sample port

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S. Kelly & J. Avritt

Well Address: 16 Bethel Drive **EPA Station ID:** MGDW-021

~~Pre-filter~~ **Sample Location:** spigot adjacent to wellhead

~~Pre-filter~~ **Sample:** PW-021-02 **Sample Date/Time:** 4/9/13 13:55

Post-filter Sample Location: N/A

Post-filter Sample: N/A **Sample Date/Time:** N/A

Purge Start Time: 13:40 **Purge Stop Time:** 13:55

Flow Rate: 2.5 gpm (approximate) **Volume Purged:** 38 gallons (approximate)

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

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.23	15.8	126.2	29.8	
13:45	6.13	14.9	117.0	34.4	
13:50	6.14	15.2	125.7	34.4	
13:55	6.14	15.2	128.4	4.70	

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:

- purge from spigot adjacent to wellhead
- no IRM system

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S. Kelly & J. Avritt

Well Address: 20 Moriah Lane **EPA Station ID:** MGPW073

Pre-filter Sample Location: wellhead

Pre-filter Sample: PW-073A-02 **Sample Date/Time:** 4/9/13 14:20

Post-filter Sample Location: Spigot on house

Post-filter Sample: PW-073B-02 **Sample Date/Time:** 4/9/13 14:25

Purge Start Time: 14:05 **Purge Stop Time:** 14:20

Flow Rate: 6 gpm (approximate) **Volume Purged:** 90 gallons (approximate)

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

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.83	14.9	252.3	1.07	
14:10	6.64	14.8	230.9	1.13	
14:15	6.64	14.2	179.6	0.77	
14:20	6.59	14.3	180.1	0.98	

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:

- purge from spigot on house

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S.Kelly & J.Avritt

Well Address: 25 Moriah Lane **EPA Station ID:** MGPW084

Pre-filter Sample Location: pre-IRM system sample port

Pre-filter Sample: PW-084A-02 **Sample Date/Time:** 4/9/13 15:05

Post-filter Sample Location: spigot on house

Post-filter Sample: PW-084B-02 **Sample Date/Time:** 4/9/13 15:10

Purge Start Time: 14:47 **Purge Stop Time:** 15:04

Flow Rate: 6 gpm (approximate) **Volume Purged:** 100 gallons (approximate)

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

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.49	18.3	237.5	0.61	
14:52	6.49	17.7	233.7	0.58	
14:57	6.55	15.5	228.9	0.90	
15:02	6.54	15.2	228.7	0.61	

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:

- purge at spigot on house
- spigot at wellhead not working

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S. Kelly

Well Address: 149 Pinners Cove Rd **EPA Station ID:** MGPW123

Pre-filter Sample Location: wellhead

Pre-filter Sample: PW-123A-02 **Sample Date/Time:** 4/10/13 9:00

Post-filter Sample Location: post-IRM system sample port

Post-filter Sample: PW-123B-02 **Sample Date/Time:** 4/10/13 9:05

Purge Start Time: 8:41 **Purge Stop Time:** 9:03

Flow Rate: 7.5 gpm (approximate) **Volume Purged:** 165 gallons (approximate)

QA/QC Sample(s): TB-03-02

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.73	15.1	123.5	0.63	
8:46	6.54	14.1	120.8	0.69	
8:51	6.41	14.3	120.8	0.66	
8:56	6.42	14.4	120.9	~~2.23~~ 4/10/13 0.46	

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:

- purge from post-system sample port
- water purging when sampling at wellhead

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S. Kelly & J. Avritt

Well Address: 3182 Sweetenbrack Rd. **EPA Station ID:** MGPW065

Pre-filter Sample Location: pre-system sample port

Pre-filter Sample: PW-065A-02 **Sample Date/Time:** 4/10/13 10:00

Post-filter Sample Location: post-system sample port

Post-filter Sample: PW-065B-02 **Sample Date/Time:** 4/10/13 10:05

Purge Start Time: 9:41 **Purge Stop Time:** 9:56

Flow Rate: 7.5 gpm (approximate) **Volume Purged:** 113 gallons (approximate)

QA/QC Sample(s): TB-03-02

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.70	16.6	167.4	0.77	
9:46	6.75	16.4	190.7	0.57	
9:51	6.66	13.4	115.8	0.85	
9:56	6.52	13.1	108.2	0.51	

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:

- purge from post-system sample port

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S. Kelly & J. Avritt

Well Address: 116 Forest Run Drive **EPA Station ID:** MGPW083

Pre-filter Sample Location: wellhead

Pre-filter Sample: PW-083A-02 **Sample Date/Time:** 4/10/13 10:45

Post-filter Sample Location: exterior spigot on house

Post-filter Sample: PW-083B-02 **Sample Date/Time:** 4/10/13 10:50

Purge Start Time: 10:30 **Purge Stop Time:** 10:46

Flow Rate: 3.5 gpm (approximate) **Volume Purged:** 56 gallons (approximate)

QA/QC Sample(s): TB-03-02 & FD-03-02 (at PW-083A-02)

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	9.00	14.8	86.1	0.64	
10:35	9.16	14.0	74.5	1.10	
10:40	9.12	13.7	64.0	1.01	
10:45	9.09	13.5	61.4	1.06	

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:

- purge from spigot on house

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S. Kelly & J. Arrit

Well Address: 14 Forest Rim Drive **EPA Station ID:** MGPW025

Pre-filter Sample Location: wellhead

Pre-filter Sample: PW-025A-02 **Sample Date/Time:** 4/10/13 12:25

Post-filter Sample Location: spigot on house

Post-filter Sample: PW-025B-02 **Sample Date/Time:** 4/10/13 12:30

Purge Start Time: 12:06 **Purge Stop Time:** 12:23

Flow Rate: 5.5 gpm (approximate) **Volume Purged:** 94 gallons (approximate)

QA/QC Sample(s): TB-03-02

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	7.22	18.1	256.3	0.43	
12:11	7.25	16.6	252.3	0.40	
12:16	7.22	15.2	225.0	0.51	
12:21	7.23	14.9	214.6	0.53	

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:

- purge from spigot on house

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S. Kelly & J. Avritt

Well Address: 19 Forest Run Drive **EPA Station ID:** MGPW099

Pre-filter Sample Location: Wellhead

Pre-filter Sample: PW-099A-02 **Sample Date/Time:** 4/10/13 12:50

Post-filter Sample Location: spigot on house

Post-filter Sample: PW-099B-02 **Sample Date/Time:** 4/10/13 12:55

Purge Start Time: 12:35 **Purge Stop Time:** 12:54

Flow Rate: 3.5 gpm (approximate) **Volume Purged:** 67 gallons (approximate)

QA/QC Sample(s): TB-03-02

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	5.73	14.8	58.5	0.41	
12:40	5.61	14.0	56.8	0.46	
12:45	5.76	13.7	56.7	0.84	
12:50	5.64	13.7	56.5	0.50	

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:

- purge from spigot on house

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S. Kelly & J Arrit

Well Address: 28 North oak Terrace **EPA Station ID:** MGPW107

Pre-filter Sample Location: wellhead

Pre-filter Sample: PW-107A-02 **Sample Date/Time:** 4/10/13 13:35

Post-filter Sample Location: Spigot on house

Post-filter Sample: PW-107B-02 **Sample Date/Time:** 4/10/13 13:40

Purge Start Time: 13:15 **Purge Stop Time:** 13:32

Flow Rate: 2.5 gpm (approximate) **Volume Purged:** 43 gallons (approximate)

QA/QC Sample(s): TB-03-02

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.69	17.7	127.3	0.62	
13:20	6.84	17.0	121.7	0.83	
13:25	6.92	17.0	125.3	0.80	
13:30	7.01	17.6	125.0	0.81	

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:

- purge from spigot on house

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S. Kelly

Well Address: 6 Walsh Trace **EPA Station ID:** MGPW050

Pre-filter Sample Location: Wellhead

Pre-filter Sample: PW-050A-02 **Sample Date/Time:** 4/11/13 8:35

Post-filter Sample Location: Spigot on house

Post-filter Sample: PW-050B-02 **Sample Date/Time:** 4/11/13 8:40

Purge Start Time: 8:20 **Purge Stop Time:** 8:35

Flow Rate: 5 gpm (approximate) **Volume Purged:** 75 gallons (approximate)

QA/QC Sample(s): TB-04-02

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.20	19.0	120.8	0.48	
8:25	6.04	18.6	112.8	0.80	
8:30	6.04	15.6	102.4	0.69	
8:35	5.98	14.9	101.2	0.80	

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:

- purge from spigot on house

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S.Kelly

Well Address: 108 Russet Lane **EPA Station ID:** MGPW049

Pre-filter Sample Location: wellhead

Pre-filter Sample: PW-049A-02 **Sample Date/Time:** 4/11/13 9:10

Post-filter Sample Location: post-system sample port

Post-filter Sample: PW-049B-02 **Sample Date/Time:** 4/11/13 9:15

Purge Start Time: 8:55 **Purge Stop Time:** 9:10

Flow Rate: 6 gpm (approximate) **Volume Purged:** 90 gallons (approximate)

QA/QC Sample(s): TB-04-02

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	6.42	18.1	282.6	0.81	
9:00	6.44	17.8	270.9	0.63	
9:05	6.43	16.5	200.5	0.71	
9:10	6.31	15.6	161.0	0.55	

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:

- purge from post-system sample port (spigot on house is off)
  ↳ winterized

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S. Kelly & J. Avritt

Well Address: 15 Moriah Lane **EPA Station ID:** MGPW001

Pre-filter Sample Location: pre-system sample port

Pre-filter Sample: PW-001A-02 **Sample Date/Time:** 4/15/13 13:25

Post-filter Sample Location: spigot on house

Post-filter Sample: PW-001B-02 **Sample Date/Time:** 4/15/13 13:30

Purge Start Time: 13:10 **Purge Stop Time:** 13:25

Flow Rate: 5 gpm (approximate) **Volume Purged:** 75 gallons (approximate)

QA/QC Sample(s): TB-05-02 & FD-04-02 (PW-001A-02)

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	7.21	16.8	178.7	0.53	
13:15	7.17	15.5	175.6	0.62	
13:20	7.10	15.0	167.0	0.57	
13:25	6.95	14.9	165.1	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:

-purge from exterior spigot on house (between softener system and IRM-system

WATER SUPPLY WELL SAMPLING RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Project Number: 6252-12-0006.0004

Personnel: S. Kelly & J. Avritt

Well Address: 559 School Road **EPA Station ID:** MGPW098

Pre-filter Sample Location: pre-system sample port

Pre-filter Sample: PW-098A-02 **Sample Date/Time:** 4/15/13 14:10

Post-filter Sample Location: post-system sample port

Post-filter Sample: PW-098B-02 **Sample Date/Time:** 4/15/13 14:15

Purge Start Time: 13:51 **Purge Stop Time:** 14:06

Flow Rate: 2 gpm (approximate) **Volume Purged:** 30 gallons (approximate)

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

Time	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Comments
initial	5.55	18.0	148.2	1.09	
13:56	5.49	14.8	146.0	0.62	
14:01	5.41	13.9	142.9	1.12	
14:06	5.39	13.7	143.0	2.34	

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:

- purge from post-system sample port (upstream of pressure tank)

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
TB-01-02	lab prep	N/A	N/A		cooler for 4/8/13
PW-015A-02	sk	4/8/13	13:20	TB-01-02	
PW-015B-02	sk	4/8/13	13:25	TB-01-02	
PW-141A-02	sk	4/8/13	14:20	TB-01-02	
PW-141B-02	sk	4/8/13	14:25	TB-01-02	
PW-095A-02	sk	4/8/13	15:05	FD-01-02 TB-01-02	
PW-095B-02	sk	4/8/13	15:10	TB-01-02	
FD-01-02	sk	4/8/13	15:05	TB-01-02	
TB-02-02	lab prep	N/A	N/A		cooler for 4/9/13
PW-017A-02	sk	4/9/13	9:20	TB-02-02	
PW-017B-02	sk	4/9/13	9:25	TB-02-02	
PW-038A-02	sk	4/9/13	10:00	TB-02-02	
PW-038B-02	sk	4/9/13	10:05	TB-02-02	
PW-036A-02	sk	4/9/13	10:40	TB-02-02	
PW-036B-02	sk	4/9/13	10:30	TB-02-02	
PW-088A-02	sk	4/9/13	11:10	FD-02-02 TB-02-02	
PW-088B-02	sk	4/9/13	11:15	TB-02-02	
FD-02-02	sk	4/9/13	11:10	TB-02-02	
PW-114A-02	sk	4/9/13	13:20	TB-02-02	
PW-114B-02	sk	4/9/13	13:25	TB-02-02	
PW-021-02	sk	4/9/13	13:55	TB-02-02	
PW-073A-02	sk	4/9/13	14:20	TB-02-02	
PW-073B-02	sk	4/9/13	14:25	TB-02-02	
PW-084A-02	sk	4/9/13	15:05	TB-02-02	
PW-084B-02	sk	4/9/13	15:10	TB-02-02	

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
TB-03-02	lab prep	N/A	N/A		for cooler 4/10/13
PW-123A-02	sk	4/10/13	9:00	TB-03-02	
PW-123B-02	sk	4/10/13	9:05	TB-03-02	
PW-065A-02	sk	4/10/13	10:00	TB-03-02	
PW-065B-02	sk	4/10/13	10:05	TB-03-02	
PW-083A-02	sk	4/10/13	10:45	FD-03-02 TB-03-02	
PW-083B-02	sk	4/10/13	10:50	TB-03-02	
FD-03-02	sk	4/10/13	10:45	TB-03-02	
PW-025A-02	sk	4/10/13	12:25	TB-03-02	
PW-025B-02	sk	4/10/13	12:30	TB-03-02	
PW-099A-02	sk	4/10/13	12:50	TB-03-02	
PW-099B-02	sk	4/10/13	12:55	TB-03-02	
PW-107A-02	sk	4/10/13	13:35	TB-03-02	
PW-107B-02	sk	4/10/13	13:40	TB-03-02	
TB-04-02	lab prep	~~lab prep~~ N/A	~~lab prep~~ N/A	4/11/13	for cooler 4/11/13
PW-050A-02	sk	4/11/13	8:35	TB-04-02	
PW-050B-02	sk	4/11/13	8:40	TB-04-02	
PW-049A-02	sk	4/11/13	9:10	TB-04-02	
PW-049B-02	sk	4/11/13	9:15	TB-04-02	
TB-05-02	sk	N/A	N/A		for cooler 4/15/13
PW-001A-02	sk	4/15/13	13:25	FD-04-02 TB-05-02	
PW-001B-02	sk	4/15/13	13:30	TB-05-02	
FD-04-02	sk	4/15/13	13:25	TB-05-02	
PW-098A-02	sk	4/15/13	14:10	TB-05-02	
PW-098B-02	sk	4/15/13	14:15	TB-05-02	

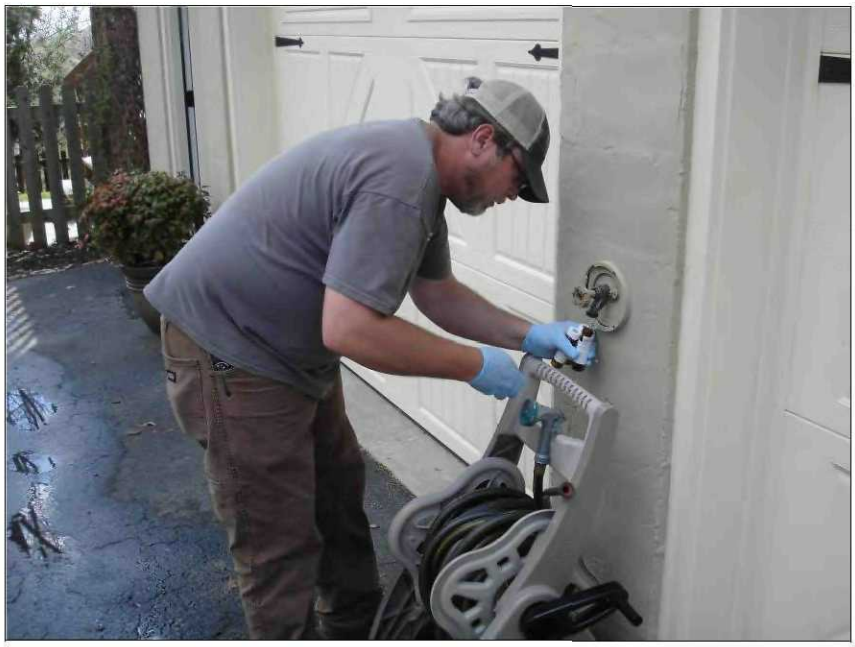
APPENDIX B

PHOTOGRAPHS OF SAMPLING ACTIVITIES

Photograph No. 1: AMEC personnel recording water quality parameters.
Date: *April 8, 2013*
Location: 16 Gilmore Drive
Photographer: Ryan Stubbs (OTIE)

Photograph No. 2: AMEC collecting pre-IRM filtration system sample from spigot at wellhead.
Date: April 9, 2013
Location: 2 Brae Burn Way
Photographer: Ryan Stubbs (OTIE)

Photograph No. 3: AMEC personnel collecting pre-IRM filtration system sample from sample port.
Date: April 9, 2013
Location: 8 Bethel Drive
Photographer: Ryan Stubbs (OTIE)



Photograph No. 4: AMEC personnel collecting post-IRM filtration system sample from spigot on house.
Date: April 9, 2013
Location: 25 Moriah Lane
Photographer: Ryan Stubbs (OTIE)

APPENDIX C

LABORATORY ANALYTICAL REPORTS

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
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April 15, 2013

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

RE: Project: CTS of Asheville 6252120006
Pace Project No.: 92153821

Dear Ms. Kelly:
Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2013. 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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CERTIFICATIONS

Project: CTS of Asheville 6252120006
Pace Project No.: 92153821

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.: 92153821

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92153821001	**TB-01-02**	Water	04/08/13 00:00	04/08/13 16:05
92153821002	**FD-01-02**	Water	04/08/13 00:00	04/08/13 16:05
92153821003	**PW-015A-02**	Water	04/08/13 13:20	04/08/13 16:05
92153821004	**PW-015B-02**	Water	04/08/13 13:25	04/08/13 16:05
92153821005	**PW-141A-02**	Water	04/08/13 14:20	04/08/13 16:05
92153821006	**PW-141B-02**	Water	04/08/13 14:25	04/08/13 16:05
92153821007	**PW-095A-02**	Water	04/08/13 15:05	04/08/13 16:05
92153821008	**PW-095B-02**	Water	04/08/13 15:10	04/08/13 16:05

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SAMPLE ANALYTE COUNT

Project: CTS of Asheville 6252120006
Pace Project No.: 92153821

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92153821001	**TB-01-02**	EPA 8260	CAH	12	PASI-C
92153821002	**FD-01-02**	EPA 8260	CAH	12	PASI-C
92153821003	**PW-015A-02**	EPA 8260	CAH	12	PASI-C
92153821004	**PW-015B-02**	EPA 8260	CAH	12	PASI-C
92153821005	**PW-141A-02**	EPA 8260	CAH	12	PASI-C
92153821006	**PW-141B-02**	EPA 8260	CAH	12	PASI-C
92153821007	**PW-095A-02**	EPA 8260	CAH	12	PASI-C
92153821008	**PW-095B-02**	EPA 8260	CAH	12	PASI-C

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PROJECT NARRATIVE

Project: CTS of Asheville 6252120006
Pace Project No.: 92153821

Method: **EPA 8260**
Description: 8260 MSV Low Level
Client: AMEC, Asheville
Date: April 15, 2013

General Information:
8 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 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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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92153821

Sample: TB-01-02 **Lab ID: 92153821001** Collected: 04/08/13 00:00 Received: 04/08/13 16:05 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		04/10/13 15:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/10/13 15:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/10/13 15:08	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/10/13 15:08	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/10/13 15:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/10/13 15:08	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/10/13 15:08	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/10/13 15:08	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-130		1		04/10/13 15:08	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		04/10/13 15:08	1868-53-7	
1,2-Dichloroethane-d4 (S)	114	%	70-130		1		04/10/13 15:08	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		04/10/13 15:08	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92153821

Sample: FD-01-02 **Lab ID: 92153821002** Collected: 04/08/13 00:00 Received: 04/08/13 16:05 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		04/10/13 15:25	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/10/13 15:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/10/13 15:25	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/10/13 15:25	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/10/13 15:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/10/13 15:25	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/10/13 15:25	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/10/13 15:25	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-130		1		04/10/13 15:25	460-00-4	
Dibromofluoromethane (S)	102	%	70-130		1		04/10/13 15:25	1868-53-7	
1,2-Dichloroethane-d4 (S)	113	%	70-130		1		04/10/13 15:25	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		04/10/13 15:25	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92153821

Sample: PW-015A-02 **Lab ID: 92153821003** Collected: 04/08/13 13:20 Received: 04/08/13 16:05 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		04/10/13 15:42	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/10/13 15:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/10/13 15:42	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/10/13 15:42	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/10/13 15:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/10/13 15:42	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/10/13 15:42	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/10/13 15:42	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	92	%	70-130		1		04/10/13 15:42	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		04/10/13 15:42	1868-53-7	
1,2-Dichloroethane-d4 (S)	113	%	70-130		1		04/10/13 15:42	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		04/10/13 15:42	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92153821

Sample: PW-015B-02 **Lab ID: 92153821004** Collected: 04/08/13 13:25 Received: 04/08/13 16:05 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		04/10/13 15:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/10/13 15:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/10/13 15:58	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/10/13 15:58	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/10/13 15:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/10/13 15:58	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/10/13 15:58	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/10/13 15:58	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-130		1		04/10/13 15:58	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		04/10/13 15:58	1868-53-7	
1,2-Dichloroethane-d4 (S)	115	%	70-130		1		04/10/13 15:58	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		04/10/13 15:58	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92153821

Sample: PW-141A-02 **Lab ID: 92153821005** Collected: 04/08/13 14:20 Received: 04/08/13 16:05 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		04/10/13 16:15	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/10/13 16:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/10/13 16:15	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/10/13 16:15	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/10/13 16:15	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/10/13 16:15	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/10/13 16:15	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/10/13 16:15	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		04/10/13 16:15	460-00-4	
Dibromofluoromethane (S)	106	%	70-130		1		04/10/13 16:15	1868-53-7	
1,2-Dichloroethane-d4 (S)	117	%	70-130		1		04/10/13 16:15	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		04/10/13 16:15	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92153821

Sample: PW-141B-02 **Lab ID: 92153821006** Collected: 04/08/13 14:25 Received: 04/08/13 16:05 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		04/10/13 16:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/10/13 16:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/10/13 16:31	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/10/13 16:31	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/10/13 16:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/10/13 16:31	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/10/13 16:31	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/10/13 16:31	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		04/10/13 16:31	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		04/10/13 16:31	1868-53-7	
1,2-Dichloroethane-d4 (S)	118	%	70-130		1		04/10/13 16:31	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		04/10/13 16:31	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92153821

Sample: PW-095A-02 **Lab ID: 92153821007** Collected: 04/08/13 15:05 Received: 04/08/13 16:05 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		04/10/13 16:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/10/13 16:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/10/13 16:48	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/10/13 16:48	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/10/13 16:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/10/13 16:48	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/10/13 16:48	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/10/13 16:48	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		04/10/13 16:48	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		04/10/13 16:48	1868-53-7	
1,2-Dichloroethane-d4 (S)	120	%	70-130		1		04/10/13 16:48	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		04/10/13 16:48	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92153821

Sample: PW-095B-02 **Lab ID: 92153821008** Collected: 04/08/13 15:10 Received: 04/08/13 16:05 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		04/10/13 17:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/10/13 17:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/10/13 17:04	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/10/13 17:04	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/10/13 17:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/10/13 17:04	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/10/13 17:04	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/10/13 17:04	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		04/10/13 17:04	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		04/10/13 17:04	1868-53-7	
1,2-Dichloroethane-d4 (S)	121	%	70-130		1		04/10/13 17:04	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		04/10/13 17:04	2037-26-5	

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QUALITY CONTROL DATA

Project: CTS of Asheville 6252120006
Pace Project No.: 92153821

QC Batch: MSV/22596 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92153821001, 92153821002, 92153821003, 92153821004, 92153821005, 92153821006, 92153821007, 92153821008

METHOD BLANK: 953634 — Matrix: Water
Associated Lab Samples: 92153821001, 92153821002, 92153821003, 92153821004, 92153821005, 92153821006, 92153821007, 92153821008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	04/10/13 14:52	
1,1-Dichloroethene	ug/L	ND	1.0	04/10/13 14:52	
cis-1,2-Dichloroethene	ug/L	ND	1.0	04/10/13 14:52	
Tetrachloroethene	ug/L	ND	1.0	04/10/13 14:52	
Toluene	ug/L	ND	1.0	04/10/13 14:52	
trans-1,2-Dichloroethene	ug/L	ND	1.0	04/10/13 14:52	
Trichloroethene	ug/L	ND	1.0	04/10/13 14:52	
Vinyl chloride	ug/L	ND	1.0	04/10/13 14:52	
1,2-Dichloroethane-d4 (S)	%	112	70-130	04/10/13 14:52	
4-Bromofluorobenzene (S)	%	92	70-130	04/10/13 14:52	
Dibromofluoromethane (S)	%	103	70-130	04/10/13 14:52	
Toluene-d8 (S)	%	99	70-130	04/10/13 14:52	

LABORATORY CONTROL SAMPLE: 953635

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	57.1	114	70-130	
1,1-Dichloroethene	ug/L	50	52.4	105	70-132	
cis-1,2-Dichloroethene	ug/L	50	48.9	98	70-131	
Tetrachloroethene	ug/L	50	53.6	107	70-130	
Toluene	ug/L	50	48.5	97	70-130	
trans-1,2-Dichloroethene	ug/L	50	51.2	102	70-130	
Trichloroethene	ug/L	50	48.4	97	70-130	
Vinyl chloride	ug/L	50	47.6	95	69-130	
1,2-Dichloroethane-d4 (S)	%			111	70-130	
4-Bromofluorobenzene (S)	%			106	70-130	
Dibromofluoromethane (S)	%			105	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 953636 953637

Parameter	Units	92153821003 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	63.7	63.4	127	127	70-166	0	30	
Toluene	ug/L	ND	50	50	52.3	51.6	105	103	70-155	1	30	
Trichloroethene	ug/L	ND	50	50	56.0	56.3	112	113	69-151	0	30	
1,2-Dichloroethane-d4 (S)	%						121	121	70-130			
4-Bromofluorobenzene (S)	%						92	96	70-130			

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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: CTS of Asheville 6252120006
Pace Project No.: 92153821

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 953636 953637

Parameter	Units	92153821003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromofluoromethane (S)	%						104	105	70-130			
Toluene-d8 (S)	%						98	97	70-130			

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QUALIFIERS

Project: CTS of Asheville 6252120006
Pace Project No.: 92153821

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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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CTS of Asheville 6252120006
Pace Project No.: 92153821

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92153821001	**TB-01-02**	EPA 8260	MSV/22596		
92153821002	**FD-01-02**	EPA 8260	MSV/22596		
92153821003	**PW-015A-02**	EPA 8260	MSV/22596		
92153821004	**PW-015B-02**	EPA 8260	MSV/22596		
92153821005	**PW-141A-02**	EPA 8260	MSV/22596		
92153821006	**PW-141B-02**	EPA 8260	MSV/22596		
92153821007	**PW-095A-02**	EPA 8260	MSV/22596		
92153821008	**PW-095B-02**	EPA 8260	MSV/22596		

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Pace Analytical www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: March 13, 2013 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.09	Issuing Authorities: Pace Asheville Quality Office

Client Name: ANDEC

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#2 -80344039 **Type of Ice:** Wet Blue None ☑ Samples on Ice, cooling process has begun

IR Gun Back-Up- 111565135

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 2.1 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 4/8/13

				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		**Initial when completed**
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: LJ Date: 4/5/13

SRF Review: JDB Date: 4/9/13

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#: 92153821

92153821

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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

1668272

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: std.

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): N

Analysis Test: 8260 VOCs*

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	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TB-01-02	WT	G	N/A	N/A	lab prep			2				X					X		001
2	FD-01-02	WT	G			4/8/13	00:00		3				X					X		002
3	PW-015A-02	WT	G			4/8/13	13:20		3				X					X		003
4	PW-015B-02	WT	G			4/8/13	13:25		3				X					X		004
5	PW-141A-02	WT	G			4/8/13	14:20		3				X					X		005
6	PW-141B-02	WT	G			4/8/13	14:25		3				X					X		006
7	PW-095A-02	WT	G			4/8/13	15:05		3				X					X		007
8	PW-095B-02	WT	G			4/8/13	15:10		3				X					X		008
9													X							
10													X							
11													X							
12													X							

Preservatives: Unpreserved, H_2SO_4, HNO_3, HCl, NaOH, $Na_2S_2O_3$, Methanol, Other

8260 4/8/13
8260 4/8/13
8260 4/8/13
8260 4/8/13

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*site-specific compound list	[signature] / AMEC	4/8/13	16:05	[signature]	4/8/13	16:05	2.1

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: SUSAN KELLY

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 4/8/13

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

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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April 17, 2013

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

RE: Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Dear Ms. Kelly:
Enclosed are the analytical results for sample(s) received by the laboratory on April 09, 2013. 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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CERTIFICATIONS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

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.: 92153998

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92153998001	**TB-02-02**	Water	04/09/13 00:00	04/09/13 16:23
92153998002	**FD-02-02**	Water	04/09/13 00:00	04/09/13 16:23
92153998003	**PW-017A-02**	Water	04/09/13 09:20	04/09/13 16:23
92153998004	**PW-017B-02**	Water	04/09/13 09:25	04/09/13 16:23
92153998005	**PW-038A-02**	Water	04/09/13 10:00	04/09/13 16:23
92153998006	**PW-038B-02**	Water	04/09/13 10:05	04/09/13 16:23
92153998007	**PW-036A-02**	Water	04/09/13 10:40	04/09/13 16:23
92153998008	**PW-036B-02**	Water	04/09/13 10:30	04/09/13 16:23
92153998009	**PW-088A-02**	Water	04/09/13 11:10	04/09/13 16:23
92153998010	**PW-088B-02**	Water	04/09/13 11:15	04/09/13 16:23
92153998011	**PW-114A-02**	Water	04/09/13 13:20	04/09/13 16:23
92153998012	**PW-114B-02**	Water	04/09/13 13:25	04/09/13 16:23
92153998013	**PW-021-02**	Water	04/09/13 13:55	04/09/13 16:23
92153998014	**PW-073A-02**	Water	04/09/13 14:20	04/09/13 16:23
92153998015	**PW-073B-02**	Water	04/09/13 14:25	04/09/13 16:23
92153998016	**PW-084A-02**	Water	04/09/13 15:05	04/09/13 16:23
92153998017	**PW-084B-02**	Water	04/09/13 15:10	04/09/13 16:23

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SAMPLE ANALYTE COUNT

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92153998001	TB-02-02	EPA 8260	CAH	12	PASI-C
92153998002	FD-02-02	EPA 8260	CAH	12	PASI-C
92153998003	PW-017A-02	EPA 8260	CAH	12	PASI-C
92153998004	PW-017B-02	EPA 8260	CAH	12	PASI-C
92153998005	PW-038A-02	EPA 8260	CAH	12	PASI-C
92153998006	PW-038B-02	EPA 8260	CAH	12	PASI-C
92153998007	PW-036A-02	EPA 8260	CAH	12	PASI-C
92153998008	PW-036B-02	EPA 8260	CAH	12	PASI-C
92153998009	PW-088A-02	EPA 8260	CAH	12	PASI-C
92153998010	PW-088B-02	EPA 8260	CAH	12	PASI-C
92153998011	PW-114A-02	EPA 8260	CAH	12	PASI-C
92153998012	PW-114B-02	EPA 8260	CAH	12	PASI-C
92153998013	PW-021-02	EPA 8260	CAH	12	PASI-C
92153998014	PW-073A-02	EPA 8260	CAH	12	PASI-C
92153998015	PW-073B-02	EPA 8260	CAH	12	PASI-C
92153998016	PW-084A-02	EPA 8260	CAH	12	PASI-C
92153998017	PW-084B-02	EPA 8260	CAH	12	PASI-C

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PROJECT NARRATIVE

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Method: **EPA 8260**
Description: 8260 MSV Low Level
Client: AMEC, Asheville
Date: April 17, 2013

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.

QC Batch: MSV/22599

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

- FD-02-02 (Lab ID: 92153998002)
  - 1,2-Dichloroethane-d4 (S)
- PW-084B-02 (Lab ID: 92153998017)
  - 1,2-Dichloroethane-d4 (S)

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

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

QC Batch: MSV/22599

L3: Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

- LCS (Lab ID: 953915)
  - Toluene

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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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Sample: TB-02-02 **Lab ID: 92153998001** Collected: 04/09/13 00:00 Received: 04/09/13 16:23 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		04/11/13 03:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/11/13 03:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/11/13 03:50	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/11/13 03:50	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/11/13 03:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/11/13 03:50	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/11/13 03:50	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/11/13 03:50	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		04/11/13 03:50	460-00-4	
Dibromofluoromethane (S)	103	%	70-130		1		04/11/13 03:50	1868-53-7	
1,2-Dichloroethane-d4 (S)	116	%	70-130		1		04/11/13 03:50	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		04/11/13 03:50	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Sample: FD-02-02 **Lab ID: 92153998002** Collected: 04/09/13 00:00 Received: 04/09/13 16:23 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		04/11/13 08:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/11/13 08:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/11/13 08:16	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/11/13 08:16	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/11/13 08:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/11/13 08:16	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/11/13 08:16	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/11/13 08:16	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		04/11/13 08:16	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		04/11/13 08:16	1868-53-7	
1,2-Dichloroethane-d4 (S)	132	%	70-130		1		04/11/13 08:16	17060-07-0	S3
Toluene-d8 (S)	99	%	70-130		1		04/11/13 08:16	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Sample: PW-017A-02 **Lab ID: 92153998003** Collected: 04/09/13 09:20 Received: 04/09/13 16:23 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		04/11/13 04:07	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/11/13 04:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/11/13 04:07	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/11/13 04:07	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/11/13 04:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/11/13 04:07	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/11/13 04:07	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/11/13 04:07	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		04/11/13 04:07	460-00-4	
Dibromofluoromethane (S)	103	%	70-130		1		04/11/13 04:07	1868-53-7	
1,2-Dichloroethane-d4 (S)	117	%	70-130		1		04/11/13 04:07	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		04/11/13 04:07	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Sample: PW-017B-02 **Lab ID: 92153998004** Collected: 04/09/13 09:25 Received: 04/09/13 16:23 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		04/11/13 04:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/11/13 04:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/11/13 04:23	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/11/13 04:23	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/11/13 04:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/11/13 04:23	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/11/13 04:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/11/13 04:23	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		04/11/13 04:23	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		04/11/13 04:23	1868-53-7	
1,2-Dichloroethane-d4 (S)	117	%	70-130		1		04/11/13 04:23	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		04/11/13 04:23	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Sample: PW-038A-02 **Lab ID: 92153998005** Collected: 04/09/13 10:00 Received: 04/09/13 16:23 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		04/11/13 04:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/11/13 04:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/11/13 04:40	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/11/13 04:40	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/11/13 04:40	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/11/13 04:40	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/11/13 04:40	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/11/13 04:40	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		04/11/13 04:40	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		04/11/13 04:40	1868-53-7	
1,2-Dichloroethane-d4 (S)	119	%	70-130		1		04/11/13 04:40	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		04/11/13 04:40	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Sample: PW-038B-02 **Lab ID: 92153998006** Collected: 04/09/13 10:05 Received: 04/09/13 16:23 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		04/11/13 04:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/11/13 04:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/11/13 04:56	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/11/13 04:56	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/11/13 04:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/11/13 04:56	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/11/13 04:56	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/11/13 04:56	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		04/11/13 04:56	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		1		04/11/13 04:56	1868-53-7	
1,2-Dichloroethane-d4 (S)	120	%	70-130		1		04/11/13 04:56	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		04/11/13 04:56	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Sample: PW-036A-02 **Lab ID: 92153998007** Collected: 04/09/13 10:40 Received: 04/09/13 16:23 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		04/11/13 05:13	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/11/13 05:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/11/13 05:13	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/11/13 05:13	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/11/13 05:13	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/11/13 05:13	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/11/13 05:13	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/11/13 05:13	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		04/11/13 05:13	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		1		04/11/13 05:13	1868-53-7	
1,2-Dichloroethane-d4 (S)	123	%	70-130		1		04/11/13 05:13	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		04/11/13 05:13	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Sample: PW-036B-02 **Lab ID: 92153998008** Collected: 04/09/13 10:30 Received: 04/09/13 16:23 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		04/11/13 05:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/11/13 05:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/11/13 05:30	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/11/13 05:30	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/11/13 05:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/11/13 05:30	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/11/13 05:30	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/11/13 05:30	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		04/11/13 05:30	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		1		04/11/13 05:30	1868-53-7	
1,2-Dichloroethane-d4 (S)	122	%	70-130		1		04/11/13 05:30	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		04/11/13 05:30	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Sample: PW-088A-02 **Lab ID: 92153998009** Collected: 04/09/13 11:10 Received: 04/09/13 16:23 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		04/11/13 05:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/11/13 05:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/11/13 05:46	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/11/13 05:46	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/11/13 05:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/11/13 05:46	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/11/13 05:46	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/11/13 05:46	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		04/11/13 05:46	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		04/11/13 05:46	1868-53-7	
1,2-Dichloroethane-d4 (S)	123	%	70-130		1		04/11/13 05:46	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		04/11/13 05:46	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Sample: PW-088B-02 **Lab ID: 92153998010** Collected: 04/09/13 11:15 Received: 04/09/13 16:23 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		04/11/13 06:03	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/11/13 06:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/11/13 06:03	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/11/13 06:03	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/11/13 06:03	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/11/13 06:03	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/11/13 06:03	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/11/13 06:03	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		04/11/13 06:03	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		04/11/13 06:03	1868-53-7	
1,2-Dichloroethane-d4 (S)	126	%	70-130		1		04/11/13 06:03	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		04/11/13 06:03	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Sample: PW-114A-02 **Lab ID: 92153998011** Collected: 04/09/13 13:20 Received: 04/09/13 16:23 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		04/11/13 06:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/11/13 06:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/11/13 06:19	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/11/13 06:19	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/11/13 06:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/11/13 06:19	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/11/13 06:19	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/11/13 06:19	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		04/11/13 06:19	460-00-4	
Dibromofluoromethane (S)	108	%	70-130		1		04/11/13 06:19	1868-53-7	
1,2-Dichloroethane-d4 (S)	126	%	70-130		1		04/11/13 06:19	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		04/11/13 06:19	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Sample: PW-114B-02 **Lab ID: 92153998012** Collected: 04/09/13 13:25 Received: 04/09/13 16:23 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		04/11/13 06:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/11/13 06:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/11/13 06:36	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/11/13 06:36	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/11/13 06:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/11/13 06:36	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/11/13 06:36	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/11/13 06:36	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		04/11/13 06:36	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		1		04/11/13 06:36	1868-53-7	
1,2-Dichloroethane-d4 (S)	126	%	70-130		1		04/11/13 06:36	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		04/11/13 06:36	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Sample: PW-021-02 **Lab ID: 92153998013** Collected: 04/09/13 13:55 Received: 04/09/13 16:23 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		04/11/13 06:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/11/13 06:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/11/13 06:53	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/11/13 06:53	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/11/13 06:53	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/11/13 06:53	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/11/13 06:53	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/11/13 06:53	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		04/11/13 06:53	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		04/11/13 06:53	1868-53-7	
1,2-Dichloroethane-d4 (S)	129	%	70-130		1		04/11/13 06:53	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		04/11/13 06:53	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Sample: PW-073A-02 **Lab ID: 92153998014** Collected: 04/09/13 14:20 Received: 04/09/13 16:23 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		04/11/13 07:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/11/13 07:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/11/13 07:09	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/11/13 07:09	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/11/13 07:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/11/13 07:09	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/11/13 07:09	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/11/13 07:09	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		04/11/13 07:09	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		04/11/13 07:09	1868-53-7	
1,2-Dichloroethane-d4 (S)	129	%	70-130		1		04/11/13 07:09	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		04/11/13 07:09	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Sample: PW-073B-02 **Lab ID: 92153998015** Collected: 04/09/13 14:25 Received: 04/09/13 16:23 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		04/11/13 07:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/11/13 07:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/11/13 07:26	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/11/13 07:26	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/11/13 07:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/11/13 07:26	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/11/13 07:26	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/11/13 07:26	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		04/11/13 07:26	460-00-4	
Dibromofluoromethane (S)	106	%	70-130		1		04/11/13 07:26	1868-53-7	
1,2-Dichloroethane-d4 (S)	127	%	70-130		1		04/11/13 07:26	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		04/11/13 07:26	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Sample: PW-084A-02 **Lab ID: 92153998016** Collected: 04/09/13 15:05 Received: 04/09/13 16:23 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		04/11/13 07:42	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/11/13 07:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/11/13 07:42	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/11/13 07:42	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/11/13 07:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/11/13 07:42	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/11/13 07:42	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/11/13 07:42	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		04/11/13 07:42	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		04/11/13 07:42	1868-53-7	
1,2-Dichloroethane-d4 (S)	129	%	70-130		1		04/11/13 07:42	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		04/11/13 07:42	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Sample: PW-084B-02 **Lab ID: 92153998017** Collected: 04/09/13 15:10 Received: 04/09/13 16:23 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		04/11/13 07:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/11/13 07:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/11/13 07:59	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/11/13 07:59	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/11/13 07:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/11/13 07:59	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/11/13 07:59	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/11/13 07:59	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		04/11/13 07:59	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		04/11/13 07:59	1868-53-7	
1,2-Dichloroethane-d4 (S)	132	%	70-130		1		04/11/13 07:59	17060-07-0	S3
Toluene-d8 (S)	99	%	70-130		1		04/11/13 07:59	2037-26-5	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

QC Batch: MSV/22599 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92153998001, 92153998002, 92153998003, 92153998004, 92153998005, 92153998006, 92153998007, 92153998008, 92153998009, 92153998010, 92153998011, 92153998012, 92153998013, 92153998014, 92153998015, 92153998016, 92153998017

METHOD BLANK: 953914 — Matrix: Water
Associated Lab Samples: 92153998001, 92153998002, 92153998003, 92153998004, 92153998005, 92153998006, 92153998007, 92153998008, 92153998009, 92153998010, 92153998011, 92153998012, 92153998013, 92153998014, 92153998015, 92153998016, 92153998017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	04/11/13 03:17	
1,1-Dichloroethene	ug/L	ND	1.0	04/11/13 03:17	
cis-1,2-Dichloroethene	ug/L	ND	1.0	04/11/13 03:17	
Tetrachloroethene	ug/L	ND	1.0	04/11/13 03:17	
Toluene	ug/L	ND	1.0	04/11/13 03:17	
trans-1,2-Dichloroethene	ug/L	ND	1.0	04/11/13 03:17	
Trichloroethene	ug/L	ND	1.0	04/11/13 03:17	
Vinyl chloride	ug/L	ND	1.0	04/11/13 03:17	
1,2-Dichloroethane-d4 (S)	%	112	70-130	04/11/13 03:17	
4-Bromofluorobenzene (S)	%	93	70-130	04/11/13 03:17	
Dibromofluoromethane (S)	%	102	70-130	04/11/13 03:17	
Toluene-d8 (S)	%	100	70-130	04/11/13 03:17	

LABORATORY CONTROL SAMPLE: 953915

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	59.7	119	70-130	
1,1-Dichloroethene	ug/L	50	53.9	108	70-132	
cis-1,2-Dichloroethene	ug/L	50	50.0	100	70-131	
Tetrachloroethene	ug/L	50	54.6	109	70-130	
Toluene	ug/L	50	66.0	132	70-130	L3
trans-1,2-Dichloroethene	ug/L	50	52.4	105	70-130	
Trichloroethene	ug/L	50	49.7	99	70-130	
Vinyl chloride	ug/L	50	49.0	98	69-130	
1,2-Dichloroethane-d4 (S)	%			115	70-130	
4-Bromofluorobenzene (S)	%			106	70-130	
Dibromofluoromethane (S)	%			105	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 954397 954398

Parameter	Units	92153998003 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	62.1	62.3	124	125	70-166	0	30	
Toluene	ug/L	ND	50	50	51.5	52.1	103	104	70-155	1	30	
Trichloroethene	ug/L	ND	50	50	56.4	56.4	113	113	69-151	0	30	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 954397 954398

Parameter	Units	92153998003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloroethane-d4 (S)	%						119	119	70-130			
4-Bromofluorobenzene (S)	%						94	95	70-130			
Dibromofluoromethane (S)	%						104	102	70-130			
Toluene-d8 (S)	%						99	98	70-130			

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QUALIFIERS

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

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.

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TNI - The NELAC Institute.

LABORATORIES

PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
S3	Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CTS OF ASHEVILLE 6252120006
Pace Project No.: 92153998

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92153998001	**TB-02-02**	EPA 8260	MSV/22599		
92153998002	**FD-02-02**	EPA 8260	MSV/22599		
92153998003	**PW-017A-02**	EPA 8260	MSV/22599		
92153998004	**PW-017B-02**	EPA 8260	MSV/22599		
92153998005	**PW-038A-02**	EPA 8260	MSV/22599		
92153998006	**PW-038B-02**	EPA 8260	MSV/22599		
92153998007	**PW-036A-02**	EPA 8260	MSV/22599		
92153998008	**PW-036B-02**	EPA 8260	MSV/22599		
92153998009	**PW-088A-02**	EPA 8260	MSV/22599		
92153998010	**PW-088B-02**	EPA 8260	MSV/22599		
92153998011	**PW-114A-02**	EPA 8260	MSV/22599		
92153998012	**PW-114B-02**	EPA 8260	MSV/22599		
92153998013	**PW-021-02**	EPA 8260	MSV/22599		
92153998014	**PW-073A-02**	EPA 8260	MSV/22599		
92153998015	**PW-073B-02**	EPA 8260	MSV/22599		
92153998016	**PW-084A-02**	EPA 8260	MSV/22599		
92153998017	**PW-084B-02**	EPA 8260	MSV/22599		

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Pace Analytical® www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: March 13, 2013 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.09	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#2 -80344039 **Type of Ice:** (Wet) Blue None ☑ Samples on ice, cooling process has begun

IR Gun Back Up- 111565135

Temp Correction Factor: Add/ Subtract 0.1 C

Corrected Cooler Temp.: 2-8 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: L 4/9/13

		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	L
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	**Initial when completed**
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: JY **Date:** 4/9/13

SRF Review: JY **Date:** 4/10/13

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# : 92153998

92153993

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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

1668273

Section A Required Client Information:

Company: AMEC
Address: 1308 Patton Ave Asheville NC 28806
Email To: susan.kelly@amec.com
Phone: 8282528130 Fax:
Requested Due Date/TAT: std.

Section B Required Project Information:

Report To: Susan kelly
Copy To:
Purchase Order No.: C0121019 36
Project Name: CTS of Asheville
Project Number: 62521200 06

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): 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: 8260 VOCs*	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92153998
1	TB-02-02	WT	G	N/A	N/A	lab prep			2				X					X		001
2	FD-02-02	WT	G			4/9/13	00:00		3				X					X		002
3	PW-017A-02	WT	G			4/9/13	9:20		3				X					X		003
4	PW-017B-02	WT	G			4/9/13	9:25		3				X					X		004
5	PW-038A-02	WT	G				10:00		3				X					X		005
6	PW-038B-02	WT	G				10:05		3				X					X		006
7	PW-036A-02	WT	G				10:40		3				X					X		007
8	PW-036B-02	WT	G				10:30		3				X					X		008
9	PW-088A-02	WT	G				11:10		3				X					X		009
10	PW-088B-02	WT	G				11:15		3				X					X		010
11	PW-114A-02	WT	G				13:20		3				X					X		011
12	PW-114B-02	WT	G				13:25		3				X					X		012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
*site-specific compound list	[signature] / AMEC	4/9/13	16:23	[signature]	4/9/13	16:23	2.8	Y	Y	Y

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: SUSAN KELLY
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 4/9/13

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

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

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Page: 2 of 2

1668274

Section A Required Client Information:
- Company: AMEC
- Address: 1308 Patton Ave, Asheville, NC 28806
- Email To: susan.kelly@amec.com
- Phone: 8282528130 Fax:
- Requested Due Date/TAT: std.

Section B Required Project Information:
- Report To: Susan Kelly
- Copy To:
- Purchase Order No.: 6012101936
- 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
- [x] 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): Y/N; Analysis Test: 8260 VOCs*

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED 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: 8260 VOCs*	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	PW-021-02	WT	G	N/A	N/A	4/9/13	13:55		3				X					X		013
2	PW-073A-02	WT	G			4/9/13	14:20		3				X					X		014
3	PW-073B-02	WT	G			4/9/13	14:25		3				X					X		015
4	PW-084A-02	WT	G			4/9/13	15:05		3				X					X		016
5	PW-084B-02	WT	G			4/9/13	15:10		3				X					X		017
6																				
7																				
8																				
9																				
10																				
11																				
12																				

92153998

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
*site-specific compound list	Amanda Cy / AMEC	4/9/13	16:23	[signature]	4/9/13	16:23	2.8	X	X	X

ORIGINAL

SAMPLER NAME AND SIGNATURE
- PRINT Name of SAMPLER: SUSAN KELLY
- SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 4/9/13

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.

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

April 17, 2013

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

RE: Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

Dear Ms. Kelly:
Enclosed are the analytical results for sample(s) received by the laboratory on April 10, 2013. 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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CERTIFICATIONS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

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.: 92154164

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92154164001	**TB-03-02**	Water	04/10/13 00:00	04/10/13 14:44
92154164002	**FD-03-02**	Water	04/10/13 00:00	04/10/13 14:44
92154164003	**PW-123A-02**	Water	04/10/13 09:00	04/10/13 14:44
92154164004	**PW-123B-02**	Water	04/10/13 09:05	04/10/13 14:44
92154164005	**PW-065A-02**	Water	04/10/13 10:00	04/10/13 14:44
92154164006	**PW-065B-02**	Water	04/10/13 10:05	04/10/13 14:44
92154164007	**PW-083A-02**	Water	04/10/13 10:45	04/10/13 14:44
92154164008	**PW-083B-02**	Water	04/10/13 10:50	04/10/13 14:44
92154164009	**PW-025A-02**	Water	04/10/13 12:25	04/10/13 14:44
92154164010	**PW-025B-02**	Water	04/10/13 12:30	04/10/13 14:44
92154164011	**PW-099A-02**	Water	04/10/13 12:50	04/10/13 14:44
92154164012	**PW-099B-02**	Water	04/10/13 12:55	04/10/13 14:44
92154164013	**PW-107A-02**	Water	04/10/13 13:35	04/10/13 14:44
92154164014	**PW-107B-02**	Water	04/10/13 13:40	04/10/13 14:44

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SAMPLE ANALYTE COUNT

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92154164001	**TB-03-02**	EPA 8260	MCK	12	PASI-C
92154164002	**FD-03-02**	EPA 8260	MCK	12	PASI-C
92154164003	**PW-123A-02**	EPA 8260	MCK	12	PASI-C
92154164004	**PW-123B-02**	EPA 8260	MCK	12	PASI-C
92154164005	**PW-065A-02**	EPA 8260	MCK	12	PASI-C
92154164006	**PW-065B-02**	EPA 8260	MCK	12	PASI-C
92154164007	**PW-083A-02**	EPA 8260	MCK	12	PASI-C
92154164008	**PW-083B-02**	EPA 8260	MCK	12	PASI-C
92154164009	**PW-025A-02**	EPA 8260	MCK	12	PASI-C
92154164010	**PW-025B-02**	EPA 8260	MCK	12	PASI-C
92154164011	**PW-099A-02**	EPA 8260	MCK	12	PASI-C
92154164012	**PW-099B-02**	EPA 8260	MCK	12	PASI-C
92154164013	**PW-107A-02**	EPA 8260	MCK	12	PASI-C
92154164014	**PW-107B-02**	EPA 8260	MCK	12	PASI-C

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PROJECT NARRATIVE

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

Method: **EPA 8260**
Description: 8260 MSV Low Level
Client: AMEC, Asheville
Date: April 17, 2013

General Information:
14 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 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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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

Sample: TB-03-02 **Lab ID: 92154164001** Collected: 04/10/13 00:00 Received: 04/10/13 14:44 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		04/13/13 05:51	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/13/13 05:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/13/13 05:51	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/13/13 05:51	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/13/13 05:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/13/13 05:51	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/13/13 05:51	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/13/13 05:51	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		04/13/13 05:51	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		04/13/13 05:51	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		04/13/13 05:51	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		04/13/13 05:51	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

Sample: FD-03-02 **Lab ID: 92154164002** Collected: 04/10/13 00:00 Received: 04/10/13 14:44 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		04/13/13 06:07	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/13/13 06:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/13/13 06:07	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/13/13 06:07	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/13/13 06:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/13/13 06:07	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/13/13 06:07	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/13/13 06:07	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		04/13/13 06:07	460-00-4	
Dibromofluoromethane (S)	103	%	70-130		1		04/13/13 06:07	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		04/13/13 06:07	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		04/13/13 06:07	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

Sample: PW-123A-02 **Lab ID: 92154164003** Collected: 04/10/13 09:00 Received: 04/10/13 14:44 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		04/13/13 06:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/13/13 06:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/13/13 06:23	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/13/13 06:23	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/13/13 06:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/13/13 06:23	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/13/13 06:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/13/13 06:23	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		04/13/13 06:23	460-00-4	
Dibromofluoromethane (S)	102	%	70-130		1		04/13/13 06:23	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		04/13/13 06:23	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		04/13/13 06:23	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

Sample: PW-123B-02 **Lab ID: 92154164004** Collected: 04/10/13 09:05 Received: 04/10/13 14:44 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		04/13/13 06:38	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/13/13 06:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/13/13 06:38	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/13/13 06:38	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/13/13 06:38	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/13/13 06:38	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/13/13 06:38	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/13/13 06:38	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		04/13/13 06:38	460-00-4	
Dibromofluoromethane (S)	98	%	70-130		1		04/13/13 06:38	1868-53-7	
1,2-Dichloroethane-d4 (S)	95	%	70-130		1		04/13/13 06:38	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		04/13/13 06:38	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

Sample: PW-065A-02 **Lab ID: 92154164005** Collected: 04/10/13 10:00 Received: 04/10/13 14:44 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		04/13/13 06:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/13/13 06:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/13/13 06:54	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/13/13 06:54	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/13/13 06:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/13/13 06:54	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/13/13 06:54	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/13/13 06:54	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		04/13/13 06:54	460-00-4	
Dibromofluoromethane (S)	101	%	70-130		1		04/13/13 06:54	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		04/13/13 06:54	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		04/13/13 06:54	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

Sample: PW-065B-02 **Lab ID: 92154164006** Collected: 04/10/13 10:05 Received: 04/10/13 14:44 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		04/13/13 07:10	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/13/13 07:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/13/13 07:10	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/13/13 07:10	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/13/13 07:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/13/13 07:10	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/13/13 07:10	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/13/13 07:10	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		04/13/13 07:10	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		04/13/13 07:10	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		04/13/13 07:10	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		04/13/13 07:10	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

Sample: PW-083A-02 **Lab ID: 92154164007** Collected: 04/10/13 10:45 Received: 04/10/13 14:44 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		04/13/13 07:25	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/13/13 07:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/13/13 07:25	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/13/13 07:25	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/13/13 07:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/13/13 07:25	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/13/13 07:25	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/13/13 07:25	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		04/13/13 07:25	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		1		04/13/13 07:25	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		04/13/13 07:25	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		04/13/13 07:25	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

Sample: PW-083B-02 **Lab ID: 92154164008** Collected: 04/10/13 10:50 Received: 04/10/13 14:44 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		04/13/13 07:41	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/13/13 07:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/13/13 07:41	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/13/13 07:41	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/13/13 07:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/13/13 07:41	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/13/13 07:41	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/13/13 07:41	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		04/13/13 07:41	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		04/13/13 07:41	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		04/13/13 07:41	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		04/13/13 07:41	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

Sample: PW-025A-02 **Lab ID: 92154164009** Collected: 04/10/13 12:25 Received: 04/10/13 14:44 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		04/13/13 07:57	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/13/13 07:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/13/13 07:57	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/13/13 07:57	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/13/13 07:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/13/13 07:57	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/13/13 07:57	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/13/13 07:57	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		04/13/13 07:57	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		1		04/13/13 07:57	1868-53-7	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		04/13/13 07:57	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		04/13/13 07:57	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

Sample: PW-025B-02 **Lab ID: 92154164010** Collected: 04/10/13 12:30 Received: 04/10/13 14:44 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		04/13/13 08:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/13/13 08:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/13/13 08:12	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/13/13 08:12	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/13/13 08:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/13/13 08:12	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/13/13 08:12	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/13/13 08:12	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		04/13/13 08:12	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		04/13/13 08:12	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		04/13/13 08:12	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		04/13/13 08:12	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

Sample: PW-099A-02 **Lab ID: 92154164011** Collected: 04/10/13 12:50 Received: 04/10/13 14:44 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		04/13/13 08:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/13/13 08:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/13/13 08:28	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/13/13 08:28	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/13/13 08:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/13/13 08:28	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/13/13 08:28	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/13/13 08:28	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		04/13/13 08:28	460-00-4	
Dibromofluoromethane (S)	101	%	70-130		1		04/13/13 08:28	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		04/13/13 08:28	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		04/13/13 08:28	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

Sample: PW-099B-02 **Lab ID: 92154164012** Collected: 04/10/13 12:55 Received: 04/10/13 14:44 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		04/13/13 08:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/13/13 08:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/13/13 08:44	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/13/13 08:44	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/13/13 08:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/13/13 08:44	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/13/13 08:44	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/13/13 08:44	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		04/13/13 08:44	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		1		04/13/13 08:44	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		04/13/13 08:44	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		04/13/13 08:44	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

Sample: PW-107A-02 **Lab ID: 92154164013** Collected: 04/10/13 13:35 Received: 04/10/13 14:44 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		04/13/13 09:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/13/13 09:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/13/13 09:00	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/13/13 09:00	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/13/13 09:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/13/13 09:00	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/13/13 09:00	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/13/13 09:00	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		04/13/13 09:00	460-00-4	
Dibromofluoromethane (S)	98	%	70-130		1		04/13/13 09:00	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		04/13/13 09:00	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		04/13/13 09:00	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

Sample: PW-107B-02 **Lab ID: 92154164014** Collected: 04/10/13 13:40 Received: 04/10/13 14:44 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		04/13/13 09:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/13/13 09:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/13/13 09:16	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/13/13 09:16	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/13/13 09:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/13/13 09:16	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/13/13 09:16	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/13/13 09:16	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		04/13/13 09:16	460-00-4	
Dibromofluoromethane (S)	102	%	70-130		1		04/13/13 09:16	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		04/13/13 09:16	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		04/13/13 09:16	2037-26-5	

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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 Asheville 6252120006
Pace Project No.: 92154164

QC Batch: MSV/22623 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92154164001, 92154164002, 92154164003, 92154164004, 92154164005, 92154164006, 92154164007, 92154164008, 92154164009, 92154164010, 92154164011, 92154164012, 92154164013, 92154164014

METHOD BLANK: 955674 — Matrix: Water
Associated Lab Samples: 92154164001, 92154164002, 92154164003, 92154164004, 92154164005, 92154164006, 92154164007, 92154164008, 92154164009, 92154164010, 92154164011, 92154164012, 92154164013, 92154164014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	04/13/13 03:30	
1,1-Dichloroethene	ug/L	ND	1.0	04/13/13 03:30	
cis-1,2-Dichloroethene	ug/L	ND	1.0	04/13/13 03:30	
Tetrachloroethene	ug/L	ND	1.0	04/13/13 03:30	
Toluene	ug/L	ND	1.0	04/13/13 03:30	
trans-1,2-Dichloroethene	ug/L	ND	1.0	04/13/13 03:30	
Trichloroethene	ug/L	0.57J	1.0	04/13/13 03:30	
Vinyl chloride	ug/L	ND	1.0	04/13/13 03:30	
1,2-Dichloroethane-d4 (S)	%	97	70-130	04/13/13 03:30	
4-Bromofluorobenzene (S)	%	100	70-130	04/13/13 03:30	
Dibromofluoromethane (S)	%	98	70-130	04/13/13 03:30	
Toluene-d8 (S)	%	102	70-130	04/13/13 03:30	

LABORATORY CONTROL SAMPLE: 955675

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	50.2	100	70-130	
1,1-Dichloroethene	ug/L	50	49.2	98	70-132	
cis-1,2-Dichloroethene	ug/L	50	48.3	97	70-131	
Tetrachloroethene	ug/L	50	49.5	99	70-130	
Toluene	ug/L	50	47.4	95	70-130	
trans-1,2-Dichloroethene	ug/L	50	48.3	97	70-130	
Trichloroethene	ug/L	50	47.3	95	70-130	
Vinyl chloride	ug/L	50	47.6	95	69-130	
1,2-Dichloroethane-d4 (S)	%			94	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Dibromofluoromethane (S)	%			99	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 955676 — 955677

Parameter	Units	92154164004 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	60.5	59.3	121	119	70-166	2	30	
Toluene	ug/L	ND	50	50	54.4	53.7	109	107	70-155	1	30	
Trichloroethene	ug/L	ND	50	50	60.9	59.2	121	118	69-151	3	30	
1,2-Dichloroethane-d4 (S)	%						97	95	70-130			
4-Bromofluorobenzene (S)	%						99	98	70-130			

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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 955676 955677

Parameter	Units	92154164004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromofluoromethane (S)	%						97	99	70-130			
Toluene-d8 (S)	%						98	103	70-130			

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QUALIFIERS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

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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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CTS of Asheville 6252120006
Pace Project No.: 92154164

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92154164001	**TB-03-02**	EPA 8260	MSV/22623		
92154164002	**FD-03-02**	EPA 8260	MSV/22623		
92154164003	**PW-123A-02**	EPA 8260	MSV/22623		
92154164004	**PW-123B-02**	EPA 8260	MSV/22623		
92154164005	**PW-065A-02**	EPA 8260	MSV/22623		
92154164006	**PW-065B-02**	EPA 8260	MSV/22623		
92154164007	**PW-083A-02**	EPA 8260	MSV/22623		
92154164008	**PW-083B-02**	EPA 8260	MSV/22623		
92154164009	**PW-025A-02**	EPA 8260	MSV/22623		
92154164010	**PW-025B-02**	EPA 8260	MSV/22623		
92154164011	**PW-099A-02**	EPA 8260	MSV/22623		
92154164012	**PW-099B-02**	EPA 8260	MSV/22623		
92154164013	**PW-107A-02**	EPA 8260	MSV/22623		
92154164014	**PW-107B-02**	EPA 8260	MSV/22623		

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Pace Analytical www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: March 13, 2013 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.09	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#2 -80344039 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

IR Gun Back Up- 111565135

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 3.5 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 4/10/13

		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	**Initial when completed**
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: JD **Date:** 4/10/13

SRF Review: JD **Date:** 4/11/13

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#: 92154164

92154164

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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

1668275

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: std.

Section B Required Project Information:

Report To: Susan Kelly
Copy To:
Purchase Order No.: 6012101936
Project Name: GTS 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): Y/N

Analysis Test: 8260 VOCs*

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	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	8260 VOCs*	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92154164
1	TB-03-02	WT	G	N/A	N/A	~~4/10/13~~ SD 4/10/13	lab prep		2				X					X		001
2	FD-03-02	WT	G			4/10/13	00:00		3				X					X		002
3	PW-123A-02	WT	G			4/10/13	9:00		3				X					X		003
4	PW-123B-02	WT	G			4/10/13	9:05		3				X					X		004
5	PW-065A-02	WT	G			4/10/13	10:00		3				X					X		005
6	PW-065B-02	WT	G			4/10/13	10:05		3				X					X		006
7	PW-083A-02	WT	G			4/10/13	10:45		3				X					X		007
8	PW-083B-02	WT	G			4/10/13	10:50		3				X					X		008
9	PW-025A-02	WT	G			4/10/13	12:25		3				X					X		009
10	PW-025B-02	WT	G			4/10/13	12:30		3				X					X		010
11	PW-099A-02	WT	G			4/10/13	12:50		3				X					X		011
12	PW-099B-02	WT	G			4/10/13	12:55		3				X					X		012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* Site-specific compound list	[signature] / AMEC	4/10/13	14:44	[signature]	4/10/13	14:44	3.5	X	X	X

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: SUSAN KELLY

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 4/10/13

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

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.

Pace Analytical www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: March 13, 2013 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.09	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#2 -80344039) IR Gun Back Up- 111565135 **Type of Ice:** (Wet) Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor: Add / (Subtract) 0.1 C

Corrected Cooler Temp.: 3.5 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 4/9/13

		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	**Initial when completed**
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: JG **Date:** 4/10/13

SRF Review: JG **Date:** 4/11/13

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)

Place label here

92154164

OR

Handwrite project number (if no label available)

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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

1668276

Section A Required Client Information:

Company: AMEC
Address: 1308 Patton Ave
Asheville, NC 28806
Email To: Susan.kelly@amec.com
Phone: 8282528130 Fax:
Requested Due Date/TAT: std.

Section B Required Project Information:

Report To: Susan Kelly
Copy To:
Purchase Order No.: C01210196 3
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): 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	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test: 8260 VOCs*	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92154164
1	PW-107A-02	WT	G	N/A	N/A	4/10/13	13:35		3				X					X		013
2	PW-107B-02	WT	G	N/A	N/A	4/10/13	13:40		3				X					X		014
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
*Site-specific compound list	[signature] / AMEC	4/10/13	14:44	[signature]	4/10/13	14:44	3.5	Y	—	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: SUSAN KELLY

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 4/10/13

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

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.

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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April 17, 2013

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

RE: Project: CTS of Asheville 6252120006
Pace Project No.: 92154292

Dear Ms. Kelly:
Enclosed are the analytical results for sample(s) received by the laboratory on April 11, 2013. 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
(704)875-9092

CERTIFICATIONS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154292

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

SAMPLE SUMMARY

Project: CTS of Asheville 6252120006
Pace Project No.: 92154292

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92154292001	**TB-04-02**	Water	04/11/13 00:00	04/11/13 12:33
92154292002	**PW-050A-02**	Water	04/11/13 08:35	04/11/13 12:33
92154292003	**PW-050B-02**	Water	04/11/13 08:40	04/11/13 12:33
92154292004	**PW-049A-02**	Water	04/11/13 09:10	04/11/13 12:33
92154292005	**PW-049B-02**	Water	04/11/13 09:15	04/11/13 12:33

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SAMPLE ANALYTE COUNT

Project: CTS of Asheville 6252120006
Pace Project No.: 92154292

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92154292001	**TB-04-02**	EPA 8260	KJM	12	PASI-C
92154292002	**PW-050A-02**	EPA 8260	KJM	12	PASI-C
92154292003	**PW-050B-02**	EPA 8260	KJM	12	PASI-C
92154292004	**PW-049A-02**	EPA 8260	KJM	12	PASI-C
92154292005	**PW-049B-02**	EPA 8260	KJM	12	PASI-C

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PROJECT NARRATIVE

Project: CTS of Asheville 6252120006
Pace Project No.: 92154292

Method: **EPA 8260**
Description: 8260 MSV Low Level
Client: AMEC, Asheville
Date: April 17, 2013

General Information:
5 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 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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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154292

Sample: TB-04-02 **Lab ID: 92154292001** Collected: 04/11/13 00:00 Received: 04/11/13 12:33 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		04/13/13 05:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/13/13 05:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/13/13 05:52	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/13/13 05:52	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/13/13 05:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/13/13 05:52	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/13/13 05:52	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/13/13 05:52	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		04/13/13 05:52	460-00-4	
Dibromofluoromethane (S)	103	%	70-130		1		04/13/13 05:52	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		04/13/13 05:52	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		04/13/13 05:52	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154292

Sample: PW-050A-02 **Lab ID: 92154292002** Collected: 04/11/13 08:35 Received: 04/11/13 12:33 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		04/13/13 10:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/13/13 10:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/13/13 10:23	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/13/13 10:23	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/13/13 10:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/13/13 10:23	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/13/13 10:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/13/13 10:23	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		04/13/13 10:23	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		1		04/13/13 10:23	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		04/13/13 10:23	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		04/13/13 10:23	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154292

Sample: PW-050B-02 **Lab ID: 92154292003** Collected: 04/11/13 08:40 Received: 04/11/13 12:33 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		04/13/13 10:39	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/13/13 10:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/13/13 10:39	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/13/13 10:39	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/13/13 10:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/13/13 10:39	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/13/13 10:39	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/13/13 10:39	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		04/13/13 10:39	460-00-4	
Dibromofluoromethane (S)	103	%	70-130		1		04/13/13 10:39	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		04/13/13 10:39	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		04/13/13 10:39	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154292

Sample: PW-049A-02 **Lab ID: 92154292004** Collected: 04/11/13 09:10 Received: 04/11/13 12:33 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		04/13/13 10:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/13/13 10:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/13/13 10:55	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/13/13 10:55	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/13/13 10:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/13/13 10:55	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/13/13 10:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/13/13 10:55	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		04/13/13 10:55	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		1		04/13/13 10:55	1868-53-7	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		04/13/13 10:55	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		04/13/13 10:55	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154292

Sample: PW-049B-02 **Lab ID: 92154292005** Collected: 04/11/13 09:15 Received: 04/11/13 12:33 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		04/13/13 11:11	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/13/13 11:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/13/13 11:11	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/13/13 11:11	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/13/13 11:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/13/13 11:11	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/13/13 11:11	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/13/13 11:11	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		04/13/13 11:11	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		04/13/13 11:11	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		04/13/13 11:11	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		04/13/13 11:11	2037-26-5	

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QUALITY CONTROL DATA

Project: CTS of Asheville 6252120006
Pace Project No.: 92154292

QC Batch: MSV/22628 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92154292001, 92154292002, 92154292003, 92154292004, 92154292005

METHOD BLANK: 955785 — Matrix: Water
Associated Lab Samples: 92154292001, 92154292002, 92154292003, 92154292004, 92154292005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	04/13/13 02:41	
1,1-Dichloroethene	ug/L	ND	1.0	04/13/13 02:41	
cis-1,2-Dichloroethene	ug/L	ND	1.0	04/13/13 02:41	
Tetrachloroethene	ug/L	ND	1.0	04/13/13 02:41	
Toluene	ug/L	ND	1.0	04/13/13 02:41	
trans-1,2-Dichloroethene	ug/L	ND	1.0	04/13/13 02:41	
Trichloroethene	ug/L	ND	1.0	04/13/13 02:41	
Vinyl chloride	ug/L	ND	1.0	04/13/13 02:41	
1,2-Dichloroethane-d4 (S)	%	105	70-130	04/13/13 02:41	
4-Bromofluorobenzene (S)	%	95	70-130	04/13/13 02:41	
Dibromofluoromethane (S)	%	104	70-130	04/13/13 02:41	
Toluene-d8 (S)	%	101	70-130	04/13/13 02:41	

LABORATORY CONTROL SAMPLE: 955786

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	53.5	107	70-130	
1,1-Dichloroethene	ug/L	50	52.4	105	70-132	
cis-1,2-Dichloroethene	ug/L	50	53.0	106	70-131	
Tetrachloroethene	ug/L	50	52.9	106	70-130	
Toluene	ug/L	50	53.3	107	70-130	
trans-1,2-Dichloroethene	ug/L	50	54.6	109	70-130	
Trichloroethene	ug/L	50	51.4	103	70-130	
Vinyl chloride	ug/L	50	54.1	108	69-130	
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Dibromofluoromethane (S)	%			100	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 955787 955788

Parameter	Units	92154292004 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	67.7	65.6	135	131	70-166	3	30	
Toluene	ug/L	ND	50	50	60.8	59.2	122	118	70-155	3	30	
Trichloroethene	ug/L	ND	50	50	63.6	62.2	127	124	69-151	2	30	
1,2-Dichloroethane-d4 (S)	%						105	105	70-130			
4-Bromofluorobenzene (S)	%						96	96	70-130			
Dibromofluoromethane (S)	%						101	102	70-130			
Toluene-d8 (S)	%						99	97	70-130			

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154292

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.

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TNI - The NELAC Institute.

LABORATORIES

PASI-C Pace Analytical Services - Charlotte

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CTS of Asheville 6252120006
Pace Project No.: 92154292

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92154292001	**TB-04-02**	EPA 8260	MSV/22628		
92154292002	**PW-050A-02**	EPA 8260	MSV/22628		
92154292003	**PW-050B-02**	EPA 8260	MSV/22628		
92154292004	**PW-049A-02**	EPA 8260	MSV/22628		
92154292005	**PW-049B-02**	EPA 8260	MSV/22628		

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Pace Analytical® www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: March 13, 2013 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.09	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#2 -80344039 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

IR Gun Back Up- 111565135

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 5.8 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C **Comments:**

Date and Initials of person examining contents: 4/4/13

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	**Initial when completed**
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: JD **Date:** 4/11/13

SRF Review: JD **Date:** 4/12/13

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# : 92154292

9215429:2

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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

1668277

Section A Required Client Information:

Company: AMEC
Address: 1308 Patton Ave. Asheville, NC 28806
Email To: susan.kelly@amec.com
Phone: 8282528130 Fax:
Requested Due Date/TAT: Std.

Section B Required Project Information:

Report To: Susan Kelly
Copy To:
Purchase Order No.: 601210963
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): Y/N; Analysis Test: 8260 VOCs*

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 VOCs*	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92154292
1	TB-04-02	WT	G	N/A	N/A	lab prep			2			X						X		001
2	PW-050A-02	WT	G	↓	↓	4/1/13	8:35		3			X						X		002
3	PW-050B-02	WT	G			4/1/13	8:40		3			X						X		003
4	PW-049A-02	WT	G			4/1/13	9:10		3			X						X		MS/MSD 004
5	PW-049B-02	WT	G			4/1/13	9:15		3			X						X		005
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
*site specific compound list	[signature] / AMEC	4/1/13	12:33	[signature]	4/1/13	12:33	5.8	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: SUSAN KELLY
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 4/1/13

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.

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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April 19, 2013

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

RE: Project: CTS of Asheville 6252120006
Pace Project No.: 92154590

Dear Ms. Kelly:
Enclosed are the analytical results for sample(s) received by the laboratory on April 15, 2013. 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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CERTIFICATIONS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154590

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.: 92154590

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92154590001	**TB-05-02**	Water	04/15/13 00:00	04/15/13 15:21
92154590002	**FD-04-02**	Water	04/15/13 00:00	04/15/13 15:21
92154590003	**PW-001A-02**	Water	04/15/13 13:25	04/15/13 15:21
92154590004	**PW-001B-02**	Water	04/15/13 13:30	04/15/13 15:21
92154590005	**PW-098A-02**	Water	04/15/13 14:10	04/15/13 15:21
92154590006	**PW-098B-02**	Water	04/15/13 14:15	04/15/13 15:21

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SAMPLE ANALYTE COUNT

Project: CTS of Asheville 6252120006
Pace Project No.: 92154590

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92154590001	**TB-05-02**	EPA 8260	MCK	12	PASI-C
92154590002	**FD-04-02**	EPA 8260	MCK	12	PASI-C
92154590003	**PW-001A-02**	EPA 8260	MCK	12	PASI-C
92154590004	**PW-001B-02**	EPA 8260	MCK	12	PASI-C
92154590005	**PW-098A-02**	EPA 8260	MCK	12	PASI-C
92154590006	**PW-098B-02**	EPA 8260	MCK	12	PASI-C

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PROJECT NARRATIVE

Project: CTS of Asheville 6252120006
Pace Project No.: 92154590

Method: **EPA 8260**
Description: 8260 MSV Low Level
Client: AMEC, Asheville
Date: April 19, 2013

General Information:
6 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 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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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154590

Sample: TB-05-02 **Lab ID: 92154590001** Collected: 04/15/13 00:00 Received: 04/15/13 15:21 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		04/17/13 17:22	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/17/13 17:22	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/17/13 17:22	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/17/13 17:22	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/17/13 17:22	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/17/13 17:22	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/17/13 17:22	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/17/13 17:22	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		04/17/13 17:22	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		04/17/13 17:22	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		04/17/13 17:22	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		04/17/13 17:22	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154590

Sample: FD-04-02 **Lab ID: 92154590002** Collected: 04/15/13 00:00 Received: 04/15/13 15:21 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		04/17/13 17:38	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/17/13 17:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/17/13 17:38	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/17/13 17:38	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/17/13 17:38	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/17/13 17:38	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/17/13 17:38	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/17/13 17:38	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		04/17/13 17:38	460-00-4	
Dibromofluoromethane (S)	110	%	70-130		1		04/17/13 17:38	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		04/17/13 17:38	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		04/17/13 17:38	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154590

Sample: PW-001A-02 **Lab ID: 92154590003** Collected: 04/15/13 13:25 Received: 04/15/13 15:21 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		04/17/13 17:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/17/13 17:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/17/13 17:54	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/17/13 17:54	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/17/13 17:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/17/13 17:54	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/17/13 17:54	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/17/13 17:54	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		04/17/13 17:54	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		04/17/13 17:54	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		04/17/13 17:54	17060-07-0	
Toluene-d8 (S)	109	%	70-130		1		04/17/13 17:54	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154590

Sample: PW-001B-02 **Lab ID: 92154590004** Collected: 04/15/13 13:30 Received: 04/15/13 15:21 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		04/17/13 18:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/17/13 18:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/17/13 18:09	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/17/13 18:09	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/17/13 18:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/17/13 18:09	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/17/13 18:09	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/17/13 18:09	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		04/17/13 18:09	460-00-4	
Dibromofluoromethane (S)	108	%	70-130		1		04/17/13 18:09	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		04/17/13 18:09	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		04/17/13 18:09	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154590

Sample: PW-098A-02 **Lab ID: 92154590005** Collected: 04/15/13 14:10 Received: 04/15/13 15:21 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		04/17/13 18:25	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/17/13 18:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/17/13 18:25	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/17/13 18:25	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/17/13 18:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/17/13 18:25	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/17/13 18:25	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/17/13 18:25	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		04/17/13 18:25	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		04/17/13 18:25	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		04/17/13 18:25	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		04/17/13 18:25	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154590

Sample: PW-098B-02 **Lab ID: 92154590006** Collected: 04/15/13 14:15 Received: 04/15/13 15:21 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		04/17/13 18:41	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/17/13 18:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/17/13 18:41	156-60-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/17/13 18:41	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/17/13 18:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/17/13 18:41	71-55-6	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/17/13 18:41	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/17/13 18:41	75-01-4	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		04/17/13 18:41	460-00-4	
Dibromofluoromethane (S)	111	%	70-130		1		04/17/13 18:41	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		04/17/13 18:41	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		04/17/13 18:41	2037-26-5	

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QUALITY CONTROL DATA

Project: CTS of Asheville 6252120006
Pace Project No.: 92154590

QC Batch: MSV/22669 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92154590001, 92154590002, 92154590003, 92154590004, 92154590005, 92154590006

METHOD BLANK: 957843 — Matrix: Water
Associated Lab Samples: 92154590001, 92154590002, 92154590003, 92154590004, 92154590005, 92154590006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	04/17/13 13:58	
1,1-Dichloroethene	ug/L	ND	1.0	04/17/13 13:58	
cis-1,2-Dichloroethene	ug/L	ND	1.0	04/17/13 13:58	
Tetrachloroethene	ug/L	ND	1.0	04/17/13 13:58	
Toluene	ug/L	ND	1.0	04/17/13 13:58	
trans-1,2-Dichloroethene	ug/L	ND	1.0	04/17/13 13:58	
Trichloroethene	ug/L	ND	1.0	04/17/13 13:58	
Vinyl chloride	ug/L	ND	1.0	04/17/13 13:58	
1,2-Dichloroethane-d4 (S)	%	98	70-130	04/17/13 13:58	
4-Bromofluorobenzene (S)	%	105	70-130	04/17/13 13:58	
Dibromofluoromethane (S)	%	102	70-130	04/17/13 13:58	
Toluene-d8 (S)	%	103	70-130	04/17/13 13:58	

LABORATORY CONTROL SAMPLE: 957844

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	59.5	119	70-130	
1,1-Dichloroethene	ug/L	50	60.9	122	70-132	
cis-1,2-Dichloroethene	ug/L	50	55.9	112	70-131	
Tetrachloroethene	ug/L	50	51.2	102	70-130	
Toluene	ug/L	50	54.9	110	70-130	
trans-1,2-Dichloroethene	ug/L	50	56.6	113	70-130	
Trichloroethene	ug/L	50	53.7	107	70-130	
Vinyl chloride	ug/L	50	56.1	112	69-130	
1,2-Dichloroethane-d4 (S)	%			95	70-130	
4-Bromofluorobenzene (S)	%			110	70-130	
Dibromofluoromethane (S)	%			107	70-130	
Toluene-d8 (S)	%			105	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 957845 957846

Parameter	Units	92154415006 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	72.6	66.7	145	133	70-166	8	30	
Toluene	ug/L	ND	50	50	60.2	56.4	120	113	70-155	6	30	
Trichloroethene	ug/L	ND	50	50	63.9	61.1	128	122	69-151	4	30	
1,2-Dichloroethane-d4 (S)	%						98	97	70-130			
4-Bromofluorobenzene (S)	%						103	104	70-130			
Dibromofluoromethane (S)	%						104	106	70-130			
Toluene-d8 (S)	%						104	104	70-130			

REPORT OF LABORATORY ANALYSIS

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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: CTS of Asheville 6252120006
Pace Project No.: 92154590

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 958639 958640

Parameter	Units	92154590004 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	68.3	64.2	137	128	70-166	6	30	
Toluene	ug/L	ND	50	50	63.1	58.3	126	117	70-155	8	30	
Trichloroethene	ug/L	ND	50	50	65.2	60.3	130	121	69-151	8	30	
1,2-Dichloroethane-d4 (S)	%						108	106	70-130			
4-Bromofluorobenzene (S)	%						95	94	70-130			
Dibromofluoromethane (S)	%						103	103	70-130			
Toluene-d8 (S)	%						97	97	70-130			

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QUALIFIERS

Project: CTS of Asheville 6252120006
Pace Project No.: 92154590

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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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CTS of Asheville 6252120006
Pace Project No.: 92154590

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92154590001	**TB-05-02**	EPA 8260	MSV/22669		
92154590002	**FD-04-02**	EPA 8260	MSV/22669		
92154590003	**PW-001A-02**	EPA 8260	MSV/22669		
92154590004	**PW-001B-02**	EPA 8260	MSV/22669		
92154590005	**PW-098A-02**	EPA 8260	MSV/22669		
92154590006	**PW-098B-02**	EPA 8260	MSV/22669		

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Pace Analytical www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: March 13, 2013 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.09	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#2 -80344039 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

IR Gun Back Up- 111565135

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 0.9 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 4/15/13

		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	**Initial when completed**
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: JA **Date:** 4/15/13

SRF Review: JA **Date:** 4/16/13

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# : 92154590

92154590

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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

1638475

Section A Required Client Information:
Company: AMEC
Address: 1308 Patton Ave Asheville NC 28806
Email To: susan.kelly@amec.com
Phone: 8282528130 Fax:
Requested Due Date/TAT: std

Section B Required Project Information:
Report To: Susan Kelly
Copy To:
Purchase Order No.: 6012101963
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): Y/N; Analysis Test: 8260D VOCs*

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED 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	8260D VOCs*	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92154590
1	TB-05-02	WT	G	N/A	N/A	lab	prep		2				X					X		001
2	FD-04-02	WT	G			4/15/13	00:00		3				X					X		002
3	PW-001A-02	WT	G			4/15/13	13:25		3				X					X		003
4	PW-001B-02	WT	G			4/15/13	13:30		3				X					X		MS/MSD 004
5	PW-098A-02	WT	G			4/15/13	14:10		3				X					X		005
6	PW-098B-02	WT	G			4/15/13	14:15		3				X					X		006
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*site-specific compound list	[signature] / AMEC	4/15/13	15:21	Jane Meehan	4/15/13	15:21	0.9

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: SUSAN KELLY
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM/DD/YY): 4/15/13

Temp in °C | Received on Ice (Y/N) | Custody Seal on 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.

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).

APPENDIX D

DATA VALIDATION REPORT

DATA VALIDATION REPORT
April 2013 Water Supply Monitoring
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina

Introduction

Water samples were collected at the CTS of Asheville, Inc. Superfund Site (Site) in Asheville, North Carolina in April 2013 and submitted for off-site laboratory analysis. Samples were analyzed by Pace Analytical Services, Inc., located in Charlotte, North Carolina. Results were reported in the following Sample Delivery Groups (SDGs): 92153821, 92153998, 92154164, 92154292, and 92154590.

A listing of samples included in this Data Validation Report is presented in Table D.1. The project quality control limits are included in Table D.2. A summary of the analytical results is presented in Table D.3. Samples were analyzed by the following method:

- Volatile organic compounds (VOCs) by USEPA Method 8260 (Site-specific list)

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). Data 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
J = concentration is estimated

Results are interpreted to be usable as reported by the laboratory unless discussed in the following sections.

Data Validation Results

Continuing Calibration

Percent differences between the initial calibration average relative response factors (RRFs) and continuing calibration RRFs for trans-1,2-dichloroethene (21) and 1,1,1-trichloroethane (25) were above the USEPA Region 4 control limit of 20. These analytes were not detected in associated samples, and reporting limits for trans-1,2-dichloroethene and 1,1,1-trichloroethane were qualified as estimated (UJ) in all samples of SDG 92154590. Qualified samples are summarized in Table D.4 with reason code CCV%D.

Raw Data and Calculation Checks

For SDG 92154292, the average RRFs reported on the Initial Calibration Summary did not match the average RRFs reported on the Continuing Calibration Summary. The average RRFs listed on the Continuing Calibration Summary met all quality control (QC) criteria and had been used by the laboratory for all field and QC sample quantitations. Review of the raw calibration data found that the RRFs listed on the Initial Calibration Summary were determined by including an additional calibration point that was not required. The laboratory was contacted and the Initial Calibration Summary was corrected. Based on this correction, all field sample results were determined to be reported correctly by the laboratory.

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: Julie Ricardi

Julie Ricardi

Date: 5/16/2013

Reviewed by Chris Ricardi, NRCC-EAC

Chris Ricardi

Date: 5/19/2013

TABLE D.1
Data Validation Report: Sample Summary (April 2013)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

SDG	Sample ID	Sample Date	Lab Sample ID	EPA 8260
92153821	FD-01-02	4/8/2013	92153821002	8
92153821	PW-015A-02	4/8/2013	92153821003	8
92153821	PW-015B-02	4/8/2013	92153821004	8
92153821	PW-095A-02	4/8/2013	92153821007	8
92153821	PW-095B-02	4/8/2013	92153821008	8
92153821	PW-141A-02	4/8/2013	92153821005	8
92153821	PW-141B-02	4/8/2013	92153821006	8
92153821	TB-01-02	4/8/2013	92153821001	8
92153998	FD-02-02	4/9/2013	92153998002	8
92153998	PW-017A-02	4/9/2013	92153998003	8
92153998	PW-017B-02	4/9/2013	92153998004	8
92153998	PW-021-02	4/9/2013	92153998013	8
92153998	PW-036A-02	4/9/2013	92153998007	8
92153998	PW-036B-02	4/9/2013	92153998008	8
92153998	PW-038A-02	4/9/2013	92153998005	8
92153998	PW-038B-02	4/9/2013	92153998006	8
92153998	PW-073A-02	4/9/2013	92153998014	8
92153998	PW-073B-02	4/9/2013	92153998015	8
92153998	PW-084A-02	4/9/2013	92153998016	8
92153998	PW-084B-02	4/9/2013	92153998017	8
92153998	PW-088A-02	4/9/2013	92153998009	8
92153998	PW-088B-02	4/9/2013	92153998010	8
92153998	PW-114A-02	4/9/2013	92153998011	8
92153998	PW-114B-02	4/9/2013	92153998012	8
92153998	TB-02-02	4/9/2013	92153998001	8
92154164	FD-03-02	4/10/2013	92154164002	8
92154164	PW-025A-02	4/10/2013	92154164009	8
92154164	PW-025B-02	4/10/2013	92154164010	8
92154164	PW-065A-02	4/10/2013	92154164005	8
92154164	PW-065B-02	4/10/2013	92154164006	8
92154164	PW-083A-02	4/10/2013	92154164007	8
92154164	PW-083B-02	4/10/2013	92154164008	8
92154164	PW-099A-02	4/10/2013	92154164011	8
92154164	PW-099B-02	4/10/2013	92154164012	8
92154164	PW-107A-02	4/10/2013	92154164013	8
92154164	PW-107B-02	4/10/2013	92154164014	8
92154164	PW-123A-02	4/10/2013	92154164003	8
92154164	PW-123B-02	4/10/2013	92154164004	8
92154164	TB-03-02	4/10/2013	92154164001	8
92154292	PW-049A-02	4/11/2013	92154292004	8
92154292	PW-049B-02	4/11/2013	92154292005	8
92154292	PW-050A-02	4/11/2013	92154292002	8
92154292	PW-050B-02	4/11/2013	92154292003	8
92154292	TB-04-02	4/11/2013	92154292001	8
92154590	FD-04-02	4/15/2013	92154590002	8
92154590	PW-001A-02	4/15/2013	92154590003	8
92154590	PW-001B-02	4/15/2013	92154590004	8
92154590	PW-098A-02	4/15/2013	92154590005	8
92154590	PW-098B-02	4/15/2013	92154590006	8
92154590	TB-05-02	4/15/2013	92154590001	8

Note:
1. Number listed under method indicates the number of target analytes reported.

Prepared By: WCG 5/7/13
Checked By: JAR 5/9/13

TABLE D.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

TABLE D.3
Data Validation Report: Final Results Summary (April 2013)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

		Location															
		Field ID	FD-01-02		FD-02-02		FD-03-02		FD-04-02		MGPW001 PW-001A-02		MGPW001 PW-001B-02	
		Sample Date	04/08/13		04/09/13		04/10/13		04/15/13		04/15/13		04/15/13	
		Lab ID	92153821002		92153998002		92154164002		92154590002		92154590003		92154590004	
Method	**Parameter**	**Units**	**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	UJ	1	UJ	1	UJ
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	UJ	1	UJ	1	UJ
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
J = estimated concentration

Prepared By: WCG 5/15/13
Checked By: JAR 5/16/13

TABLE D.3
Data Validation Report: Final Results Summary (April 2013)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

		Location	MGPW015		MGPW015		MGPW017		MGPW017		MGPW021		MGPW025	
		Field ID	PW-015A-02		PW-015B-02		PW-017A-02		PW-017B-02		PW-021-02		PW-025A-02	
		Sample Date	04/08/13		04/08/13		04/09/13		04/09/13		04/09/13		04/10/13	
		Lab ID	92153821003		92153821004		92153998003		92153998004		92153998013		92154164009	
Method	**Parameter**	**Units**	**Result**	**Qual**	**Result**	**Final Qua**	**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
J = estimated concentration

Prepared By: WCG 5/15/13
Checked By: JAR 5/16/13

TABLE D.3
Data Validation Report: Final Results Summary (April 2013)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

		Location	MGPW025		MGPW036		MGPW036		MGPW038		MGPW038		MGPW049	
		Field ID	PW-025B-02		PW-036A-02		PW-036B-02		PW-038A-02		PW-038B-02		PW-049A-02	
		Sample Date	04/10/13		04/09/13		04/09/13		04/09/13		04/09/13		04/11/13	
		Lab ID	92154164010		92153998007		92153998008		92153998005		92153998006		92154292004	
Method	**Parameter**	**Units**	**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
J = estimated concentration

Prepared By: WCG 5/15/13
Checked By: JAR 5/16/13

TABLE D.3
Data Validation Report: Final Results Summary (April 2013)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

		Location	MGPW049		MGPW050		MGPW050		MGPW065		MGPW065		MGPW073	
		Field ID	PW-049B-02		PW-050A-02		PW-050B-02		PW-065A-02		PW-065B-02		PW-073A-02	
		Sample Date	04/11/13		04/11/13		04/11/13		04/10/13		04/10/13		04/09/13	
		Lab ID	92154292005		92154292002		92154292003		92154164005		92154164006		92153998014	
Method	**Parameter**	**Units**	**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
J = estimated concentration

Prepared By: WCG 5/15/13
Checked By: JAR 5/16/13

TABLE D.3
Data Validation Report: Final Results Summary (April 2013)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

		Location	MGPW073		MGPW083		MGPW083		MGPW084		MGPW084		MGPW088	
		Field ID	PW-073B-02		PW-083A-02		PW-083B-02		PW-084A-02		PW-084B-02		PW-088A-02	
		Sample Date	04/09/13		04/10/13		04/10/13		04/09/13		04/09/13		04/09/13	
		Lab ID	92153998015		92154164007		92154164008		92153998016		92153998017		92153998009	
Method	**Parameter**	**Units**	**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
J = estimated concentration

Prepared By: WCG 5/15/13
Checked By: JAR 5/16/13

TABLE D.3
Data Validation Report: Final Results Summary (April 2013)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

		Location	MGPW088		MGPW095		MGPW095		MGPW098		MGPW098		MGPW099	
		Field ID	PW-088B-02		PW-095A-02		PW-095B-02		PW-098A-02		PW-098B-02		PW-099A-02	
		Sample Date	04/09/13		04/08/13		04/08/13		04/15/13		04/15/13		04/10/13	
		Lab ID	92153998010		92153821007		92153821008		92154590005		92154590006		92154164011	
Method	**Parameter**	**Units**	**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	UJ	1	UJ	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	UJ	1	UJ	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
J = estimated concentration

Prepared By: WCG 5/15/13
Checked By: JAR 5/16/13

TABLE D.3
Data Validation Report: Final Results Summary (April 2013)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

		Location	MGPW099		MGPW107		MGPW107		MGPW114		MGPW114		MGPW123	
		Field ID	PW-099B-02		PW-107A-02		PW-107B-02		PW-114A-02		PW-114B-02		PW-123A-02	
		Sample Date	04/10/13		04/10/13		04/10/13		04/09/13		04/09/13		04/10/13	
		Lab ID	92154164012		92154164013		92154164014		92153998011		92153998012		92154164003	
Method	**Parameter**	**Units**	**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
J = estimated concentration

Prepared By: WCG 5/15/13
Checked By: JAR 5/16/13

TABLE D.3
Data Validation Report: Final Results Summary (April 2013)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

		Location	MGPW123		MGPW141		MGPW141		QC		QC		QC	
		Field ID	PW-123B-02		PW-141A-02		PW-141B-02		TB-01-02		TB-02-02		TB-03-02	
		Sample Date	04/10/13		04/08/13		04/08/13		04/08/13		04/09/13		04/10/13	
		Lab ID	92154164004		92153821005		92153821006		92153821001		92153998001		92154164001	
Method	**Parameter**	**Units**	**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
J = estimated concentration

Prepared By: WCG 5/15/13
Checked By: JAR 5/16/13

TABLE D.3
Data Validation Report: Final Results Summary (April 2013)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
AMEC Project 6252-12-0006

		Location	QC		QC	
		Field ID	TB-04-02		TB-05-02	
		Sample Date	04/11/13		04/15/13	
		Lab ID	92154292001		92154590001	
Method	Parameter	Units	Result	Qual	Result	Qual
EPA 8260	1,1,1-Trichloroethane	UG/L	1	U	1	U
EPA 8260	1,1-Dichloroethene	UG/L	1	U	1	U
EPA 8260	cis-1,2-Dichloroethene	UG/L	1	U	1	U
EPA 8260	Tetrachloroethene	UG/L	1	U	1	U
EPA 8260	Toluene	UG/L	1	U	1	U
EPA 8260	trans-1,2-Dichloroethene	UG/L	1	U	1	U
EPA 8260	Trichloroethene	UG/L	1	U	1	U
EPA 8260	Vinyl chloride	UG/L	1	U	1	U

Notes:
UG/L = microgram per liter
U = not detected at the reporting limit
J = estimated concentration

Prepared By: WCG 5/15/13
Checked By: JAR 5/16/13

TABLE D.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	Units
FD-04-02	92154590002	92154590	EPA 8260	1,1,1-Trichloroethane	1	U	UJ	CCV%D	UG/L
FD-04-02	92154590002	92154590	EPA 8260	trans-1,2-Dichloroethene	1	U	UJ	CCV%D	UG/L
PW-001A-02	92154590003	92154590	EPA 8260	1,1,1-Trichloroethane	1	U	UJ	CCV%D	UG/L
PW-001A-02	92154590003	92154590	EPA 8260	trans-1,2-Dichloroethene	1	U	UJ	CCV%D	UG/L
PW-001B-02	92154590004	92154590	EPA 8260	1,1,1-Trichloroethane	1	U	UJ	CCV%D	UG/L
PW-001B-02	92154590004	92154590	EPA 8260	trans-1,2-Dichloroethene	1	U	UJ	CCV%D	UG/L
PW-098A-02	92154590005	92154590	EPA 8260	1,1,1-Trichloroethane	1	U	UJ	CCV%D	UG/L
PW-098A-02	92154590005	92154590	EPA 8260	trans-1,2-Dichloroethene	1	U	UJ	CCV%D	UG/L
PW-098B-02	92154590006	92154590	EPA 8260	1,1,1-Trichloroethane	1	U	UJ	CCV%D	UG/L
PW-098B-02	92154590006	92154590	EPA 8260	trans-1,2-Dichloroethene	1	U	UJ	CCV%D	UG/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:
CCV%D = continuing calibration percent difference exceeds control limit

Prepared By: WCG 5/15/13
Checked By: JAR 5/16/13