



ISCO PRE-DESIGN INVESTIGATION EVALUATION REPORT

CTS OF ASHEVILLE, INC. SUPERFUND SITE

**235 Mills Gap Road
Asheville, Buncombe County, North Carolina
EPA ID: NCD003149556
Consent Decree – Civil Action No. 1:16-cv-380**

Prepared for:
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Prepared by:
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Amec Foster Wheeler Project 6252-16-2012

September 11, 2017



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Subject: ISCO Pre-Design Investigation Evaluation Report
CTS of Asheville, Inc. Superfund Site
235 Mills Gap Road, Asheville, Buncombe County, North Carolina
Amec Foster Wheeler Project 6252-16-2012
EPA ID: NCD003149556
Consent Decree – Civil Action No. 1:16-cv-380

Dear Mr. Zeller:

Please find attached the In-situ Chemical Oxidation (ISCO) Pre-Design Investigation Evaluation Report (PDI Report) for the above-referenced Site. Amec Foster Wheeler Environment & Infrastructure, Inc. prepared this PDI Report on behalf of CTS Corporation to comply with the Consent Decree for Interim Remedial Design/Remedial Action at the CTS of Asheville, Inc. Superfund Site between the United States of America and CTS Corporation, Mills Gap Road Associates, and Northrop Grumman Systems Corporation (entered on March 7, 2017).

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

Sincerely,

Amec Foster Wheeler Environment & Infrastructure, Inc.


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ACRONYMS

bgs	below ground surface
cis-1,2-DCE	cis-1,2-dichloroethene
CD	Consent Decree
DPT	direct-push technology
EC	electrical conductivity
ECD	electron capture device
FID	flame ionization detector
g/kg	grams per kilogram
IDW	investigative derived waste
ISCO	in-situ chemical oxidation
MIP	membrane interface probe
MDL	method detection limit
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
µV	microvolts
NAPL	non-aqueous phase liquid
PNOD	permanganate natural oxidant demand
PDI	Pre-design Investigation
PWR	partially weathered rock
QAPP	Quality Assurance Project Plan
TCE	trichloroethene (also, trichloroethylene)
TCL	Target Compound List
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

1.0 INTRODUCTION

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) prepared this In-Situ Chemical Oxidation (ISCO) Pre-Design Evaluation Investigation Report (PDI Report) for the CTS of Asheville, Inc. Superfund Site (Site). This PDI Report describes work conducted to comply with the Consent Decree for Interim Remedial Design/Remedial Action (CD) at the Site between the United States of America and CTS Corporation, Mills Gap Road Associates, and Northrop Grumman Systems Corporation.

1.1 SITE DESCRIPTION

The approximate center of the Site is located at north latitude 35°29'36" and west longitude 82°30'25" (Figure 1). The Site formerly contained an approximate 95,000-square foot, single-story brick and metal structure on the southern portion of the Site. The building was demolished in December 2011 and the concrete building pad remains intact. The northeastern portion of the Site contains an asphalt-paved parking area, and asphalt-paved driveways are located parallel to the north (front) of the building pad and southeast (rear) of the building pad. A six-foot high chain-link fence surrounds the Site and a locked gate at the north end of the Site controls access to the Site from Mills Gap Road. The Site is unoccupied. The Site and adjacent property boundaries are illustrated on Figure 2.

1.2 OBJECTIVES OF THE ISCO PDI

The objective of the PDI was to collect additional information in the approximate 1.9-acre Northern Area of the Site where interim ISCO groundwater remediation will be implemented. One objective of the PDI was to gather data to better understand the distribution of VOC contamination in the Northern Area groundwater plume so that treatment can be focused in the areas of the highest contamination, both horizontally and vertically. Another objective was to collect additional soil and groundwater data to provide information for the design of the ISCO Treatability Study and the full-scale interim ISCO Remedial Design.

2.0 FIELD ACTIVITIES

The ISCO PDI was implemented in general accordance with the USEPA-approved PDI Work Plan, dated April 19, 2017, as described in the following sections. Field activities were conducted from May 24, 2017, through June 31, 2017. The USEPA Remedial Project Manager and a USEPA contractor representative accompanied Amec Foster Wheeler during portions of the field activities. A copy of the field log book is included in Appendix A.

2.1 DEPTH TO GROUNDWATER MEASUREMENT

The depth to groundwater was measured in the six overburden monitoring wells in the Northern Area of the Site on May 24, 2017. The depth to water measurements and calculated elevations are tabulated in Table 1. Historic groundwater elevations in the six monitoring wells are tabulated in Table 2.

2.2 DIRECT SENSING

Direct sensing instruments were used to collect real-time semi-qualitative data in the overburden, as described below. Table 3 contains a summary of boring information (e.g., date, depth, etc.). The boring locations were surveyed with a global positioning system unit.

A membrane interface probe (MIP) was advanced at 34 locations (Figure 3). Borings were generally located in a grid pattern. Some of the proposed boring locations presented in the Work Plan were adjusted in the field based on access barriers (e.g., terrain, underground utilities, etc.). Two duplicate MIP borings were also advanced. The MIP logs are included in Appendix B.

The MIP was advanced using direct-push technology (DPT) equipment. Response tests were conducted prior to advancing each MIP boring. In some locations, the MIP was driven to refusal of the drilling equipment and the boring was terminated. At other locations where shallow refusal was encountered, the MIP was advanced to “first refusal” of the equipment, removed from the boring, and a soil sampler (e.g., dual tube assembly) was advanced to equipment refusal. The intent of advancing the soil sampler was to

remove soil from the boring to allow for advancement of the MIP deeper than the depth of first refusal. The MIP was then reinserted in the boring and advanced to “final refusal” (i.e., the MIP could not be advanced deeper than the refusal depth encountered with the soil sampler).

Because this process could potentially slow the investigation schedule, the soil sampler was advanced through the vadose zone to a depth above the water table prior to advancing the MIP. In these instances, the MIP was not advanced at a slow rate to take measurements in the vadose zone. This approach is considered acceptable, as the intent of the MIP investigation was to collect direct sensing data below the water table where remediation will occur. Also, previous investigations have indicated that there is no or minimal contamination in the vadose zone in the area of investigation.

The MIP contains three detectors for evaluation of VOCs: an electron capture device (ECD), a flame ionization detector (FID), and a photoionization detector (PID). The detectors generally respond to different groups of compounds: the ECD responds to chlorinated VOCs, such as TCE; the PID responds primarily to aromatic compounds, such as benzene; and the FID primarily responds to alkanes, such as methane. The MIP probe also contains an electrical conductivity dipole, which indicates general soil conditions (e.g., sand, clay, etc.).

2.3 SOIL AND GROUNDWATER SAMPLING

Soil and groundwater samples were collected at selected locations/depths based on the results of the MIP data in accordance with the methods presented in the PDI Work Plan. Table 4 contains a summary of the soil and groundwater samples collected.

Soil borings were advanced adjacent to the select MIP borings using DPT equipment. For collection of soil samples, the borings were advanced to the target depth using a dual-tube assembly. Soil cores were retrieved at five-foot intervals and the soil core was scanned with a PID at approximate one-foot intervals and photographed. The soil lithology, PID readings, and sample information were recorded on soil boring records. Boring logs are included in Appendix C.

A screen-point sampler was advanced using DPT equipment in borings selected for the collection of groundwater samples. The sampler was advanced to the target depth, and the outer rod was pulled back/up approximately four feet to expose the stainless-steel screen to the formation. Polyethylene tubing equipped with a stainless-steel check valve was lowered to the screened interval. A peristaltic pump, in combination with the check valve, was used to purge the screened interval and collect a groundwater sample. Water quality parameters (temperature, pH, conductivity, dissolved oxygen, oxidation reduction potential, and turbidity) were measured using a calibrated water quality meter during purging.

Groundwater samples were also collected from four monitoring wells located in the Northern Area (MW-6, MW-6A, MW-7, and MW-7A). The wells were purged either with a peristaltic pump or a variable-speed submersible pump. Water quality parameters were measured using a calibrated water quality meter during purging. The calibration and groundwater sampling records are included in Appendix A.

The soil and groundwater samples were containerized, labeled, packed, and shipped in accordance with the procedures described in the Work Plan. Ten soil samples were submitted to Pace Analytical Services (Pace) for analysis of Target Compound List (TCL) VOCs according to USEPA Method 8260. Twenty soil samples were submitted to Geo-Cleanse International for analysis of permanganate natural oxidant demand (PNOD) according to ASTM D 7262-07. Fourteen groundwater samples were submitted to Pace for analysis of TCL VOCs according to USEPA Method 8260.

2.4 DECONTAMINATION PROCEDURES

DPT equipment (e.g., drill rods, probe tips, etc.) was decontaminated with a solution of industrial detergent and potable water prior to each use. Two equipment blank samples were collected from the sampling equipment to evaluate the decontamination procedures. One sample (EB-03) was collected by pouring deionized water over the screen-point sampler, which comes in direct contact with the soil/groundwater. A second equipment blank sample (EB-04) was collected by pouring deionized water through the sampling liner and drilling shoe.

2.5 INVESTIGATIVE DERIVED WASTE

Investigative derived waste (IDW), including soil cuttings, purge water, and decontamination water, was containerized in 55-gallon drums and labeled for accumulation at the Site. Liquid IDW was accumulated separately from soil IDW and each drum was labeled as to the drum's contents. Excess soil was removed from sampling materials, such as plastic and gloves, and the sampling material was then collected in plastic bags and removed from the Site for disposal in a permitted, municipal solid waste landfill. The waste disposal manifest for the IDW is included in Appendix D.

3.0 DIRECT SENSING RESULTS

The results of the direct sensing activities are discussed in the following sections.

3.1 SOIL ELECTRICAL CONDUCTIVITY

The EC responses are generally less than 20 millSiemens per meter indicating that the soil consists of coarse-grained materials, such as sand. Where duplicate borings were advanced, the EC responses in the duplicate borings were similar to the primary boring.

3.2 PHOTOIONIZATION DETECTOR

PID responses above background were detected where elevated ECD responses were detected. Where duplicate borings were advanced, the PID responses in the duplicate borings were similar to the primary boring.

3.3 FLAME IONIZATION DETECTOR

FID responses were generally detected in borings that also indicated PID responses. Where duplicate borings were advanced, the FID responses in the duplicate borings were similar to the primary boring.

3.4 ELECTRON CAPTURE DEVICE

The ECD background response was generally around 1×10^5 microvolts (μV). ECD responses ranged from background to the maximum detection limit of the equipment of $1.4 \times 10^7 \mu\text{V}$. Where duplicate borings were advanced, the ECD responses in the duplicate borings were similar to the primary boring. ECD responses above background were not detected above the water table.

ECD responses were compared to the analytical results of soil and groundwater samples. ECD responses were generally low where total chlorinated VOC concentrations in the samples were low, and ECD responses were highest where total chlorinated VOC concentrations in the samples were highest. In general, the ECD reached a maximum response where TCE concentrations in groundwater were greater than 10,000 micrograms per liter ($\mu\text{g/L}$).

4.0 ANALYTICAL RESULTS AND DATA USABILITY

The following sections describe the laboratory analytical results of the submitted samples and the results of the data validation. The laboratory analytical reports for soil and groundwater samples analyzed for VOCs are included in Appendix E. The results for the PNOD testing are included in Appendix F.

4.1 SOIL

The VOC laboratory analytical results of the soil samples are summarized in Table 5 and presented in Figure 4. The analytical results indicate 16 USEPA Method 8260 TCL VOCs were detected in the soil samples above the method detection limit (MDL; per the data validation described in Section 4.3).

TCE was detected in all of the soil samples, with the highest concentration (5,030 micrograms per kilogram [$\mu\text{g}/\text{kg}$]) detected in SS-87-48 and the lowest concentration (13.3 $\mu\text{g}/\text{kg}$) detected in SS-75-23. The remaining detected compounds are chlorinated VOCs (e.g., 1,1,1-trichloroethane and tetrachloroethene), chlorinated VOC breakdown products (e.g., cis-1,2-dichloroethane), and compounds related to petroleum hydrocarbons (e.g., benzene, toluene, etc.).

The PNOD results are summarized in Table 6. The average PNOD results for each sample ranged from 0.9 grams per kilogram (g/kg) to 2.2 g/kg. The results indicate that the PNOD does not vary greatly in the Northern Area of the site.

4.3).

4.2 GROUNDWATER

The laboratory analytical results of the groundwater samples collected from the monitoring wells are summarized in Table 7, and presented in Figure 4. The laboratory analytical results of the groundwater samples collected from the DPT borings are summarized in Table 8, and presented in Figure 4. The analytical results indicate 11 USEPA Method 8260 TCL VOCs were detected in the groundwater samples above the MDL.

TCE was detected in the groundwater samples, with the highest concentration (60,600 µg/L) in MW-6A and the lowest concentration (42.5 µg/L) in MW-7. The remaining detected compounds are chlorinated VOCs, chlorinated VOC breakdown products and compounds related to petroleum hydrocarbons.

4.3 DATA VALIDATION

Analytical data generated at the off-site laboratory for VOC analysis were validated prior to use in the evaluation presented in this report. Validation was completed using project objectives described in the Quality Assurance Project Plan (QAPP) prepared for the Remedial Design Work Plan (Amec Foster Wheeler, 2017) and USEPA Region 4 guidelines. A summary of the data validation process and findings is presented in Appendix G.

In accordance with the validation guidelines, a subset of results were qualified as estimated values due to quality control measurements that were outside of precision and/or accuracy goals specified in the QAPP or validation guidelines. In these cases, the results are determined to be useable as estimated values. The reasons for data qualification are discussed in Appendix G.

4.4 DATA USABILITY

The data set is considered to be greater than 100 percent complete with respect to the collected data. Therefore, the data are usable for completing the objectives set forth in the Work Plan.

5.0 UPDATED NORTHERN AREA CONCEPTUAL SITE MODEL

The following Conceptual Site Model is based on data collected to date, including the PDI results, related to the overburden formation in the Northern Area of the Site.

5.1 SITE PHYSICAL SETTING

The area surrounding the Site is considered rural and contains residential and light commercial properties. The Site is situated on a topographic “saddle” between two prominent mountains - Busbee Mountain to the north and Brown Mountain to the south and southwest. Properties northwest and southeast are topographically downgradient of the Site. The majority of the Site is relatively flat and natural surface drainage at the Site is to the northwest. The surrounding area contains mountains and rolling hills, typical of the eastern flank of the Appalachian Mountain range.

5.2 GEOLOGY

Fill material and residual soil (overburden) have been identified in the Northern Area of the Site. Fill material, consisting of loose silty sand with gravel, has been observed to a depth of approximately 20 feet below ground surface (bgs) in the northwestern portion of the Site where two apparent natural intermittent surface water drainage channels were historically backfilled for development/grading. Overburden is located below the fill material, where present, and has been observed to a depth of approximately 81 feet bgs (monitoring well MW-6A) in the Northern Area of the Site, where the apparent top of bedrock is encountered.

The uppermost zone of overburden generally consists of fine to medium sand with 10 to 15 percent silt. The overburden “fabric” ranges from massive (i.e., no apparent geologic structure) to strongly foliated. Foliated zones were observed to be approximately horizontal to steeply dipping. Quartz veins ranging in thickness from less than 0.5 inches to approximately 12 inches, and consisting of sand to gravel-sized fragments, have been observed in the overburden. The partially weathered rock (PWR), which is a zone of less weathered rock than the shallower overburden, has been observed to be approximately 15 feet thick in the Northern Area and typically samples as fine to coarse sand with minor

amounts of silt and gravel-sized rock fragments. The fabric of the PWR is similar to the overburden fabric (MACTEC, 2009).

The depth to bedrock in the Northern Area ranges from approximately 70 feet bgs to approximately 81 feet bgs, based on the depth to drilling refusal using rotary/roller cone drilling equipment (MACTEC, 2009).

5.3 HYDROGEOLOGY

A groundwater divide is present in the overburden in the north-central portion of the Site. As previously discussed, the Site is located on a topographic saddle between mountains to the north and south. A portion of groundwater that is flowing from each mountain (i.e., from a higher elevation) is presumed to be toward the saddle. Therefore, a groundwater divide has developed where groundwater in the overburden flows from the mountains and turns east or west to respective discharge zones. The position and shape of the groundwater divide likely changes in response to precipitation/infiltration.

The direction of shallow groundwater flow (water table) and groundwater flow in the PWR zone are similar. Groundwater flow in the southern portion of the Site appears to flow radially, to the north and east. From the north/central portion of the Site, groundwater flows northwest and east/southeast toward the respective groundwater discharge zones.

In May 2017, the depth to groundwater in the Northern Area of the Site ranged from approximately 19 to 36 feet bgs in monitoring wells MW-7 and MW-6, respectively. Considering the depth to the water table and the depth to bedrock, the aquifer thickness ranges from approximately 40 to 50 feet. The horizontal hydraulic gradient in the shallow overburden in the central portion of the Site is approximately 0.031. The horizontal hydraulic gradient in the shallow overburden in the Northern Area of the Site toward the discharge zone east of the Site is approximately 0.066 and the horizontal gradient from Northern Area of the Site toward the discharge zone west of the Site is approximately 0.015 (Amec Foster Wheeler, 2015a).

The horizontal hydraulic gradient in the PWR in the source area at the Site is approximately 0.018. The horizontal hydraulic gradient in the PWR from the Northern Area

of the Site toward the discharge zone east of the Site is approximately 0.063 and the horizontal gradient from the Site toward the spring west of the Site is approximately 0.014 (Amec Foster Wheeler, 2015a).

Upward and downward vertical hydraulic gradients were measured between proximal overburden shallow and PWR monitoring wells, based on the May 2017 monitoring event. An upward gradient (-0.067) was measured at the MW-6/6A well pair and a relatively small upward vertical gradient (-0.005) was measured at the MW-7/7A well pair.

Groundwater elevations have fluctuated since monitoring wells were installed in 2009. From 2009 to 2013, groundwater elevations in the Northern Area of the Site increased 10.8 feet and 12.5 feet at monitoring wells MW-7A and MW-6A, respectively. Groundwater elevation increases in the shallow (water table) monitoring wells were similar during this period (i.e., 11.1 feet at MW-7 and 11.2 feet at MW-6). From 2013 to 2015, groundwater elevations decreased approximately 7 to 8 feet in the Northern Area of the Site.

The groundwater seepage velocity (v) is calculated as:

$$v = ki/n_e \text{, where}$$

k = hydraulic conductivity
 i = hydraulic gradient
 n_e = effective porosity

Based on the average hydraulic conductivity of 2.3×10^{-4} cm/sec determined by slug testing conducted for the non-aqueous phase liquid (NAPL) Area Focused Feasibility Study Report (Amec Foster Wheeler, 2015a) and an assumed effective porosity of 0.25, the groundwater seepage velocity from the Northern Area (monitoring well pairs MW-6/6A and 7/7A) ranges from 13 feet per year to the western discharge zone, to 63 feet per year to the eastern discharge zone.

5.4 NATURE AND EXTENT OF CONTAMINATION

As determined from previous investigations, and confirmed during the 2013/2014 NAPL Investigation, the contamination source area is located below the south-central portion of the former building and extends to the immediate south. The nature of the chlorinated VOC contamination, whether from pure product or from a mixed material/liquid containing

a portion of chlorinated VOCs, is unknown. The primary release mechanism(s) associated with the chlorinated VOC contamination observed at the Site is also unknown.

The petroleum contamination identified in the source area at the Site consists primarily of fuel oil. The primary release mechanism(s) associated with the petroleum contamination observed at the Site is unknown; however, the petroleum is suspected of originating from an aboveground fuel oil storage tank formerly used to store and supply fuel oil to the facility's boiler.

Based on results from the NAPL Investigation, a significant portion of TCE has partitioned into (i.e., dissolved into) the petroleum NAPL. Based on geochemical parameters, primarily the octanol-water coefficient, TCE will more readily partition into the petroleum NAPL than dissolve into groundwater; however, via equilibrium conditions, the TCE will dissolve into groundwater over time (Amec, 2014). Therefore, the petroleum NAPL acts as the primary source to the dissolved-phase groundwater plume, which extends north from the north lobe of the NAPL zone, and east from the east lobe of the NAPL zone. From the Northern Area of the Site, the dissolved-phase groundwater plume extends east and west to discharge zones. Based on this PDI and previous investigations, there is no evidence of NAPL (either light or dense) in the overburden in the Northern Area of the Site.

5.4.1 Unsaturated Soil

Unsaturated soil samples collected to date from the overburden in the Northern Area of the Site do not indicate a source of soil contamination that contributes to the contaminated groundwater plume in the Northern Area of the Site. For instance, four unsaturated soil samples collected by USEPA subcontractors in late 2007/early 2008 did not indicate the presence of Site-related VOCs in the Northern Area of the Site (TNA, 2008). Also, an unsaturated soil sample collected from the MW-6 soil boring in September 2008 did not indicate Site-related VOCs (MACTEC, 2009).

In 2010, the facility's sanitary sewer line was located and unsaturated soil samples were collected within approximately two feet below the identified sewer line, which extends from the eastern portion of the former building to Mills Gap Road. Five unsaturated soil samples (SS-126 through SS-130) were collected below the sewer line in the Northern

Area of the Site and minor concentrations of TCE were reported in two of the samples (e.g., 5.4 and 8.1 µg/kg in SS-127 and SS-128, respectively; MACTEC, 2010).

During the 2013/2014 NAPL Investigation, elevated ECD responses indicating the presence of chlorinated VOCs were not measured in the unsaturated soil (Amec, 2014).

5.4.2 Groundwater

The dissolved-phase chlorinated VOC plume in overburden, primarily consisting of TCE, extends from the source NAPL Area to the Northern Area and then east and west toward groundwater discharge zones. Based on data collected during the NAPL Investigation (Amec, 2014) and the Western Area Remedial Investigation (Amec Foster Wheeler, 2015b), the Northern Area dissolved-phase chlorinated VOC groundwater plume likely does not extend north of Mills Gap Road.

TCE is the primary chlorinated VOC present in groundwater in the Northern Area of the Site. Minor concentrations of chlorinated VOC degradation products, such as 1,2-cis-dichloroethene (cis-1,2-DCE), have been detected in groundwater samples collected from the Northern Area. The lack of elevated concentrations of degradation products indicates that natural biodegradation does not appear to be readily occurring in the Northern Area.

The pH of shallow groundwater in the Northern Area of the Site is generally between 5 and 6, which could be one of the factors limiting the ability of microbes to anaerobically biodegrade TCE to cis-1,2-DCE (Amec Foster Wheeler, 2015a).

Concentrations of TCE vary horizontally and vertically in the Northern Area. Based on TCE concentrations in collected groundwater samples and ECD responses, chlorinated VOC concentrations generally increase with depth (Note: the ECD probe did not advance to the depth of bedrock due to limitations of the drilling equipment; the ECD probe generally advanced to a depth of approximately 40 to 50 feet bgs). Nearest the source area, VOC concentrations increase rapidly at the water table. However, farther away from the source area, VOC concentrations begin to increase 5 to 20 feet below the water table. For example, at MIP-80 near the source area, the water table is estimated to be at 19 feet bgs, and the ECD response immediately increased to a maximum reading just below this depth. Conversely, at MIP-100 in the downgradient plume area, the water table is at

approximately 20 feet bgs, but the ECD responses begin to increase at approximately 35 feet bgs and maximum readings are not until a depth of approximately 42 feet bgs.

In the southwestern area of the investigation, VOC concentrations begin to decrease after a zone of elevated readings. For example, at MIP-105, ECD responses increase at approximately 30 feet bgs, but begin to decline at approximately 45 feet bgs. Two drainage swales formed by intermittent streams were formerly located in this area of the Site, indicating that there was at one time an upward gradient and discharge zone. This 'upwelling' could be inhibiting the downward migration of groundwater containing VOCs in this area.

Based on the results of the NAPL Investigation, an area generally to the east and northeast of the former building was identified where groundwater was not highly contaminated (i.e., outside of the dissolved-phase TCE plume core). However, this investigation identified elevated TCE concentrations in this area deeper than during the NAPL Investigation. For example, MHP-11 was advanced in this area during the NAPL Investigation to a refusal depth of approximately 42 feet bgs, and a groundwater sample collected at 42 feet bgs indicated a TCE concentration of 419 µg/L. During advancement of MIP-102 and MIP-103 in this area for this investigation, ECD responses began to increase at 40 feet bgs and maximum responses were measured at 45 to 48 feet bgs. A groundwater sample collected at 52 feet bgs at MIP-102 indicated a TCE concentration of 17,800 µg/L.

Petroleum constituents have not been detected at elevated concentrations in groundwater samples collected in the Northern Area of the Site. Relatively minor concentrations of petroleum constituents (i.e., compared to reported TCE concentrations) were detected in soil and groundwater samples from nearest the NAPL source area. These minor concentrations indicate that the groundwater plume in the Northern Area of the Site does contain a relatively small proportion of petroleum constituents. In general, the petroleum constituents that have been detected/estimated are ring-structured hydrocarbons (e.g., benzene, toluene, and xylenes) which more readily dissolve into groundwater from a petroleum fuel source, such as the petroleum NAPL in the source area. Petroleum constituents in groundwater in the Northern Area are not considered to contribute significant mass to the overall contaminated groundwater plume.

5.5 FATE AND TRANSPORT

The fate and transport of contaminants in soil and groundwater is influenced by numerous factors, including the primary and secondary release mechanisms; the physical and chemical properties of the constituents that were released; and the characteristics of the subsurface medium through which the contaminants migrate.

5.5.1 Contaminants of Concern

The primary constituent of concern for the Northern Area is TCE.

5.5.2 Contaminant Transport Pathways

The primary transport pathway for contamination in the overburden in the Northern Area is via groundwater. The unsaturated soil pathway, where contaminants leach from the soil to the underlying groundwater, is not considered a transport pathway, as evidence of contamination in the unsaturated soil has not been identified in the Northern Area. The dissolved-phase groundwater plume in the Northern Area discharges at surface water features east and west of the Site resulting in an airborne contaminant pathway via volatilization of VOCs, as well as a surface water contaminant transport pathway.

5.5.3 Mass Distribution

The NAPL source area at the Site contains the largest mass of contaminants. The downgradient dissolved-phase plume contains chlorinated VOC degradation compounds and minor concentrations of petroleum constituents. Groundwater in the Northern Area contains concentrations of TCE ranging from hundreds µg/L to tens of thousands µg/L. As previously described, concentrations of TCE vary horizontally and vertically in groundwater in the Northern Area.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The data presented herein is adequate to be used in developing the Treatability Study Work Plan, and ultimately the interim ISCO Remedial Design (in conjunction with data to be collected during the Treatability Study). Specifically, the concentrations and distribution of VOCs will determine the proposed locations/depths of emplaced potassium permanganate and the amount of potassium permanganate required to reduce TCE concentrations to meet the remedial action objective. Additionally, the PNOD results will be used to determine the amount of permanganate required to overcome the natural oxidant demand of subsurface soil.

Amech Foster Wheeler recommends proceeding with preparation of the Treatability Study Work Plan which will describe procedures to implement the Treatability Study in the Northern Area. The Treatability Study will collect additional data that will be used to develop the interim ISCO Remedial Design for the Northern Area.

7.0 REFERENCES

- Amec Environment & Infrastructure, Inc. (Amec), 2014. NAPL Investigation Report, CTS of Asheville, Inc. Superfund Site, May 5, 2014.
- Amec Foster Wheeler, 2015a. Final NAPL Area Focused Feasibility Study Report, CTS of Asheville, Inc. Superfund Site, September 10, 2015.
- Amec Foster Wheeler, 2015b. Western Area Remedial Investigation Report, CTS of Asheville, Inc. Superfund Site, October 9, 2015.
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- MACTEC Engineering and Consulting, Inc., 2009. Report of Phase I Remedial Investigation. Mills Gap Road Site, July 27, 2009.
- MACTEC, 2010. Report of Phase IIA Remedial Investigation (November 19, 2010).
- TN & Associates, Inc. (TNA), 2008. Subsurface Soil and Groundwater Sampling Report, Revision 1 (April 23, 2008).

TABLES

TABLE 1
Boring Summary
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Boring Location	MIP (run 1)	Soil Sampling Between MIP Runs	MIP (run 2)	Soil Sample	Groundwater Sample
73	33.9' (5/23/17)				
74	42.5' (5/23/17)				
75	35.5' (5/23/17)			SS-75-23 23.0' - 24.0' (6/26/17; VOCs) SS-75-24 24.0' - 25.0' (6/26/17; PNOD)	GW-75-26 24.0' - 28.0' (6/26/17; VOCs)
76	32.9' (5/24/17)	30.0' - 47.0' (5/24/17)	32.9' - 49.1' (5/24/17)		
77	28.8' (5/24/17)	0.0' - 57.0' (5/25/17)	28.8' - 57.3' (5/25/17)		
78	35.0' (5/25/17)	0.0' - 62.5' (5/25/17)	35.0' - 66.2' (5/25/17)	SS-78-46 46.0' - 47.0' (6/27/17; VOCs)	GW-78-46 44.0' - 48.0' (6/27/17; VOCs)
79	25.0' - 41.4' (5/25/17)				
80	15.0' - 47.6' (5/26/17)			SS-80-37 37.0' - 38.0' (6/27/17; VOCs)	GW-80-40 38.0' - 42.0' (6/27/17; VOCs)
81	15.0' - 45.0' (5/30/17)			SS-81-33 33.0' - 34.0' (6/27/17; VOCs)	GW-81-36 34.0' - 38.0' (6/27/17; VOCs)
82	15.0' - 48.0' (5/30/17)				
83	15.0' - 42.9' (5/31/17)				
84	20.0' - 36.8' (5/31/17)				
84A	30.0' - 50.7' (6/14/17)				
85	28.0' - 43.5' (6/1/17)	30.0' - 51.0' (6/1/17)	43.5' - 57.5' (6/1/17)	SS-85-47 47.0' - 48.0' (6/1/17; PNOD)	
86	25.0' - 46.0' (6/1/17)				

TABLE 1
Boring Summary
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Boring Location	MIP (run 1)	Soil Sampling Between MIP Runs	MIP (run 2)	Soil Sample	Groundwater Sample
87	25.0' - 46.7' (6/1/17)	35.0' - 50.0' (6/2/17)		SS-87-28 28.0' - 29.0' (6/28/17; PNOD)* SS-87-31 31.0' - 32.0' (6/28/17; VOCs) SS-87-37 37.0' - 38.0' (6/2/17; PNOD) SS-87-48 48.0' - 49.0' (6/28/17; VOCs)	GW-87-35 33' - 37 (6/28/17; VOCs) GW-87-53 51.0' - 55.0' (6/28/17; VOCs)
88	20.0' - 40.0' (6/2/17)	40.0' - 49.0' (6/2/17)	40.0' - 54.2' (6/2/17)	SS-88-46 46.0' - 47.0' (6/2/17; PNOD)	
89	20.0' - 44.2' (6/2/17)				
90	25.0' - 42.7' (6/3/17)	30.0' - 51.5' (6/3/17)		SS-90-27 27.0' - 28.0' (6/28/17; PNOD) SS-90-34 34.0' - 35.0' (6/28/17; PNOD) SS-90-37 37.0' - 38.0' (6/28/17; VOCs) SS-90-39 39.0' - 40.0' (6/3/17; PNOD)	GW-90-42 40.0' - 44.0' (6/28/17; VOCs)
91	25.0' - 30.3' (6/3/17)	30.0' - 32.0' (6/3/17)			
92	15.0' - 46.2' (6/5/17)				
93	15.0' - 47.6' (6/5/17)			SS-93-22 22.0' - 23.0' (6/28/17; PNOD)* SS-93-28 28.0' - 29.0' (6/28/17; PNOD) SS-93-33 33.0' - 34.0' (6/28/17; PNOD) SS-93-42 42.0' - 43.0' (6/28/17; VOCs)	GW-93-46 44.0' - 48.0' (6/28/17; VOCs)

TABLE 1
Boring Summary
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Boring Location	MIP (run 1)	Soil Sampling Between MIP Runs	MIP (run 2)	Soil Sample	Groundwater Sample
94	15.0' - 48.3' (6/5/17)	40.0' - 55.0' (6/5/17)		SS-94-54 54.0' - 55.0' (6/5/17; PNOD)	
95	15.0' - 47.8' (6/6/17)	45.0' - 50.5' (6/6/17)		SS-95-24 24.0' - 24.0' (6/27/17; PNOD)* SS-95-37 37.0' - 38.0' (6/27/17; PNOD) SS-95-42 42.0' - 43.0' (6/27/17; VOCs)	GW-95-46 44.0' - 48.0' (6/27/17; VOCs)
96	13.0' - 44.7' (6/7/17)	35.0' - 43.0' (6/7/17)		SS-96-43 43.0' - 44.0' (6/7/17; PNOD)	
97	10.0' - 42.1' (6/8/17)				
97 DUP	10.0' - 41.4' (6/8/17)	15.0' - 57.0' (6/8/17)	41.4' - 55.3' (6/8/17)	SS-97-24 24.0' - 25.0' (6/8/17; PNOD) SS-97-54 54.0' - 55.0' (6/8/17; PNOD)	
98	10.0' - 48.7' (6/9/17)	20.0' - 59.0' (6/9/17)	48.7' - 57.3' (6/9/17)		
99	10.0' - 48.4' (6/9/17)	20.0' - 25.0' (6/9/17)			
100	13.0' - 52.5' (6/13/17)				
101	25.0' - 49.5' (6/13/17)	30.0' - 58.0' (6/14/17)	49.5' - 59.8' (6/14/17)	SS-101-43 43.0' - 44.0' (6/14/17; PNOD) SS-101-57 57.0' - 58.0' (6/14/17; PNOD)	
102	25.0' - 43.0' (6/14/17)	25.0' - 48.0' (6/15/17)	43.0' - 53.4' (6/15/17)	SS-102-32 32.0' - 33.0' (6/29/17; PNOD)* SS-102-38 38.0' - 39.0' (6/29/17; PNOD) SS-102-47 47.0' - 48.0' (6/15/17; PNOD) SS-102-53 52.0' - 53.0' (6/29/17; VOCs)	GW-102-52 50.0' - 54.0' (6/29/17; VOCs)

TABLE 1
Boring Summary
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Boring Location	MIP (run 1)	Soil Sampling Between MIP Runs	MIP (run 2)	Soil Sample	Groundwater Sample
103	20.0' - 35.5' (6/14/17)	30.0' - 43.0' (6/15/17)	35.5' - 52.5' (6/15/17)	SS-103-41 41.0' - 42.0' (6/15/17; PNOD)	
104	15.0' - 58.5' (6/16/17)				
105	15.0' - 43.5' (6/16/17)	40.0' - 50.0' (6/16/17)	43.5' - 52.0' (6/16/17)	SS-105-49 49.0' - 50.0' (6/16/17; PNOD)	
105 DUP	15.0' - 41.5' (6/16/17)				

Notes:

1. Depths for MIP are depth of ECD port at refusal.
2. VOCs - volatile organic compounds
3. PNOD - permanganate natural oxidant demand
4. DUP - duplicate boring
5. * - PNOD sample not submitted for analysis.

Prepared By: RMC 8/2/17

Checked By: SEK 8/28/17

TABLE 2
Monitoring Well Construction Details and Groundwater Elevations
CTS of Asheville, Inc. Superfund Site
Skyland, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Monitoring Well	Monitored Zone	Installation Date	Drilling Method	Well Materials	Surface Casing Depth (bgs)	Well Depth (bgs)	Screened Interval (bgs)	Ground Surface Elevation	Top of Casing Elevation	Depth to Water 5/24/17 (toc)	Potentiometric Elevation 5/24/17
MW-5	water table	9/18/2008	HSA	PVC		27.1	17.1 - 26.7	2,407.60	2,407.52	15.43	2,392.09
MW-5A	PWR	9/25/2008	HSA (casing); MR (well)	PVC (casing and well)	49.9	70.6	65.5 - 70.3	2,407.38	2,407.35	16.01	2,391.34
MW-6	water table	9/16/2008	HSA	PVC		47.2	37.2 - 46.8	2,421.53	2,421.35	36.08	2,385.27
MW-6A	PWR	9/15/2008	HSA (casing); MR (well)	PVC (casing and well)	68.2	80.7	75.6 - 80.4	2,421.71	2,421.21	33.52	2,387.69
MW-7	water table	3/6/2009	HSA	PVC		30.4	20.4 - 29.8	2,412.04	2,411.86	19.31	2,392.55
MW-7A	PWR	3/6/2009	MR (casing and well)	PVC (casing and well)	55.0	71.5	66.8 - 71.3	2,412.04	2,411.79	19.00	2,392.79

Notes:

1. Depths are in feet relative to ground surface (bgs) or top of well casing (toc).
2. Elevations are in feet relative to mean sea level.
3. Water Table - zone of fluctuating, unconfined groundwater; PWR - partially weathered rock zone above bedrock.
4. MR - mud rotary; HSA - hollow-stem auger; PVC - Schedule 40 polyvinyl chloride.

Prepared By: SEK 7/21/17

Checked By: RMC 8/1/17

TABLE 3
Historical Groundwater Elevations
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Monitoring Well	Groundwater Elevation (6/8/2009)	Groundwater Elevation (9/23/2013)	Groundwater Elevation (1/5/2015)	Groundwater Elevation (5/24/2017)
MW-5	2,388.29	2,396.29	2,392.40	2,392.09
MW-5A	2,387.65	2,395.37	2,391.74	2,391.34
MW-6	2,381.81	2,393.01	2,388.07	2,385.27
MW-6A	2,382.33	2,394.79	2,391.65	2,387.69
MW-7	2,389.01	2,400.15	2,394.77	2,392.55
MW-7A	2,389.18	2,399.99	2,394.73	2,392.79

Note:

1. Elevations are in feet relative to mean sea level.

Prepared By: SEK 7/21/17

Checked By: RMC 8/1/17

TABLE 4
Sample Summary
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Sample ID	Date	Sample Interval (feet bgs)	Analyses	Associated QC Samples
MW-6	6/22/2017	37.2 - 46.8	VOC	TB-07
MW-6A	6/22/2017	75.6 - 80.4	VOC	TB-07
MW-7	6/23/2017	20.4 - 29.8	VOC	TB-07
MW-7A	6/23/2017	66.8 - 71.3	VOC	TB-07, FD-08
GW-75-26	6/26/2017	24 - 28	VOC	TB-08
GW-78-46	6/27/2017	44 - 48	VOC	TB-08
GW-80-40	6/27/2017	38 - 42	VOC	TB-08, FD-10
GW-81-36	6/27/2017	34 - 48	VOC	TB-08
GW-87-35	6/28/2017	33 - 37	VOC	TB-08
GW-87-53	6/28/2017	51 - 55	VOC	TB-08
GW-90-42	6/28/2017	40 - 44	VOC	TB-08
GW-93-46	6/28/2017	44 - 48	VOC	TB-08
GW-95-46	6/27/2017	44 - 48	VOC	TB-08
GW-102-52	6/29/2017	50 - 54	VOC	TB-08
SS-75-23	6/26/2017	23 - 24	VOC	TB-08
SS-75-24	6/26/2017	24 - 25	PNOD	N/A
SS-78-46	6/27/2017	46 - 47	VOC	TB-08
SS-80-37	6/27/2017	37 - 38	VOC	TB-08, FD-09
SS-81-33	6/27/2017	33 - 34	VOC	TB-08
SS-85-47	6/1/2017	47 - 48	PNOD	N/A
SS-87-31	6/28/2017	31 - 32	VOC	TB-08
SS-87-37	6/2/2017	37 - 38	PNOD	N/A
SS-87-48	6/28/2017	48 - 49	VOC	TB-08
SS-88-46	6/2/2017	46 - 47	PNOD	N/A
SS-90-27	6/28/2017	27 - 28	PNOD	N/A
SS-90-34	6/28/2017	34 - 35	PNOD	N/A
SS-90-37	6/28/2017	37 - 38	VOC	TB-08
SS-90-39	6/3/2017	39 - 40	PNOD	N/A
SS-93-28	6/28/2017	28 - 29	PNOD	N/A
SS-93-33	6/28/2017	33 - 34	PNOD	N/A
SS-93-42	6/28/2017	42 - 43	VOC	TB-08
SS-94-54	6/5/2017	54 - 55	PNOD	N/A
SS-95-37	6/27/2017	37 - 38	PNOD	N/A
SS-95-42	6/27/2017	42 - 43	VOC	TB-08
SS-96-43	6/7/2017	43 - 44	PNOD	N/A
SS-97-24	6/8/2017	24 - 25	PNOD	N/A
SS-97-54	6/8/2017	54 - 55	PNOD	N/A

TABLE 4
Sample Summary
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Sample ID	Date	Sample Interval (feet bgs)	Analyses	Associated QC Samples
SS-101-43	6/14/2017	43 - 44	PNOD	N/A
SS-101-57	6/14/2017	57 - 58	PNOD	N/A
SS-102-38	6/29/2017	38 - 39	PNOD	N/A
SS-102-47	6/15/2017	47 - 48	PNOD	N/A
SS-102-53	6/29/2017	52 - 53	VOC	TB-08
SS-103-41	6/15/2017	41 - 42	PNOD	N/A
SS-105-49	6/16/2017	49 - 50	PNOD	N/A

Notes:

1. bgs - below ground surface
2. VOC - volatile organic compounds, according to EPA Method 8260
3. PNOD - permanganate natural oxidant demand
4. N/A - not applicable

Prepared By: SEK 7/31/17

Checked By: RMC 7/31/17

TABLE 5
Analytical Results of Soil Samples - VOCs
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Analyte	SS-75-23 6/26/2017	SS-78-46 6/27/2017	SS-80-37 6/27/2017	FD-09 (SS-80-37) 6/26/2017	SS-81-33 6/27/2017	SS-87-31 6/28/2017
1,1,1-Trichloroethane		75.9				
1,1,2-Trichlorotrifluoroethane						
1,1-Dichloroethane		2.2 J				
1,1-Dichloroethene		11.3				4.7 J
Benzene		18.0				
2-Butanone (MEK)						
Ethylbenzene		3.3 J				
Isopropylbenzene (Cumene)		2.1 J				
Methyl acetate	6.7 J		10.2 J	7.0 J	6.5 J	10.8
Methylene chloride		9.6 J				
Tetrachloroethene		9.6 J	2.2 J	2.1 J		2.0 J
Toluene		3.3 J				
Trichloroethene	13.3	2,930	3,310	3,160	25.6	4,630
cis-1,2-Dichloroethene		82.1				
m&p-Xylene		19.7				
o-Xylene		25.4				

Analyte	SS-87-48 6/28/2017	SS-90-37 6/28/2017	SS-93-42 6/28/2017	SS-95-42 6/27/2017	SS-102-53 6/29/2017
1,1,1-Trichloroethane		4.3 J			8.4
1,1,2-Trichlorotrifluoroethane	2.2 J				
1,1-Dichloroethane					
1,1-Dichloroethene	6.2				2.0 J
Benzene		57.7 J	30.4 J		11.8
2-Butanone (MEK)		6.9			
Ethylbenzene		3.5 J			3.5 J
Isopropylbenzene (Cumene)					
Methyl acetate		4.9 J	8.1 J	9.5 J	5.7 J
Methylene chloride	4.3 J				
Tetrachloroethene	4.1 J	4.9 J			
Toluene		2.3 J			6.5
Trichloroethene	5,030	1,950	1,130	432	438
cis-1,2-Dichloroethene	4.2 J				
m&p-Xylene		10.9 J			17.2
o-Xylene		9.0			13.0

Prepared By: AAS 7/14/17

Checked By: SEK 7/21/17

Notes:

- Concentrations are in micrograms per kilogram ($\mu\text{g}/\text{kg}$).
- Analytes detected in one or more samples above the Method Detection Limit (MDL) are shown; refer to data validation report for the list of analytes.
- Blank cells indicate analyte not detected above MDL; refer to data validation report for associated MDLs.
- J - estimated concentration.

TABLE 6
Results of Permanganate Natural Oxidant Demand Testing
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Sample Identification	Replicate 1 PNOD _t (48 hour) (g/kg)	Replicate 2 PNOD _t (48 hour) (g/kg)	Replicate 3 PNOD _t (48 hour) (g/kg)	Average PNOD _t (48 hour) (g/kg)
SS-75-24	1.1	1.3	1.1	1.1
SS-85-47	1.2	1.4	1.2	1.2
SS-87-37	1.3	1.4	1.3	1.3
SS-88-46	1.2	1.2	1.2	1.2
SS-90-27	1.2	1.2	1.8	1.4
SS-90-34	1.5	1.6	1.2	1.4
SS-90-39	1.3	2.2	1.3	1.6
SS-93-28	1.0	0.8	0.9	0.9
SS-93-33	1.0	1.0	1.0	1.0
SS-95-37	0.9	1.0	1.1	1.0
SS-94-54	1.5	1.7	1.4	1.6
SS-96-43	1.7	1.7	1.5	1.6
SS-97-24	1.8	1.4	1.6	1.6
SS-97-54	1.3	2.0	1.3	1.5
SS-101-43	1.0	0.9	1.1	1.0
SS-101-57	1.5	2.2	1.7	1.8
SS-102-38	0.8	1.2	1.0	1.0
SS-102-47	1.3	3.0	2.5	2.2
SS-103-41	1.4	1.3	1.6	1.4
SS-105-49	1.3	1.3	1.4	1.3

Notes:

1. g/kg - grams per kilogram.
2. PNOD_t - permanganate natural oxidant demand at time=t.

Prepared By: RMC 8/29/17

Checked By: SEK 8/30/17

TABLE 7
Summary of Historical and June 2017 Monitoring Well Groundwater Analytical Results
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

		Benzene	Chloroform	1,1-Dichloroethene	1,2-Dichloroethane	cis-1,2-Dichloroethene	Methylcyclohexane	Methylene Chloride	Tetrachloroethene	Toluene	1,1,2-Trichloroethane	Trichloroethene	1,1,2-Trichlorotrifluoroethane	m&p-Xylene	o-Xylene
MW-6	10/13/2008			49								19,000			
	1/7/2015		5.7 J	16.9		2.1 J	198		4.8 J		3.3 J	18,700	4.7 J	15.8 J	12.2
	1/7/2015 (duplicate)	13.2 J	5.6 J	17.0		2.5 J	211		5.5 J	3.4 J	3.2 J	17,900			3.1 J
	6/22/2017							72.0 J				7,890			
MW-6A	10/13/2008			97 J								42,000			
	1/8/2015											62,100			
	6/22/2017					98.6 J						60,600			
MW-7	3/13/2009											3,700			
	1/9/2015		7.2		0.89 J							195			
	6/23/2017		6.1									42.5			
MW-7A	3/13/2009											35,000			
	1/9/2015											52,800			
	6/23/2017							434 J				30,800			
	6/23/17 (duplicate)											33,100			

Notes:

- Concentrations are reported as micrograms per liter ($\mu\text{g/L}$).
- Analytes detected in one or more samples above the Method Detection Limit (MDL) are shown; refer to data validation report for the list of analytes.
- Blank cells indicate analyte not detected above MDL; refer to data validation report for associated MDLs.
- J - Constituent concentration is estimated.

Prepared By: SEK 7/20/17

Checked By: RMC 7/20/17

TABLE 8
Analytical Results of DPT Groundwater Samples
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Analyte	GW-75-26 6/26/2017	GW-78-46 6/27/2017	GW-80-40 6/27/2017	FD-10 (GW-80-40) 6/27/2017	GW-81-36 6/27/2017	GW-87-35 6/28/2017
1,1-Dichloroethene		183 J				
1,1,1-Trichloroethane		1,110	54.7 J	58.2 J		
2-Butanone (MEK)	182	3,220	865			2,610
Benzene		70.6 J				
Chloroform	12.4 J				18.9 J	
Ethylbenzene						
Toluene						
Trichloroethene	2,410	48,500	17,200	18,300	5,200	14,600
cis-1,2-Dichloroethene		726				
m&p-Xylene						
o-Xylene		118 J	27.8 J	30.1 J		

Analyte	GW-87-53 6/28/2017	GW-90-42 6/28/2017	GW-93-46 6/28/2017	GW-95-46 6/27/2017	GW-102-52 6/29/2017
1,1-Dichloroethene					
1,1,1-Trichloroethane					138
2-Butanone (MEK)					544
Benzene		83.3 J			167
Chloroform					
Ethylbenzene					41.7 J
Toluene		55.1 J			84.2 J
Trichloroethene	13,900	25,700	16,700	5,170	17,800
cis-1,2-Dichloroethene					
m&p-Xylene					191 J
o-Xylene					139

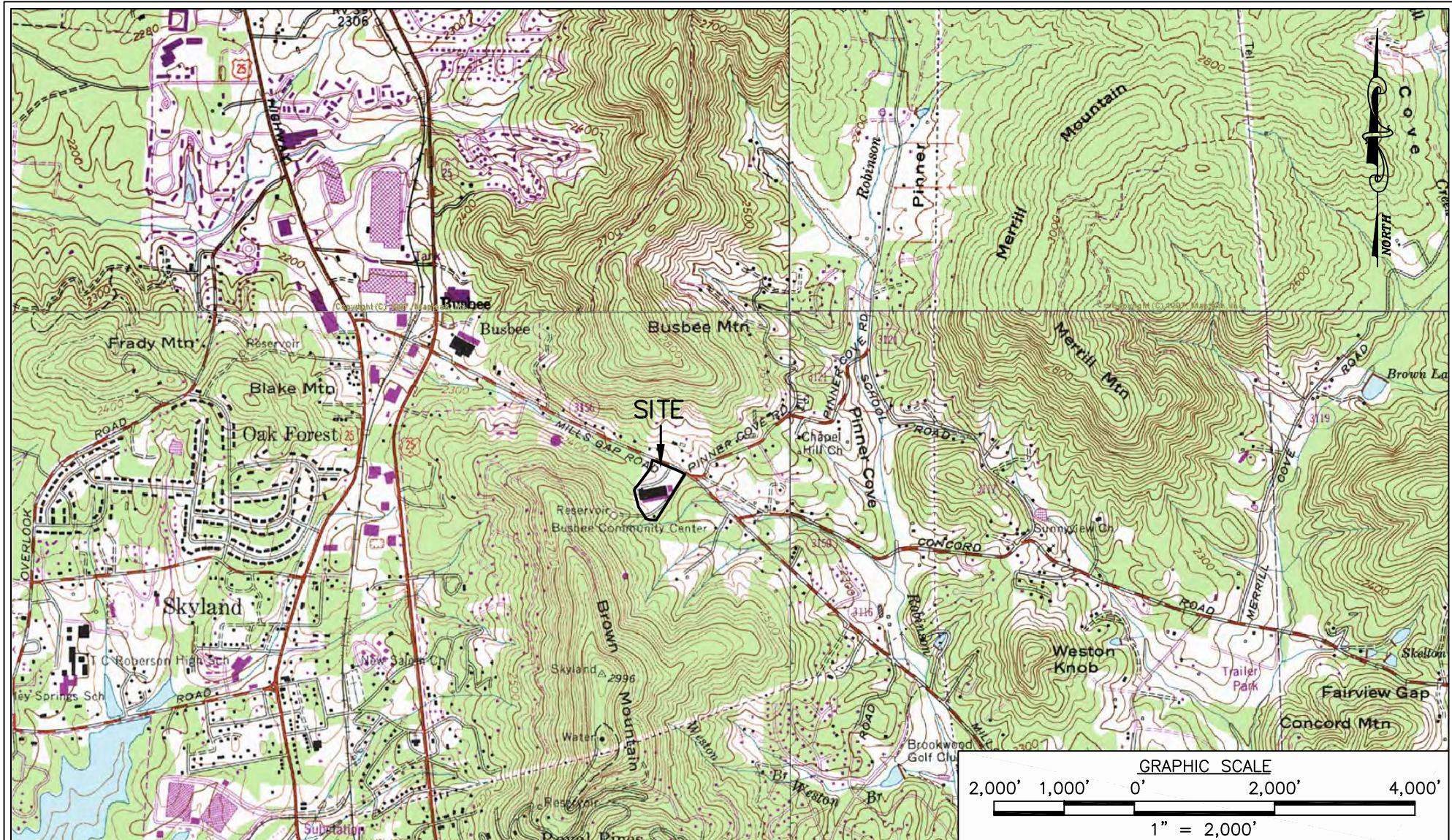
Notes:

- Concentrations are in micrograms per liter ($\mu\text{g/L}$).
- Analytes detected in one or more samples above the Method Detection Limit (MDL) are shown; refer to data validation report for the list of analytes
- Blank cells indicate analyte not detected above MDL; refer to data validation report for associated MDLs.
- J - Constituent concentration is estimated.
- DPT - direct-push technology

Prepared By: AAS 7/14/17

Checked By: SEK 7/21/17

FIGURES



TOPOGRAPHIC SITE MAP
CTS OF ASHEVILLE, INC. SUPERFUND SITE
ASHEVILLE, NORTH CAROLINA

amec foster wheeler

DRAWN: SEK	ENG CHECK: --	DATE: SEPTEMBER 2017	PROJECT: 6252162012
DFT CHECK: MEW	APPROVAL: MEW	SCALE: 1" = 2,000'	FIGURE: 1
REFERENCE: USGS QUADRANGLES: ASHEVILLE (1961), OTEEN (1962), FRUITLAND (1978) AND SKYLAND (1978)			

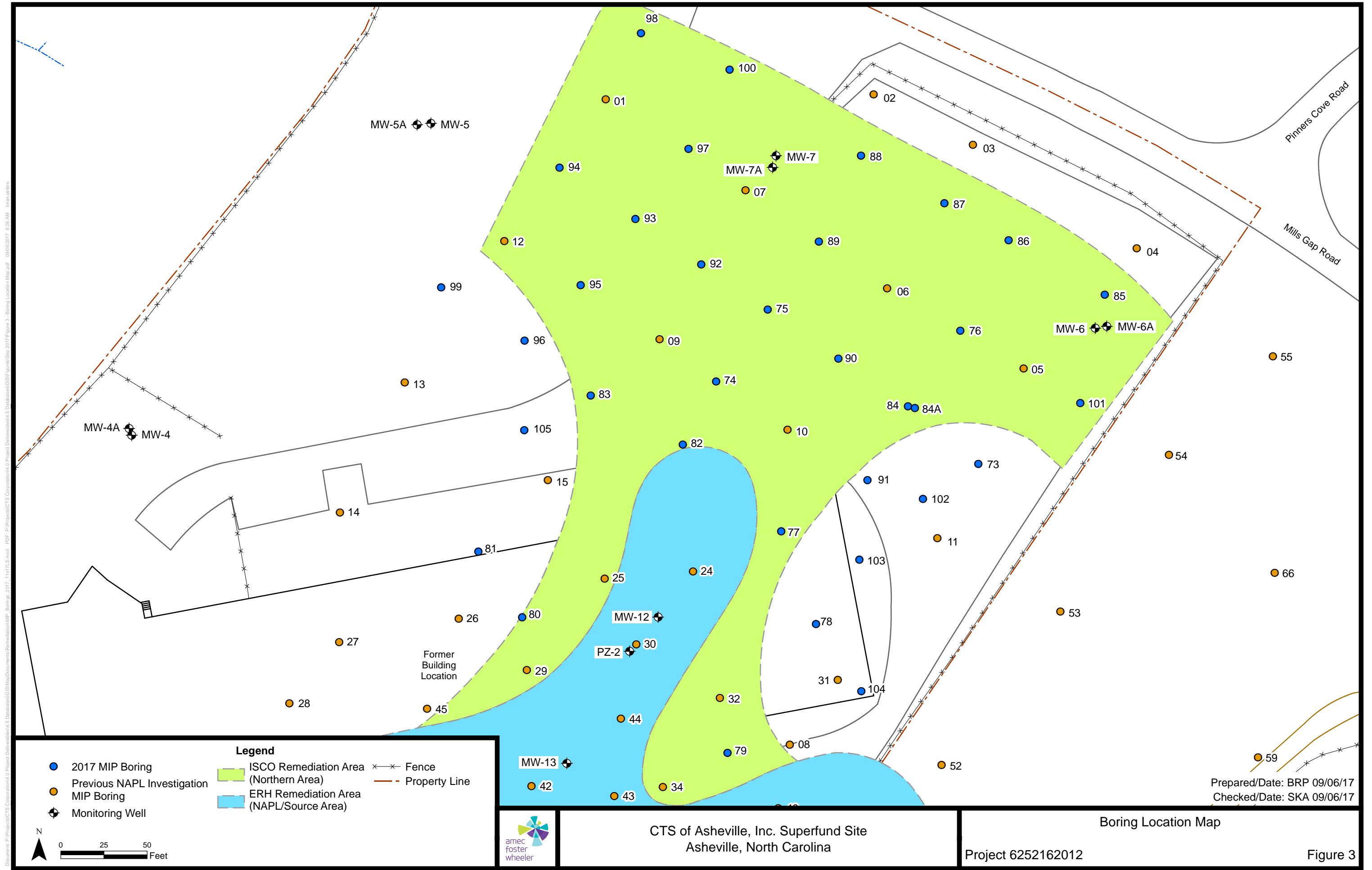


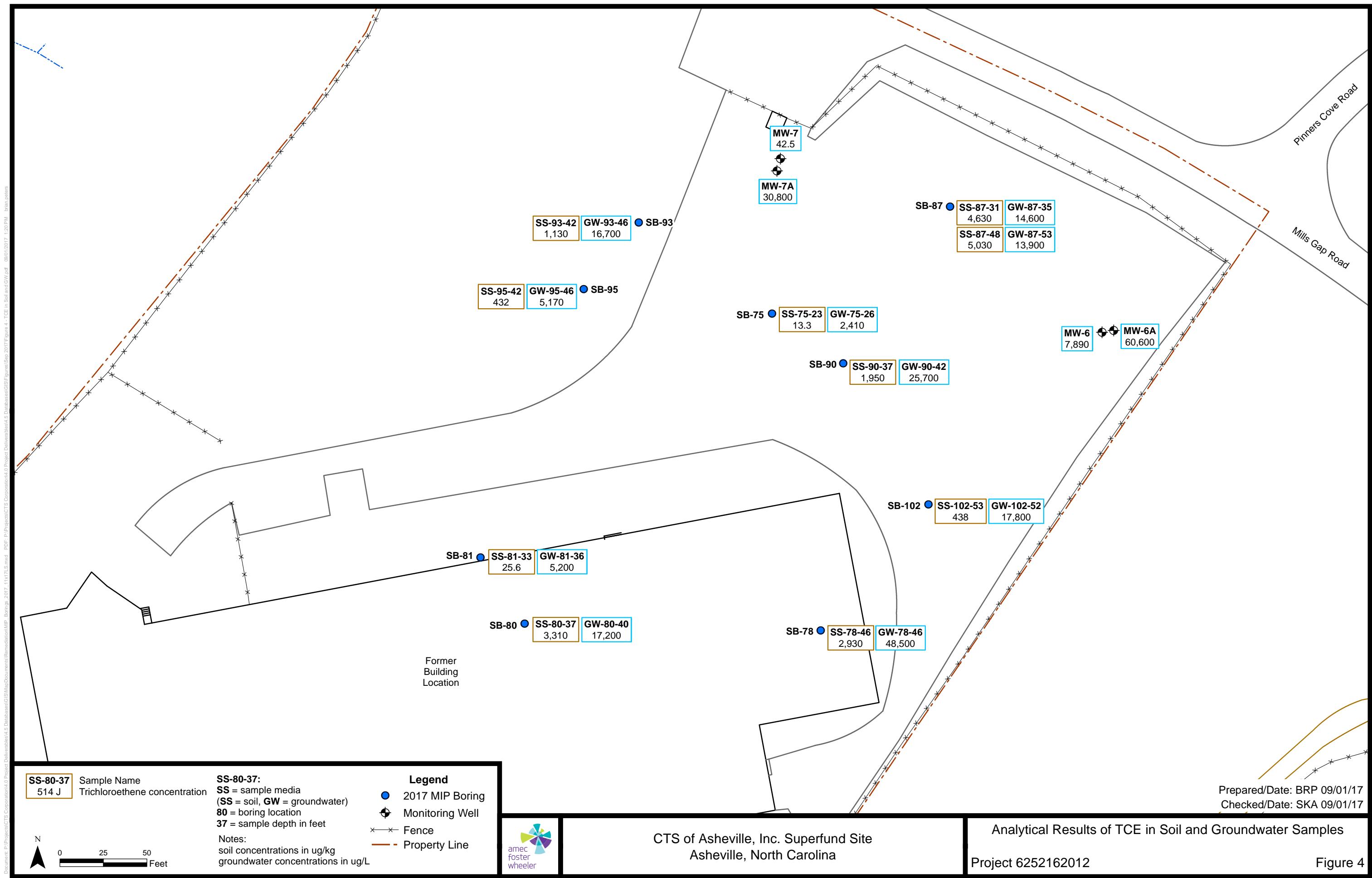
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina

Project 6252162012

Site Map

Figure 2





APPENDIX A

LOGBOOK AND FIELD DATA RECORDS

CONTENTS

PAGE

REFERENCE

CITE

Ashville NC Date 5/22/17
Location CTS of Asheville
Project / Client CTS of Asheville
0752162012 Stelly AmecFW P.V.

1230 - S. Kelly AmecFW and
R. Clark AmecFW arrive at
Site and layout boring
locations
1420 - leave site

1/25/17
SJS

- 4 Location Asheville, Nc Date 5/23/17
 Project / Client CTS of Asheville
- 5 Location Asheville Nc Date 5/24/17
 Project / Client CTS of Asheville
- 0252162012 S.Kelly / AmecFW P.1/2
- 830 - S.Kelly AmecFW and R.Clark / AmecFW arrive at site
 850 - Cascade crew of 3 arrives
 - conduct safety meeting and discuss scope of work
 - unload equipment and get set up at WIP-73
 1140 - advancing probe at WIP-73
 1330 - refusal at 33.9 ft bags ; pull rods
 1400 - mob rig to WIP-74
 1420 - advancing probe
 1540 - refusal at 42.5 ft bags
 1600 - mob to WIP-75
 1625 - advancing probe
 1710 - refusal at 35.5 ft bags
 1715 - R.Clark leaves site
 1745 - S.Kelly leaves site ; Cascade loading equipment and will leave soon
- 5/23/17

- 800 - S.Kelly AmecFW and Cascade crew arrive at site
 - conduct safety meeting
 - drill rods tell off of rock during travel, reshiming trankline
 910 - R.Clark / AmecFW and A.Stevens / AmecFW arrive at site and measure depth to water in selected monitoring wells
 930 - mob to WIP-76
 - calibrate PID
 - i-solostyrene = 19.9 ppm
 - fresh air = 0.0 ppm
 955 - advancing probe
 1050 - refusal at 32.9 ft bags ; pull rods
 - advance dual tube
 1205 - pull rods (refusal at 47ft)
 1335 - reshiming lagging with probe refusal at 49.1 ft ; pull rods
 1310 - refusal at 49.1 ft ; pull rods
 1330 - 415 lunch
 1415 - mob to WIP-77
 1435 - advancing probe
 1520 - refusal at 28.8 ft ; pull rods
 1540 - advance dual tube
- R.C. Clark

- 6 Location Asheville, NC Date 5/24/17
 Project / Client CTS of Asheville
 6252162012 S. Kelly / Amecfu P. 2/2
- 1600 - boring has deviated from vertical too much to continue; pull out and advance another soil boring at adjacent location
 1620 - heavy rain; take a break but rain continues so decide to leave for the day
 1630 - leave site
- S 24/17

- Location Asheville, NC Date 5/25/17
 Project / Client CTS of Asheville
 6252162012 R. Clark / Amecfu
- 0800 - R. Clark w/ Amecfu and Cascade crew arrive onsite.
 Conduct safety meeting.
 0830 - Mob. to MP. 77
 - Calibrate P.I.D.
 $\text{isobutylene} = 100.8 \text{ ppm}$
 fresh air = 0.0 ppm
 0845 - Begin advancing dual fiber
 1030 - Pull rods (refusal @ 57ft.)
 1045 - advancing probe
 1200 - refusal @ 57ft.; pull rods
 1215 - 1245 - Lunch
 1245 - Mob. to MP. 78
 1300 - Advancing probe
 1400 - Refusal @ 35'; pull rods
 1430 - Advance dual tube
 1530 - Pull rods; (refusal @ 62.5 ft.)
 1600 - Advancing probe
 1745 Refusal @ 66'; pull rods
 1800 - Cascade loads equipment
 1810 - R. Clark w/ Amecfu and Cascade crew leave site.
- R. Clark
 today

Brian Taylor

8

Location Asheville, NC Date 5/26/17
 Project / Client CTS of Asheville
6252162012 S.Kelly / Amec P.1/2

8:00 S.Kelly and Cascade arrive at site

- conduct safety meeting
- Cascade swaps out air tank
- S.Kelly calibrates PID;
- isobutylene = 100.0 ppm
fresh air = 0.0 ppm
- set up at WIP - 79' soil core (no samples) + 25 ft offset at 14 ft; offset refusal at 24 ft; pull rods
- 945 - advance WIP w/o measurement to 15 ft
- 955 - advance WIP w/o measurement to 15 ft

1000 - WIP tool is encountering an obstruction at 8 ft causing hole to deviate too much. Pull rods and advance an adjacent boring 1020' thick quartz-rich zone of 8-14 ft causing too many issues;
offset set w/ 15 ft east
- advance dual tube (no sampling)
15 ft

- start advancing WIP; refusal at 41.4'
- 1210 - 1300 lunch

Location Asheville, NC Date 5/26/17
 Project / Client CTS of Asheville
6252162012 S.Kelly / Amec P.2/2

1300 - setup at wip - 80'; drive point to 15 ft (no soil sampling)
 1315 - advancing WIP
 1440 - refusal at 47.6 ft
 1500 - rods broke down hole at threads + 40 ft of rods and wip left in boring - hook up new probe - try several trunklines
 1715 - S.Kelly leaves site; will return over the weekend to get another probe and trunkline set up

5/26/17

5/26/17

5/26/17

Afternoon work

10 Location Asheville, NC Date 5/30/17
Project / Client CTS of Asheville

- 0752-102012 S.Kelly / Amecfw P.I.
800 - S.Kelly Amecfw and
Cascade arrive at site
- conduct safety meeting
- Cascade restraining truss line
- mobil to MIP-81; drive
point to 15ft (no soil samples)
1030 - R.Clark / Amecfw arrives
1010 - MIP refusal at 45.0ft; pull rods
1015 - S.Kelly leaves site
1025 - Setup to coat
1055 - Begin grouting
- Grout MIP-79, 80 & 81
1200-1245 - Lunch

- 1245 - Grout MIP-73, 74, 75,
76, 77 & 78.
1700 - leave site (Cascade
+ R.Clark w/Amecfw) 5/30/17
Location Asheville, NC Date 5/31/17
Project / Client CTS of Asheville
6252162012 R.Clark / Amecfw Pg 1/2
800 - R.Clark & S.Kelly w/Amecfw onsite
- Cascade onsite.
- Conduct safety meeting
0815 - MIP-81 to MIP-82
- Calibrate P.I.D.
fresh air = 0.0
isobutylene = 100.1
- Advance solid point to 15' 6.5'.
0845 - S.Kelly leaves site
0900 - Advance MIP w/ no measurement
to 15'
0910 - Advance MIP probe to refusal
at 48'; pull rods.
0945 - Craig Zeller w/ USEPA onsite.
1000 - CTS & USEPA personnel onsite.
for CRH bid meeting.
1005 - S.Kelly w/Amecfw onsite
+ NL Wallace w/Amecfw onsite
1030 - Mobil to MIP-83
- Advance solid point to 15' 6.5'.
1045-1100 - Rig out of fuel;
obtain diesel + fuel rigs.
1100 - Advance MIP probe to
refusal @ 43'. Pull rods.
Did not take measurement from 0'-15'.

5/30/17

Daryl Clark

- 12 Location Asheville, NC Date 5/31/17
 Project / Client CTS of Asheville
 6252162012 R.Clark / AMECW Page 1/2
- 1230-1300 - Biobots arrive at site
 conference call; ERH Biobots arrive at site.
 1300-1315 - lunch
- 1315 - Cascade repairs C.C. tool on MIP unit
- 1400 - Mob. to MIP - 84'
- Advance solid point to 20'
- 1420 - Advance MIP probe to 20' (do not collect measurements)
- 1530 - Advance MIP probe to refusal
 ② 37', pull rods.
- 1600-1700 USEPA, AMECW (new & GCK),
 # Biobots leave site.
- 1600 - Mob. to MIP - 85'
- Advance solid point to 10 ft.
- Advance dual tube to 28 ft.
- 1700 - Leave site (Cascade)
 R. Clark w/AMECW

- 13 Location Asheville, NC Date 6/1/17
 Project / Client CTS of Asheville, NC
 6252162012 R.Clark / AMECW Page 1/2
- 0800 - Arrive onsite (R.Clark w/AMECW & Cascade)
 - Conduct safety meeting.
- 0815 - Mob. to MIP - 85' ; pull rods
 - Advance MIP probe to 28' w/ no measurement
- Advance MIP probe to refusal
 ② 43.5' ft ; Dull Rods
- 1015 - Advance dual tube to refusal
 ② 51' Collect SS-85-47 for PNOD
- 1115 - Pull rods
- 1130 - Advance MIP probe to 43 ft w/ no measurement.
- 1120 - Advance MIP Probe to refusal
 ② 52.5' ; pull rods
- 1230-1310 - Lunch
- 1310 - Setup & Mob to MIP - 86'
- Advance solid point to 15 ft
- Advance dual tube to 25 ft
- 1330 - Advance MIP probe to 25 ft w/ no measurement
- 1445 - Advance MIP probe to refusal
 ② 46 ft ; pull rods.
- R. Clark w/AMECW

R. Clark
 5/31/17

14 Location ... Asheville, NC Date 6/1/17
Project / Client ... CTS of Asheville
6252162012 R.Clark / AMECRW Pg 2/2

- 500 - Mob. to MIP-87
- Advance solid point to 15 ft.
- Advance dual tube to 25 ft.
- Advance MIP w/ no measurement
1540-1546 - Advance MIP Probe to
refusal @ 47' ; pull rods
1700 - Connect 55-87-37 for
ANOD analysis; run 6 1/2
1705 - Leave site (Cascade
R.Clark w/ AMECRW)

Location ... Asheville, NC Date 6/2/17 15
Project / Client ... CTS of Asheville
6252162012 R.Clark / AMECRW
Page 2 of 2

- 1800 - R.Clark/S.Kelly w/ AMECRW
Cascade arrive onsite.
- Conduct H # 5 Meeting
- Calibrate P.I.D. Meter
isobutylene = 100.1
fresh air = 0.0
0845 - Remove to MIP-87
- Advance dual tube to
refusal @ 50 ; pull rods
- Collect SS-87-37 for PND
0930 - Qus. Cascade restrings to reduce
to remove rod w/ broken threads on
MIP. wait; don't advance MIP.
0945 Mob. to MIP-88
- Advance solid point to 10 ft.
- Advance dual tube to 20 ft.
1045 - Advance MIP probe w/ no
measurement to 20 ft
- Advance MIP Probe to refusal
@ 40 ft. ; pull rods.
1220-1300 - Lunch
1300 - Advance dual tube to
refusal @ 49 ft; Collect

John Clark
6/1/17

16 Location Asheville, NC Date 6/2/17
Project / Client CTS of Asheville
6232162012 R.Clark / AMECFW

- Pull rods. Advance MIP probe to 54.2 ft.
- 1600 - Mob. to MIP - 89' Pull rods.
- Advance solid point 10 ft.
- Advance dual tube to 20 ft.
- Advance MIP Probe to 20 ft
- w/ no measurement
- Advance MIP Probe to refusal
- (2) 444 ft; Pull rods.
- 1715 - Leave site (Cascade & R.Clark w/ AMECFW)

Location Asheville, NC Date 6/3/17 17
Project / Client 6252162017 R.Clark / AMECFW
CTS of Asheville
1/2

- 0800 - R.Clark / AMECFW @ Cascade arrive onsite.
- Conduct H & S Meeting
- 0815 - Mob. to MIP - 90'
- Advance solid point to 10 ft.
- Advance dual tube to 25 ft.
- 0900 - Advance MIP Probe to 25 ft
- w/ no measurement report
- Advance MIP Probe to refusal
- (2) 437'; Pull rods
- 1000 - Calibrate P.D.
- 1500 - Advance MIP Probe = 100.3 ft/s air = 0.0

- 1145 Advance dual probe to refusal
- (2) 51.5 ft, collect SS-90 - 39 ft MIP
 - Broke 10 ft of outer rod and cutting shoe at bottom of boring,
 - 1215 - 1330 Lunch
 - 1300 Cascade restings MIP trunk
 - 1300 to remove 2 rods w/ lead thread!
 - 1400 - Mob. to MIP - 91'
 - Advance solid point to 15'
 - Advance dual tube to 25'
 - Advance MIP Probe depth measurement

✓ 1160ft
✓ 1160ft

- 18 Location Ashville, NC Date 6/3/17
 Project / Client CTS of Ashville
 625262012 R.Clark / AMECW P. 2/2
- to 25' ft. Advance MIP Probe
 to refusal @ 30.3 ft. (pull rods)
 1530- Advance dual tube to refusal
 @ 32 ft; Pull rods
- 1515 - Clean up liners; drum soil
 cuttings and decon water.
 1700- Cascade and R.Clark w/
 AMECW leave site for
 the day.

Location Ashville, NC Date 6/5/17 19
 Project / Client CTS of Ashville
 625262012 R.Clark / AMECW P. 1/1

0800- R.Clark AMECW & Cascade arrive
 onsite.

- Conduct safety meeting
- 1106, to MIP - 93 92 6/5/17 15 sec 0817
- Advance solid point to 20 ft.
- 0930 - Advance MIP Probe to
^{15 20 24}₀₈₁₇ ft. w/ no measurement.
- 0940 - Advance MIP probe to
 refusal @ 46.2'; Pull rods @ 46.2';
 100- ft. to MIP - 94 93 92 6/5/17
- Advance solid point to 520 ft.

- 1030- Advance MIP Probe to refusal
 @ 46 ft.; Pull rods (no
 measurement from surface to advance MIP
 @ 20 ft. to MIP - 94 93 92 6/5/17
 isobutylene = 100.7 ppm / @ 48
 fresh air = 0.0 ppm
 1500- inner liner locked in outer tube
 @ 50' after advancing
 dual tube; Pull rods
 1600- Advance macrocore to 55.4 ft
 pull rods; Collect 55.91.54 for PNA
 1700- leaves site (R.Clark w/ AMECW
 & cascade)

John M. Clark
 6/3/17

20

Location Ashville, NCDate 6/16/17Project / Client CTS of Ashville6252162012 R.Clark / AmecFin P. 1/1

0800-R.Clark & S.Kelly w/ AMECFIN arrive

onsite; conduct safety meeting.

0830-0930-Cascade obtains consent

for proceeding w/o S.Kelly leave site

0930-1215-Grout MIP boarings:

88, 87, 86, 85 and 83

1215-1300-Bunch 1300 P Sticks w/ CTS on site

1300-1500-Grout MIP boarings

82, 89, & 92.

1500-Mob. to MIP-95

-Advance MIP-Probe to 15ft w/no measurement

-Advance MIP probe to refusal

@ 47.8 ft.

1600-Advance dual tube to 50.5'

(refusal)

1715-Leave dual tube rods

in ground / Cascade packs up.

1725-Leave site for day
(Cascade, R.Clark w/ AmecFin

& R. Stubbs leave site)

Location Ashville, NCDate 6/17/17Project / Client CTS of Ashville6252162012 S.Kelly / AmecFin P. 1/2

0850-S.Kelly / AmecFin arrives at site; cascade and R.Stubbs / OTIE at site

-conduct safety meeting

-Cascade removes dual tube

rods from MIP-95

920-mob to MIP-96

935-advance solid point to 15ft

950-advancing wip to 13ft

w/o measurement at 1-ft intervals

-MIP/rods "drop" in hole to ~8ft; attempt to fish out tooling, "not successful"; hook up a new MIP

1135-R.Clark & L.AmecFin arrives

-MIP tooling retrieved with

hand and anger

1150-S.Kelly w/ AmecFin leaves site

1245-1315/Closed

1315-1515 Advanced 44.5' probe to refusal a 11ft 3" probe / rods

-fail to rate P.T. S.

isobutylene = 100.2

R. Stubbs

22 Location Ashville, NC Date 6/17/17
Project / Client CTS of Ashville

23

Location Ashville, NC Date 6/01/17

Project / Client CTS of Ashville

#252162012 Skelly/Hanefin P.1/2

- fresh air = 0.0 ppm
1535 - Advanced dual tube to
depth @ 43ft in pull rods.
- Collect 55-96-43 @ 1640
1645 - Leave site (R. Clark w/
ANECON & R. Stubb w/ Grie
and Cascade personnel)

- 815 - Skelly Hanefin arrives at site
- Cascade and R. Stubb's lot are
on-site
- Cascade is moving equipment
to work area
- set up at WIP -97
- conduct safety meeting
830 - push point to 10ft and start
1-ft interval WIP
920 - refusal at 42.1 ft. pull rods
935 - move ~2 ft north to conduct
dry pit chiseling with a 17DUP
- drive point to 10 feet
945 - advance WIP to 10 ft and
start WIP measurement at
1-ft intervals
1030 - WIP refusal at 41.4 ft, pull rod
and set up to dual to be
1055 advancing dual tube sampler
- calculate P10
- 100 ppm isobutylene = 100.0 ppm
- fresh air = 0.0 ppm
1130 - dual tube refusal at 57 ft.

R. Clark

24 Location Ashville, NC Date 6/8/17

Project / Client CTS of Ashville
6252162012 S.Kelly AmecFw. P-1

1250 - 1310' wrench
1310 - pull dual tube rods
1340 - advance wip to 41.5ft and begin measurements at 1-foot intervals

1410 - wip refusal at 55.3 ft; pull rods
1430 - cascade strings up new wip drill rods

1530 - wip to wip - 48
1550 - drive point to 10 ft (no soil core collected)

1600 - begin wip at 10ft with 1-ft intervals
- wip refusal at 24.1 ft ; pull rods and set up to dual tube

- likely refused in low a quartz zone
1645 - refusal w/ dual tube at 25 ft in a quartz zone; pull rods; will offset

1700 - S.Kelly leaves site; 'cascade' loading equipment and will leave momentarily
1700 - end

25 Location Ashville, NC Date 6/9/17

Project / Client CTS of Ashville
6252162012 S.Kelly AmecFw. P-1

800	S.Kelly AmecFw and cascade arrive at site
	- set up at wip - 98 (offset)
820	- drive point to 10ft (no soil samples collected)
	- advance wip to 9ft and begin measurements at 1-ft intervals
935	- wip refusal at 48.7 ft ; pull rods - calibrate PID
1000	100 ppm isobutylene = 100.0 ppm fresh air = 0.0 ppm
1140	- advance dual tube
1215	- dual tube refusal at 59 ft - drive wip to 48.7 ft and resume logging
1230	- wip refusal at 57.3 ft - 1245 break for lunch
1330	- mob to wip - 99.1 drive point to 10ft (no soil samples collected)
	- advance wip to 10ft and

Rickie McNamee

26 Location Asheville, NC Date 6/9/17
Project / Client GTS of Asheville
6252162012 Anectns P-12

begin MLP measurements at
1-4' intervals
1500 - MLP refusal at 48.4 ft; pull rods
and dual tube
1530 - Soil heaves into rods;
liner crushed, not enough
time to finish boring today

8am R. Clark w/ AMECFW and Cascade
arrive on-site.
- Conduct safety meeting.
0900 - Move MLP 10' to west with measurement to 13 ft.
- Advance MLP probe to
35 ft; Geoprobe & hammer
breaks; pull rods
1030-1230 - Repair; Cascade
removes hammer housing
and orders replacement
to be shipped overnight
1230 - R. Clark w/ AMECFW
Cascade personnel leave
site.

27 Location Asheville, NC Date 6/12/17
Project / Client GTS of Asheville
6252162012 AMECFW Pg 11

W

W

W

6/11

6/9

6/12

W

Location Ashville, NC Date 6/13/17

Project / Client CTS of Ashville

6252162012 Amecur Pg 11

Rue 6/13/17

1100 R. Clark w/ Amecur and
Cascade arrive onsite.

- Cascade repairs broken
Geoprobe hammer. Conduct safety meeting.

1200 - Repairs complete

- Mob. to MIP - 100
- Advance MIP probe to 35 ft without measurement.

- Advance MIP probe to refusal
 @ 52.5 ft; pull rods.

1330 - Mob. to MIP - 101 ft to 5 ft.

- Advance dual tube to 25 ft

- Advance MIP Probe to 25 ft without measurement.

- Advance MIP Probe to refusal @ 49.5 ft after lightning/weather standdown from 1420-1530

1530 C. Zeller w/ USCPA onsite.
- Advance solid point to 30 ft

- 30 ft and prepare to advance dual tube tomorrow
 1715 Leave site (R. Clark/Amecur - Craig Zeller/USCPA & Cascade)

Location Ashville, NC Date 6/14/17 29

Project / Client CTS of Ashville

6252162012 Amecur Pg 12

0800 - R. Clark / Amecur and Cascade arrive onsite. C. Zeller/USCPA arrives.

- Conduct safety meeting

0815 - Mob. to MIP - 101 ft

- Advance dual tube from 30 ft to refusal @ 58.4 ft.

- Calibrate P. I. D. (Collect isobutylene = 100.1 ppm at 43

fresh air = 0.0 ppm at 57 ft)

0915 - Advance MIP Probe to 49.5 ft w/ no measurement

- Advance MIP Probe to refusal @ 59.8 ft; pull rods

1045 - Electrical issue w/ C. Zeller; Cascade offsite.

1100 - Cascade returns; install 1/5 new relay or rig

1200 1245 - Lunch

1245 - Mob. to MIP - 84 ft

- Advance solid point to 30 ft. * pull rods.

- Advance MIP Probe 1/6 30 ft

w/ no measurement!

1300 - Advance MIP Probe to refusal

30 Location Asheville, NC Date 6/15/12
Project / Client CTS of Asheville

Location Asheville, NC Date 6/15/12
Project / Client CTS of Asheville
6252162012 AMECW Page 2/2

- At 50', 57 ft.; pull rods.
- (2) 30' - Mo. 6. 70' MP-102
- Advance solid point to 25 ft.
- Advance MP probe w/ no measurement to 25 ft
- Advance MP probe to 160' refus / ~ 43 ft pull rods.
- 160' Grass Zeller w/ USCPA leaves site
- Advance dual tube to 45 ft.; begins raining
- 17/18 - R. Clark w/ AMECW and Cascade leave site.

- 0800 R. Clark w/ AMECW and Cascade arrive onsite.
- Conduct safety meeting
- Calibrate P.I.D. meter isobutylene = 100. 1
fresh air = 0.0
Mo. 6 to M. 11. 102
- Advance Dual Tube from 45 ft + to 48 ft; pull rods.
 - Advance MP Probe to refusal at 53', pull rods.
 - R. Clark w/ AMECW obtains GPS coordinates of boring locations. Collect 55-102-478,000.
 - C. Clark w/ Cascade onsite to drop off false fiber stiff 1/1 rods to perform internal safety audit.

1105 - Mo. 6. to MP-103

- Cascade clears location of vegetation & set up
- 1115 - Advance solid point to 20' ft; pull rods
- Advance MP probe w/ no measurement

John Clark
6/15/12

- Asheville, NC 6/15/17 Asheville, NC 6/16/17
 CTS of Asheville CTS of Asheville
 6252162012 AMECAR Page 2/2 6252162012 AMECAR Page 1/2
 to 20ft.
 1200-1245 - lunch
 1245 - Advance MIP Probe to
 refusal @ 35.5' Pull rods
 1350 - Stop work due to weather
 thunder & lightning. Cascade leave site
 1440 - Resume work. Advance deal!
 tube to refusal @ 43 ft; pull rods
 1500 Collect 55-103-41
 1530 - Stop work due to thunder.
 1600 - Resume work; advance
 MIP Probe to refusal @
 52.5 ft w/ no measurement
 +. 35 ft; Pull Rods
 1700 - R. Clark (AMECAR B
 Cascade leave site)

- 0800-R. Clark w/ AMECAR and
 Cascade arrive onsite
 - Conduct safety meeting
 - Mot. to MIP-104
 - Calibrate P.I.D.
 isobutylene = 100.1
 Fresh air = 0.0
 0845 - Advance solid point to
 15 ft; pull rods
 - Advance MIP Probe w/ no
 measurement to 15 ft
 1030 Advance MIP Probe to refusal
 @ 58.5 ft; pull rods
 1100-Mot. to MIP-105
 - Advance solid point to 15 ft
 - Advance MIP Probe to 15 ft w/
 no measurement
 - Advance MIP Probe to refusal
 at 43.5 ft; pull rods
 1200 - Broke threads on MIP truck line
 1215-Boo: hook
 1300-1330 - Restring truck line
 1330 - Mot. to MIP-105A (w/ 3 ft
 northwest of MIP-105) / Dupl. date,

M. Clark

6/15/17

34 Location Asheville, NC Date 6/16/12
Project / Client CTS of Asheville

Location Asheville, NC Date 6/19/12
Project / Client CTS of Asheville
625262012 Amecfu Page 2/1

- Advance solid point to 15 ft.
- Advance MIP probe w/ no measurement to 15 ft.
- Advance MIP probe to refusal @ 41.5 ft; pull rods
- Set up to dual tube, but lose cutting shoe in boring; unable to retrieve.
- 1530-1630 - Stop work due to Thunder Storm. Collect SS10549 1630. ResUME work ~~for PWD office~~
- Advance macrocore in MIP-105 to refusal @ 50ft
- Advance MIP probe w/ no measurement to 41'
- Advance MIP probe to refusal @ 52 ft.

1930-R.Clark Amecfu and Cascade personnel leave site.

John M. Clark
6/19/12

1315 - R.Clark w/ Amecfu arrives
on site to perform GPS
Survey of boring locations
1620 - R.Clark w/ Amecfu
leaves site

1315 - R.Clark w/ Amecfu arrives

on site to perform GPS
Survey of boring locations
1620 - R.Clark w/ Amecfu
leaves site

1315

1620

1930

John M. Clark

John M. Clark

Ashville, NC 6/22/12
CTS of Ashville
6252162012 AMECFW Page 1/1

1215 - R. Clark w/ AMECFW arrives
on site

- Calibrate water acidity meter and turbidity meter.
- Gauge water levels in monitoring wells MW-6 and MW-6A. and purge
- Set up to sample MW-6 w/ a variable speed pump.
- 155 - Collect groundwater samples from MW-6 for analysis for TCE-VOCs.
- Set up to purge and sample MW-6A w/ a variable speed pump.

1700 - Collect groundwater sample from MW-6A for analysis for TCE-VOCs
1730 - R. Clark w/ AMECFW leaves site.

Ashville, NC 6/23/12
CTS of Ashville
6252162012 AMECFW Page 1/1

0800 - R. Clark w/ AMECFW arrives
on site

- Calibrate water quality meter and turbidity meter.
- Gauge water levels in wells MW-7 and MW-7A.
- Setup to sample MW-7 w/ a peristaltic pump.
- 1045 - Collect groundwater samples from MW-7 for analysis for TCE-VOCs.
- Collect two additional sample sets for matrix spike matrix spike duplicate.

1100 - Set up to sample MW-7A w/ a peristaltic pump.

1145 - Collect groundwater samples from MW-7A for analysis for TCE-VOCs.

- Collect a field duplicate sample FD-08 from MW-7A.

1230 - R. Clark w/ AMECFW leaves site.

✓ M. J.
6/22/12

✓ M. J.
6/23/12

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625216202 ANECU

Ashville, NC Date 6/27/17
Project / Client CTS of Asheville Page 13
652162012

- 1230 - R. Clark w/ AMECW arrives
on-site. Calibrate water quality meter.

1345 - Calibrate turbidity meter

1400 - Cascade arrives on-site

 - Conduct safety meeting
 - Set up on SB-75; Advance dual tube 19'
 - 1520 - Collect SS-75-23

for analysis via TCE, VOC's

1530 - Collect SS-75-24

for analysis via D.N.D.

 - Advance dual tube from 19'-24'
 - Advance screen point sampler
from 24' - 28' and set up to
collect groundwater sample
 - via peristaltic pump from 26'.

1745 - Collect GW-75-26

for TCE - VOC's; decon screen sampler.

1800 - Conduct sound testing
w/ a calibrated Quest

2900 sound meter (soo form)

QC-10 Calibrator 114 dBA = 114.2 dBS

1830 - R. Clark w/ AMECW and
Cascade leave site.

Mark W 6/26/12

Ashville, NC 6/27/17
CTS of Ashevile
6252162012 AMECFW Page 23

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CTS of Ashville
ANSCAN 65262012
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- 1235 Set-up to collect groundwater sample via peristaltic pump from ~36 ft.

1315 Collect GW-81-36 for TC-VOCs

 - Decon screen point sampler head
 - Pull rods from boring
 - Mobi to and set up on SB-78
 - Advance solid point to 45 ft.
 - 1450 - Collect EB-03 for VOCs
 - Decontaminated screen point sampler with lab provided deionized water
 - Advance dual tube from 45 to 47
 - 1520 Collect SS-78-46 for TC-L-VOCs
 - 1550 - Encountered refusal at 48 ft; expose screen from 44 ft to 48 ft
 - Set up to sample groundwater w/ a peristaltic pump, use offset GW-78-46 for TC-L-VOCs

- Pull rods from SB-78

- Mobi to and set up on SB-95

- Decon screen point sample and lead sample tube

1700 - Collect EB-04 for VOCs

- Decontaminate screen point sampler and lead rod w/ chisel

1705 - Advance SB-95 to 20 ft

- Advance dual tube from 20 ft to 43 ft

1715 Collect SS-95-24 for P-NOD

1730 Collect SS-95-37 for P-NOD

1800 Collect SS-95-42 for TC-L-VOCs

- Advance screen point sampler from 44 ft to 48 ft (screen)

- Set up to sample groundwater w/ a peristaltic pump offset GW-95-46

1845 - Collect SS-95-46 for TC-L-VOCs

- Pull rods. Containerize soil and water columns

- Decontaminate screen point sampler and lead rod w/ chisel

1855 Cascade and R. Clark w/ Amecow leave site.

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Project / Client CTS of Ashville

Location Ashville, NC Date 6/28/17
Project / Client CTS of Ashville
Page 2B
6/28/16 2012 AMECFW Page 1/3

0730 - R Clark w/ AMECFW arrives onsite.
- Calibrate P.I.D. turbidity and water quality meters.

0801 - Cascade arrives onsite

- Conduct safety meeting

Setup up on and Nw 16 to SB-93

- Advance solid point to 20 ft.

- Advance dual tube from 20ft to 93ft

- Collect SS-93-22 for PNOD analysis

0830 Collect SS-93-28 for PNOD analysis

0840 Collect SS-93-33 for PNOD analysis

0900 Collect SS-93-42 for TCE-VOC analysis

- Advance screen point sampler to 48 ft.

- Expose screen from 44 ft. to 48 ft.

- Setup to collect groundwater

0950 - Collect GW-93-48 for sample via peristaltic pump

- Pull red side screen point sampler off

1030 - Nw 16 to and set up on SB-93

- Advance solid point to 27 feet

- Advance dual tube from 27 ft. to 32ft

- Collect 55-87-31 for TCE-VOCs

Also collect 45-55-87-31 / 165D-55-82-7

- 1100 - Collect SS-87-28 for PNOD
- Advance screen point sampler to 37 ft.; Expose screen from 33 ft. to 37 ft.
- 1140 - 125 - Inch
1245 - Set up to collect groundwater
Sample up peristaltic pump.
1240 - Collect GW-87-35 for TCE-VOCs. Nw 16 to Advance solid point to 45 ft.
- Advance dual tube from 45 ft. to refusal at 51 ft.
- Remove rods from boring.
1340 Collect SS-87-48 for TCE-VOCs
and PNOD analysis.
- Advance screen point sampler
to refusal at 55ft
- Expose screen from 51ft-55ft
- Set up to sample groundwater via peristaltic pump.
1500 - Collect GW-87-53 for TCE-VOCs
- Pull red side screen point sampler off
1530 - Nw 16 to and set up on SB-93
- Advance solid point to 27 feet
- Advance dual tube from 27 ft. to 32ft
- Collect 55-87-31 for TCE-VOCs - pull rods; decontaminant screen point sampler and lead rod.

Ashville, NC 6/28/17
CTS at Asheville
6/28/2012 Amecaw Page 3/3

Ashville, NC 6/29/17
CTS at Asheville
6/28/2012 Amecaw Page 1/2

- 1545 - Mob. to SB-90 and set up to drill.
- Advance solid point to 25ft.
- Advance dual tube from 25ft to 39 ft.
- 1600 Collect SS-90-27 for PNOD
1630 Collect SS-90-34 for PNOD
1700 Collect SS-90-37 for TCC-VOC's
- Advance screen point sampler
approx 1/2 to 44 ft; Expose screen
from 40 ft to 44 ft.
- Set-up to sample groundwater 0915-Collect
via peristaltic pump
- Utilize check valve to assist pump
1750 - Collect GW-90-42
for TCC-VOC's
Pull Rods.
- 1830 - Decontaminate screen point
sampler & lead rod.
- Characterize soil and
groundwater collect during
drill in drums.
- 1845 - Cascade and R. Clark w/ Amecaw leave site for the day
- 0730 - R. Clark w/ Amecaw arrives
onsite. Calibrate water quality
turbidity and P.D. meters.
0750 - Cascade arrives onsite
Conduct safety meeting
Mob. to and set up on SB-162
- Advance solid point to 30 ft.
- Advance dual tube from 30ft to 54 ft.
0800 Collect SS-102-32 for PNOD
0815-Collect SS-102-38 for PNOD
0915-Collect SS-102-32 for TCC-VOC's
- Encountered refusal @ 54 ft.
- Advance screen point to refusal
at 54 ft expose screen
for 50 ft to 54 ft.
- Set up to collect groundwater sample
via peristaltic pump and check valve.
- Collect GW-102-52 @
1035 for TCC-VOC's
- Pull rods. Complete chain of custody
records and package cores for analysis.
- Full rods. Complete chain of custody
records and package cores for analysis.
- Deliver samples and chain of custody to PAC

6/28/12

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Location Ashville, NC Date 6/20/12
 Project / Client GTS of Ashville

CASPIAN ANCCW Log 1/1

Location Ashville, NC Date 6/30/12 47
 Project / Client GTS of Ashville

6/25/12 2012.06 ANCCW Log 1/1

1136-PACE carrier leaves site
 + Drillers prep. for greeting
 1200-1230 lunch
 1230-1700 Great borings MP-91, MP-84, MP-84A,
 and two offsets, MP-90, SB-90,
 SB-75, SB-87, MP-160, MP-91,
 MP-92, MP-92-008, MP-93,
 SB-93, MP-95, SB-95,
 MP-94, MP-98, MP-99
 1402-96. (Great great using rig)
 1700-Cascade drivers/containers
 Soil cuttings and sand conductor
 collected today.

1715-Cascade and R. Clark w/
 ANCCW leave site.

1800-Cascade and R. Clark w/ANCCW
 arrive onsite. Collect samples resting
 - Set up great trailer
 1820-Boat back 5 MP-103,
 MP-104, SB-73, MP-105,
 MP-105-DUP., SB-80 and SB-81
 (Great great using rig)
 1301245 Drillers pack up
 supplies and clean-up.
 1245-Cascade and R. Clark
 w/ANCCW leave site

Log 1/1
 6/30/12

Log 1/1
 6/30/12

FIELD INSTRUMENT CALIBRATION RECORD

Project Name: CTS of Asheville, Inc. Superfund Site

Date: 6/22/17
Name: Rodney Clark

Project Number: 6252-12-0006

Water Quality Meter Calibration	Standard Value	Meter Value	Acceptance Criteria
Manufacturer: <u>HORIBA</u>	pH: <u>4.0</u> SU (low)	pH: <u>4.01</u> SU	+/- 10% of standard
Model No.: <u>U-52</u>	pH: <u>NA</u> SU (med)	pH: <u>NA</u> SU	+/- 10% of standard
Unit ID: <u>WRAUBBD</u>	pH: <u>NA</u> SU (high)	pH: <u>NA</u> SU	+/- 10% of standard
	Conductivity: <u>4.49</u> mS/cm	Conductivity: <u>4.49</u> mS/cm	+/- 10% of standard
	ORP: <u>NA</u> mV	ORP: <u>NA</u> mV	+/- 10% of standard

Turbidity Meter Calibration	Standard Value	Meter Value	Acceptance Criteria
Manufacturer: <u>HACH</u>	<u>10</u> NTU (low)	<u>10.0</u> NTU	+/- 10% of standard
Model No.: <u>Z100 Q</u>	<u>20</u> NTU (med)	<u>20.1</u> NTU	+/- 10% of standard
Unit ID: <u>S/N 14080603448</u>	<u>100</u> NTU (high)	<u>100</u> NTU	+/- 10% of standard
	<u>800</u> NTU (high)	<u>7.99</u> NTU	+/- 10% of standard

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

Calibration Sources

	Source	Value	Lot Number	Expiration Date
pH (low)	<u>PINE (HORIBA AUTOCAL)</u>	<u>4.0</u> SU	<u>C688422</u>	<u>July 31, 2017</u>
pH (med)	<u>NA</u>	<u>NA</u> SU	<u>NA</u>	<u>NA</u>
pH (high)	<u>NA</u>	<u>NA</u> SU	<u>NA</u>	<u>NA</u>
Conductivity	<u>PINE (HORIBA Autocal)</u>	<u>4.49</u> mS/cm	<u>C688422</u>	<u>July 31, 2018</u>
ORP:	<u>NA</u>	<u>NA</u> mV	<u>NA</u>	<u>NA</u>
Turbidity (low)	<u>HACH STARCAL B</u>	<u>10</u> NTU	<u>2961601</u>	<u>April 2018</u>
Turbidity (med):	<u>NA</u>	<u>20</u> NTU	<u>2684601</u>	<u>March 2018</u>
Turbidity (high):	<u>NA</u>	<u>100</u> NTU	<u>A6363</u>	<u>April 2018</u>
Turbidity (high):	<u>NA</u>	<u>800</u> NTU	<u>A6356</u>	<u>April 2018</u>
PID gas:	<u>NA</u>	<u>NA</u> ppmv	<u>NA</u>	<u>NA</u>

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
 Project Number: 6252-12-0006

Date: 9/23/17
 Name: Rodney Clark

Water Quality Meter Calibration	Standard Value	Meter Value	Acceptance Criteria
Manufacturer: HORIBA	pH: 4.00 SU (low)	pH: 4.00 SU	+/- 10% of standard
Model No.: U-52	pH: NA SU (med)	pH: NA SU	+/- 10% of standard
Unit ID: WRAU3BD	pH: NA SU (high)	pH: NA SU	+/- 10% of standard
	Conductivity: 4.49 mS/cm	Conductivity: 4.49 mS/cm	+/- 10% of standard
	ORP: NA mV	ORP: NA mV	+/- 10% of standard

Turbidity Meter Calibration	Standard Value	Meter Value	Acceptance Criteria
Manufacturer: HACH	10 NTU (low)	10.1 NTU	+/- 10% of standard
Model No.: 2100Q	20 NTU (med)	20.3 NTU	+/- 10% of standard
Unit ID: SN 14080C03498	100 NTU (high)	98.9 NTU	+/- 10% of standard
	800 NTU (high)	796 NTU	+/- 10% of standard

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

Calibration Sources

	Source	Value	Lot Number	Expiration Date
pH (low)	PINE(HORIBA AUTOCAL)	4.0 SU	C688422	July 31, 2012
pH (med)	NA	NA SU	NA	NA
pH (high)	NA	NA SU	NA	NA
Conductivity	PINE(HORIBA AUTOCAL)	4.49 mS/cm	C688422	July 31, 2012
ORP:	NA	NA mV	NA	NA
Turbidity (low)	HACH STABCAL(R)	10 NTU	2961801	April 1 2018
Turbidity (med):	SAF	20 NTU	2684801	MARCH 2018
Turbidity (high):	SAF	100 NTU	A6363	APRIL 2018
Turbidity (high):	SAF	800 NTU	A6356	APRIL 2018
PID gas:	DNC	NA ppmv	NA	NA

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: 6/26/17
Name: Rodney Clark

Project Number: 6252-12-0006

Water Quality Meter Calibration	Standard Value	Meter Value	Acceptance Criteria
Manufacturer: YSI	pH: 4 SU (low)	pH: <u>4.00</u> SU	+/- 10% of standard
Model No.: 556 MPS	pH: 7 SU (med)	pH: <u>7.01</u> SU	+/- 10% of standard
Unit ID: <u>1SL100153</u>	pH: 10 SU (high)	pH: <u>10.06</u> SU	+/- 10% of standard
	Conductivity: 1.413 mS/cm	Conductivity: <u>1.416</u> mS/cm	+/- 10% of standard
	ORP: 240 mV	ORP: <u>242.5</u> mV	+/- 10% of standard

Turbidity Meter Calibration	Standard Value	Meter Value	Acceptance Criteria
Manufacturer: HACH	10 NTU (low)	<u>10.1</u> NTU	+/- 10% of standard
Model No.: 7100 Q	20 NTU (med)	<u>20.3</u> NTU	+/- 10% of standard
Unit ID: S/N 14080C034448	100 NTU (high)	<u>100</u> NTU	+/- 10% of standard
	800 NTU (high)	<u>799</u> NTU	+/- 10% of standard

Photoionization Detector	Background:	Meter:	Acceptance Criteria
Manufacturer: MiniRae	Background: <u>0.0</u> ppmv	Meter: <u>0.0</u> ppmv	within 5 ppmv of Zero
Model No.: 3000	Span Gas: <u>100</u> ppmv	Meter: <u>99.8</u> ppmv	+/- 10% of standard
Unit ID: S/N 592-918923			

Calibration Sources

	Source	Value	Lot Number	Expiration Date
pH (low)	<u>AquaPhoenix</u>	4 SU	<u>6GL310</u>	<u>12/18</u>
pH (med)		7 SU	<u>6GL816</u>	<u>12/18</u>
pH (high)		10 SU	<u>GGD555</u>	<u>4/18</u>
Conductivity	↓	1.413 mS/cm	<u>6GL948</u>	<u>12/18</u>
ORP:	<u>Hanna</u>	240 mV	<u>9567</u>	<u>11/20</u>
Turbidity (low)	<u>StabCal Forman</u>	10 NTU	<u>A63SG</u>	<u>4/18</u>
Turbidity (med):	↓	20 NTU	<u>A63SG</u>	<u>3/18</u>
Turbidity (high):		100 NTU	<u>A63G3</u>	<u>4/18</u>
Turbidity (high):	↓	800 NTU	<u>A63SG</u>	<u>4/18</u>
PID gas:	<u>Isobutylene (PINE)</u>	100 ppmv	<u>IAO-240-100-11</u>	<u>9/18</u>

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: 6/27/17

Project Number: 6252-12-0006

Name: RMC

Water Quality Meter Calibration	Standard Value	Meter Value	Acceptance Criteria
Manufacturer: YSI	pH: 4 SU (low)	pH: <u>4.00</u> SU	+/- 10% of standard
Model No.: 556 MPS	pH: 7 SU (med)	pH: <u>7.00</u> SU	+/- 10% of standard
Unit ID: <u>15C1001S3</u>	pH: 10 SU (high)	pH: <u>10.00</u> SU	+/- 10% of standard
	Conductivity: 1.413 mS/cm	Conductivity: <u>1.413</u> mS/cm	+/- 10% of standard
	ORP: 240 mV	ORP: <u>240</u> mV	+/- 10% of standard

Turbidity Meter Calibration	Standard Value	Meter Value	Acceptance Criteria
Manufacturer: HACH	0 NTU (low)	<u>10.0</u> NTU	+/- 10% of standard
Model No.: 2100 G	20 NTU (med)	<u>20.6</u> NTU	+/- 10% of standard
Unit ID: S/N 14080 CO34448	100 NTU (high)	<u>101</u> NTU	+/- 10% of standard
	800 NTU (high)	<u>798</u> NTU	+/- 10% of standard

Photoionization Detector	Background	Meter	Acceptance Criteria
Manufacturer: HORIBA MINIRAE	0.0 ppmv	<u>0.0</u> ppmv	within 5 ppmv of Zero
Model No.: UST 3000	Span Gas: 100 ppmv	<u>100</u> ppmv	+/- 10% of standard
Unit ID: Amec Asheville - 2			

Calibration Sources

	Source	Value	Lot Number	Expiration Date
pH (low)	AquaPhoenix	4 SU	GGL 310	Dec. 2018
pH (med)		7 SU	GGL 816	Dec. 2018
pH (high)		10 SU	GQP 555	Apr. 2018
Conductivity	↓	1.413 mS/cm	GGL 948	Dec. 2018
ORP:	Hanna	240 mV	9567	Nov. 2020
Turbidity (low)	Stabcal Formazin®	10 NTU	^{Amc} 296180-1 6/21/17	Apr. 2018
Turbidity (med):		20 NTU	46356	Mar 2018
Turbidity (high):		100 NTU	^{Amc} 768490-1 6/21/17	Apr. 2018
Turbidity (high):	↓	800 NTU	46356	Apr. 2018
PID gas:	PPM Isobutylene	100 ppmv	IAO-248-100-11	Sept. 2018

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: 6/28/17
Name: Rodney Clark

Project Number: 6252-12-0006

Water Quality Meter Calibration		Standard Value	Meter Value	Acceptance Criteria
Manufacturer:	YSI	pH: 4 SU (low)	pH: <u>4.00</u> SU	+/- 10% of standard
Model No.:	556 MPS	pH: 7 SU (med)	pH: <u>7.00</u> SU	+/- 10% of standard
Unit ID:	<u>15L100153</u>	pH: 10 SU (high)	pH: <u>10.00</u> SU	+/- 10% of standard
		Conductivity: 1.413 mS/cm	Conductivity: <u>1.418</u> mS/cm	+/- 10% of standard
		ORP: 240 mV	ORP: <u>241.3</u> mV	+/- 10% of standard

Turbidity Meter Calibration		Standard Value	Meter Value	Acceptance Criteria
Manufacturer:	HACH	10 NTU (low)	<u>103</u> NTU	+/- 10% of standard
Model No.:	2100 Q	20 NTU (med)	<u>20.2</u> NTU	+/- 10% of standard
Unit ID:	<u>S/N 14080C034448</u>	100 NTU (high)	<u>101</u> NTU	+/- 10% of standard
		800 NTU (high)	<u>802</u> NTU	+/- 10% of standard

Photoionization Detector		Acceptance Criteria	
Manufacturer:	Minirae	Background:	<u>0.0</u> ppmv within 5 ppmv of Zero
Model No.:	3000	Span Gas:	<u>100</u> ppmv
Unit ID:	<u>S/N 592-918923</u>	Meter:	<u>0.0</u> ppmv
		Meter:	<u>98.9</u> ppmv +/ - 10% of standard

Calibration Sources

	Source	Value	Lot Number	Expiration Date
pH (low)	<u>Aquaphoenix</u>	4 SU	<u>GGL310</u>	<u>12/18</u>
pH (med)		7 SU	<u>GGL816</u>	<u>12/18</u>
pH (high)		10 SU	<u>GGD555</u>	<u>4/18</u>
Conductivity	<u>Hanna</u>	1.413 mS/cm	<u>GGL948</u>	<u>12/18</u>
ORP:		240 mV	<u>9567</u>	<u>11/20</u>
Turbidity (low)	<u>Stabcal Formazin®</u>	10 NTU	<u>A6356</u>	<u>4/18</u>
Turbidity (med):		20 NTU	<u>A6356</u>	<u>3/18</u>
Turbidity (high):		100 NTU	<u>A6363</u>	<u>4/18</u>
Turbidity (high):		800 NTU	<u>A6356</u>	<u>4/18</u>
PID gas:	<u>Isobutylene (PINE)</u>	100 ppmv	<u>IAO-24810-11</u>	<u>9/18</u>

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: 6/29/17
Name: Rodney Clark

Project Number: 6252-12-0006

Water Quality Meter Calibration	Standard Value	Meter Value	Acceptance Criteria
Manufacturer: YSI	pH: 4 SU (low)	pH: <u>4.00</u> SU	+/- 10% of standard
Model No.: 556 MPS	pH: 7 SU (med)	pH: <u>7.00</u> SU	+/- 10% of standard
Unit ID: <u>1SL100153</u>	pH: 10 SU (high)	pH: <u>10.00</u> SU	+/- 10% of standard
	Conductivity: 1.413 mS/cm	Conductivity: <u>1.413</u> mS/cm	+/- 10% of standard
	ORP: 240 mV	ORP: <u>239.5</u> mV	+/- 10% of standard

Turbidity Meter Calibration	Standard Value	Meter Value	Acceptance Criteria
Manufacturer: HACH	10 NTU (low)	<u>10.1</u> NTU	+/- 10% of standard
Model No.: 2100 Q	20 NTU (med)	<u>20.3</u> NTU	+/- 10% of standard
Unit ID: S/N 14080C034448	100 NTU (high)	<u>99.8</u> NTU	+/- 10% of standard
	800 NTU (high)	<u>798</u> NTU	+/- 10% of standard

Photoionization Detector	Background:	Meter:	Acceptance Criteria
Manufacturer: MiniRae	<u>0.0</u> ppmv	<u>0.0</u> ppmv	within 5 ppmv of Zero
Model No.: 3000	Span Gas: <u>100</u> ppmv	Meter: <u>99.8</u> ppmv	+/- 10% of standard
Unit ID: S/N 592-918923			

Calibration Sources

	Source	Value	Lot Number	Expiration Date
pH (low)	<u>Aquaphoenix</u>	4 SU	<u>6GL310</u>	<u>12/18</u>
pH (med)		7 SU	<u>6GL816</u>	<u>12/18</u>
pH (high)		10 SU	<u>6GD555</u>	<u>4/18</u>
Conductivity	<u>Hanna</u>	1.413 mS/cm	<u>6GL948</u>	<u>12/18</u>
ORP:	<u>StabCal Formazin(R)</u>	240 mV	<u>9562</u>	<u>11/18</u>
Turbidity (low)		NTU	<u>A6356</u>	<u>4/18</u>
Turbidity (med):		NTU	<u>A635C</u>	<u>3/18</u>
Turbidity (high):		NTU	<u>A6363</u>	<u>4/18</u>
Turbidity (high):		NTU		<u>4/18</u>
PID gas:	<u>Isobutylane</u>	100 ppmv	<u>IAO-248-100.11</u>	<u>9/18</u>

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 DATA RECORD - GROUNDWATER SAMPLING

PROJECT	CTS of Asheville, Inc. Superfund Site		JOB NUMBER	6252-16-2012		DATE	6/17/17		
WELL / SAMPLE NUMBER	MW-6		ACTIVITY TIME	START 1330	END 1515	TIME	1515		
QC SAMPLES COLLECTED	NA		ASSOCIATED TRIP BLANK	TB.07					
WATER LEVEL / PUMP DATA						BLADDER PUMP	<input type="checkbox"/>		
INITIAL DTW	35.32 ft (TOC)	FINAL DTW	35.98 ft (TOC)	DRAWDOWN VOL	INITIAL - FINAL X 0.16 GAL/FT	0.11	PERISTALTIC PUMP		
SCREENED INTERVAL	37.2 - 46.8		DISCHARGE	<input type="checkbox"/>	REFILL	<input type="checkbox"/>			
						Variable Speed Pump			
PURGE DATA									
TIME	DTW (ft)	PURGE RATE (L/min)	TEMP (°C)	SPECIFIC CONDUCTIVITY (mS/cm)	pH	DO (mg/L)	TUIBILITY (NTU)	ORP (mV)	COMMENTS
1433	35.82	0.1	20.97	0.032	4.95	3.71	128	260	
1438	35.87	0.1	21.72	0.030	5.10	2.99	101	284	
1442	35.92	0.1	21.73	0.030	5.07	2.89	66.7	304	
1447	35.98	0.1	21.83	0.029	5.05	2.76	50.4	312	
1452	36.03	0.2	20.49	0.029	5.02	2.98	28.1	346	
1452	36.12	0.2	20.57	0.029	4.95	2.80	18.7	349	
1502	36.05	0.1	20.35	0.028	5.02	2.79	12.9	355	
1502	36.0	0.2	20.56	0.028	4.96	2.72	6.6	359	
1510	35.98	0.2	20.63	0.028	4.98	2.69	3.1	268	
Sample ID 1515 Total = 5.9									
ANALYSES: TCL 8260									
NOTES:									
SIGNATURE: 									

FIELD DATA RECORD - GROUNDWATER SAMPLING

ANALYSES: TCL 8260

NOTES:

SIGNATURE:

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT	CTS of Asheville, Inc. Superfund Site	JOB NUMBER	6252-16-2012	DATE	6/23/17
WELL / SAMPLE NUMBER	MW-7A	ACTIVITY TIME	START 0830 END 1100	TIME	1045
QC SAMPLES COLLECTED	ED-08	ASSOCIATED TRIP BLANK	TB-07		
WATER LEVEL / PUMP DATA			DRAWDOWN VOL	BLADDER PUMP	<input type="checkbox"/>
INITIAL DTW	18.50 ft (TOC)	FINAL DTW	21.13 ft (TOC)	INITIAL - FINAL X 0.16 GAL/FT	<input type="checkbox"/>
SCREENED INTERVAL	66.8 - 71.3		0.42 gal	PERISTALTIC PUMP	<input checked="" type="checkbox"/>
				DISCHARGE	<input type="checkbox"/>
				REFILL	<input type="checkbox"/>

PURGE DATA

ANALYSES:

NOTES:

SIGNATURE:

FIELD DATA RECORD - GROUNDWATER SAMPLING

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT	CTS of Asheville, Inc. Superfund Site	JOB NUMBER	6252-16-2012	DATE	6/29/17
WELL / SAMPLE NUMBER	SW-75-26	ACTIVITY TIME	START 1500 END 1745	TIME	1245
QC SAMPLES COLLECTED	NA	ASSOCIATED TRIP BLANK	TB-08		
WATER LEVEL / PUMP DATA			DRAWDOWN VOL	BLADDER PUMP	
INITIAL DTW	DNM ft (TOC)	FINAL DTW	DNM ft (TOC)	PERISTALTIC PUMP	<input checked="" type="checkbox"/>
SCREENED INTERVAL	24' - 28'		INITIAL - FINAL X 0.16 GAL/FT	N4 ft	DISCHARGE <input type="checkbox"/> REFILL <input type="checkbox"/>

PURGE DATA

ANALYSES: TCL 8260

NOTES:

SIGNATURE:

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT	CTS of Asheville, Inc. Superfund Site	JOB NUMBER	6252-16-2012	DATE	6/27/17
WELL / SAMPLE NUMBER	Gw 80-46	ACTIVITY TIME	START 1030 END 1111	TIME	1111
QC SAMPLES COLLECTED	FD - 10	ASSOCIATED TRIP BLANK	TB-08		
WATER LEVEL / PUMP DATA			DRAWDOWN VOL	BLADDER PUMP	
INITIAL DTW	DNM ft (TOC)	FINAL DTW	DNM ft (TOC)	INITIAL - FINAL X 0.16 GAL/FT	N/A ft
SCREENED INTERVAL	38 - 42		DISCHARGE	REFILL	
			PERISTALTIC PUMP	<input checked="" type="checkbox"/>	

PURGE DATA

ANALYSES:

NOTES:

SIGNATURE

FIELD DATA RECORD - GROUNDWATER SAMPLING

ANALYSES:

NOTES:

SIGNATURE:

Randy M. Hall

FIELD DATA RECORD - GROUNDWATER SAMPLING

ANALYSES: TCL 8260 / +++++ exceeds turbidity
NOTES: meter's range.

NOTES:

SIGNATURE

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT	CTS of Asheville, Inc. Superfund Site	JOB NUMBER	6252-16-2012	DATE	6/27/17
WELL / SAMPLE NUMBER	GW-95-4G	ACTIVITY TIME	START 18:00C END 18:45	TIME	18:45
QC SAMPLES COLLECTED	NP	ASSOCIATED TRIP BLANK	T13-08		
WATER LEVEL / PUMP DATA			DRAWDOWN VOL	BLADDER PUMP	<input type="checkbox"/>
INITIAL DTW	DUM (TOC)	FINAL DTW	DNM ft (TOC)	INITIAL - FINAL X 0.16 GAL/FT	<input type="checkbox"/> ✓
SCREENED INTERVAL	44 - 45		V4 ft	PERISTALTIC PUMP	<input checked="" type="checkbox"/>
			DISCHARGE	REFILL	<input type="checkbox"/> <input type="checkbox"/>

PURGE DATA

ANALYSES: TCI 8260

NOTES:

SIGNATURE:



FIELD DATA RECORD - GROUNDWATER SAMPLING

FIELD DATA RECORD - GROUNDWATER SAMPLING

FIELD DATA RECORD - GROUNDWATER SAMPLING

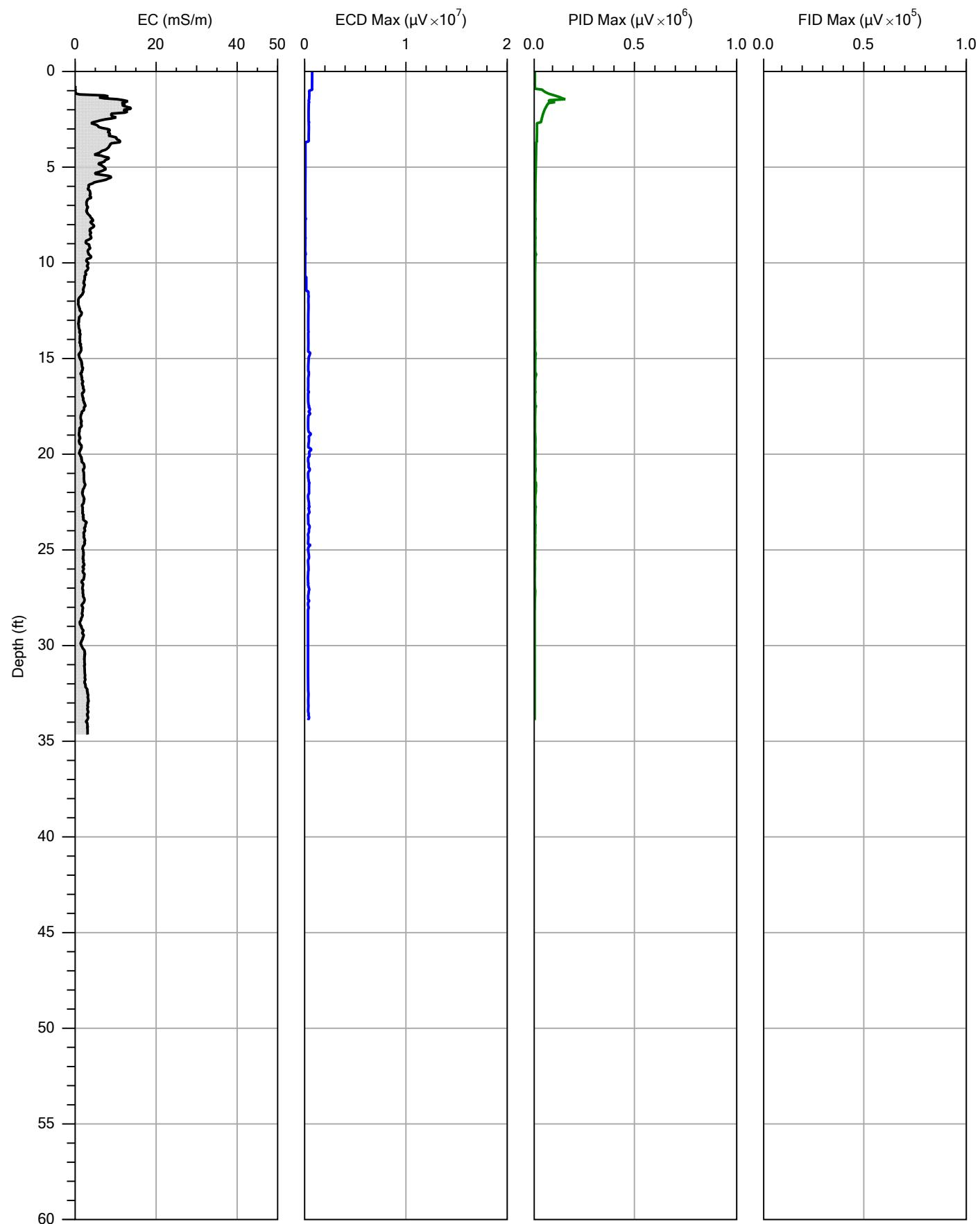
ANALYSES: TCL 8260

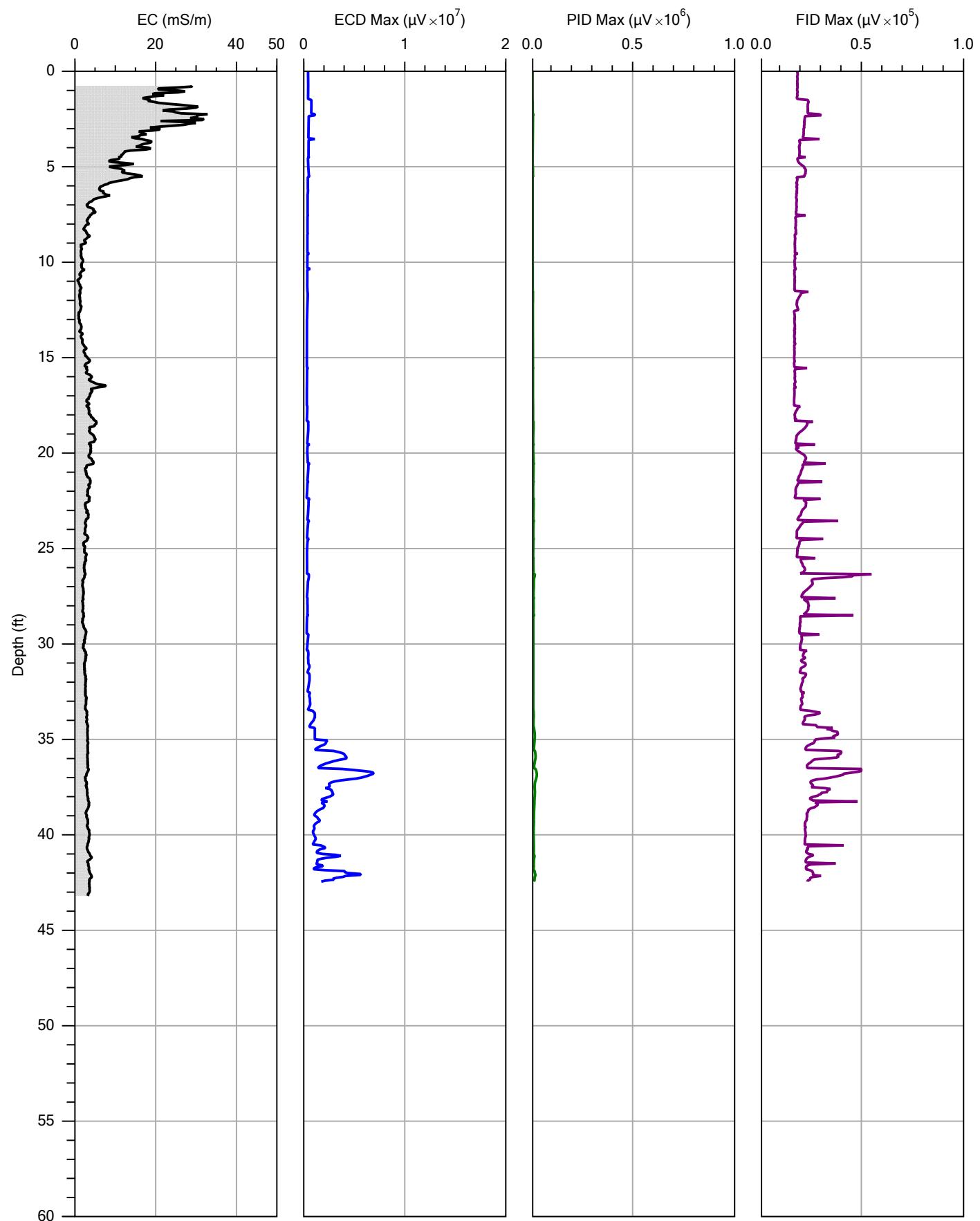
NOTES: ~~t+tf = exceeds turbidity meter's range~~, SIGNATURE

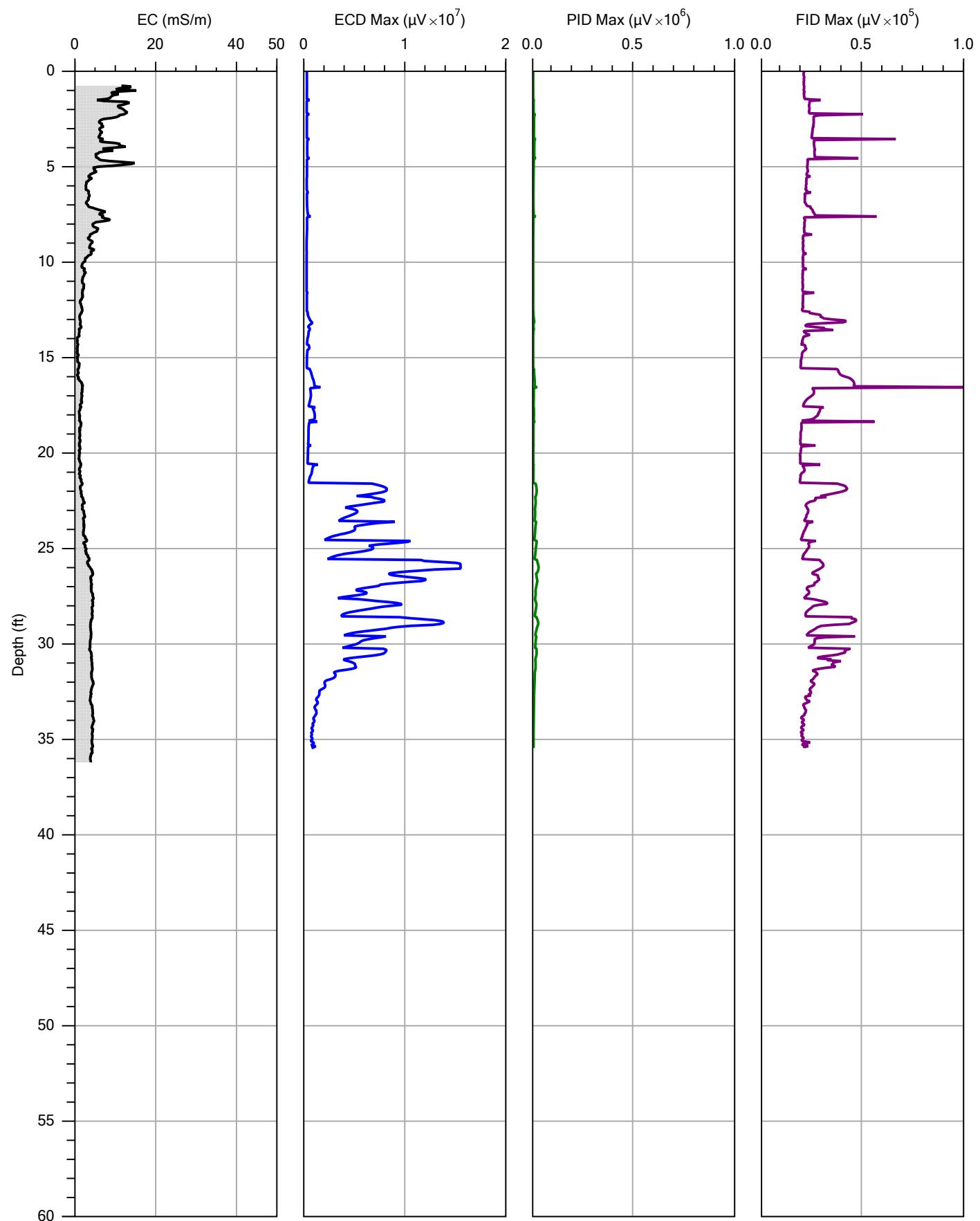
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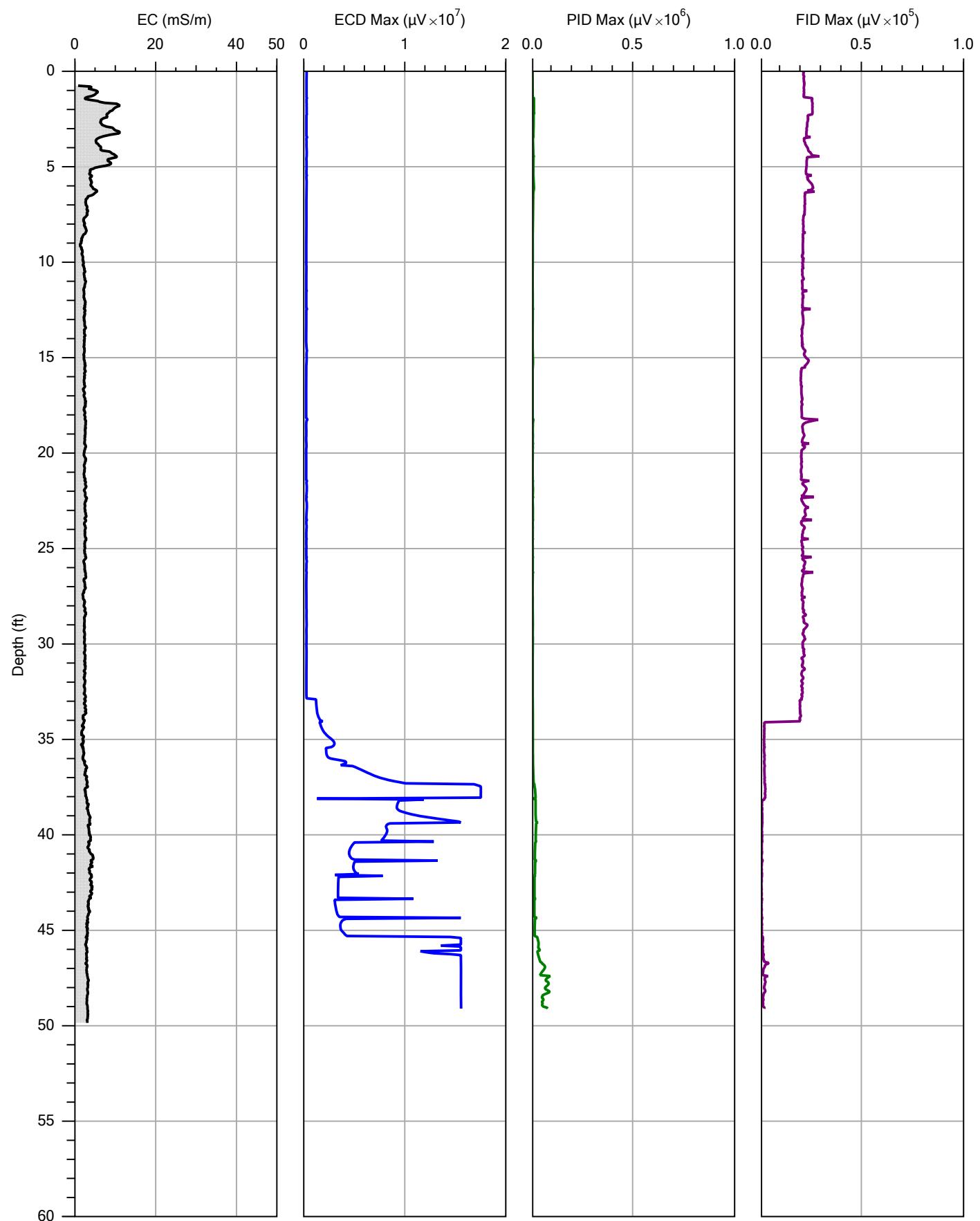
APPENDIX B

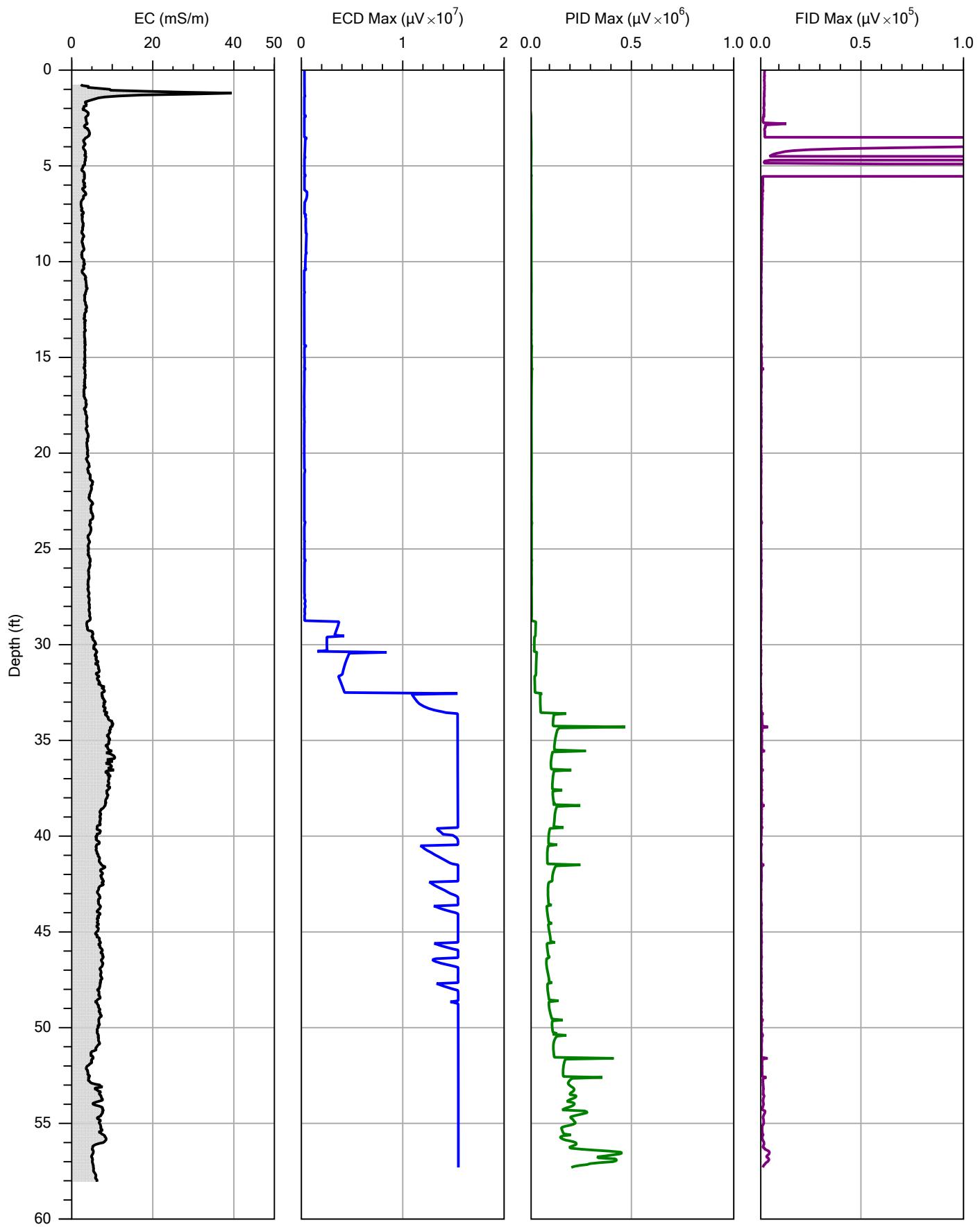
MEMBRANE INTERFACE PROBE LOGS

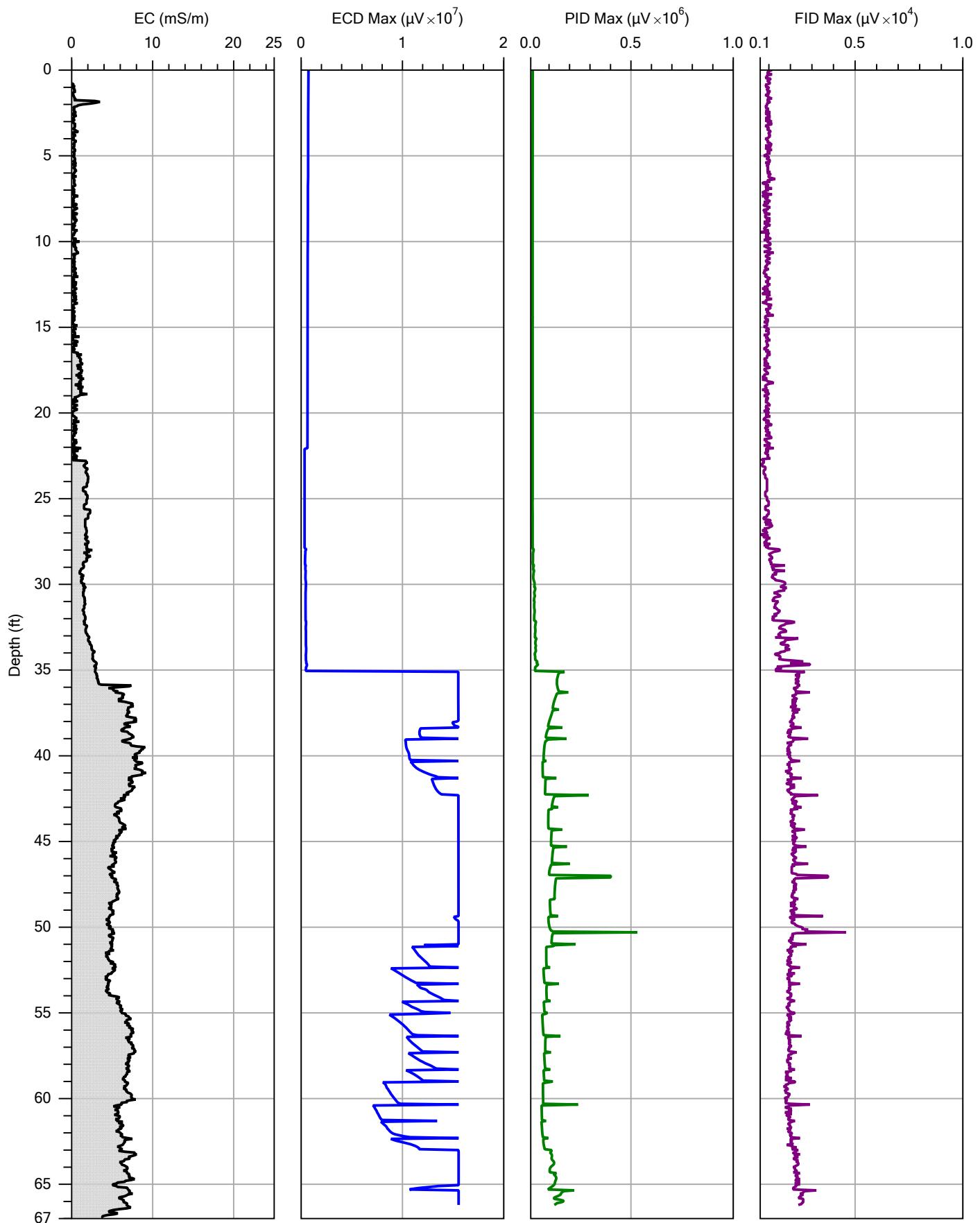


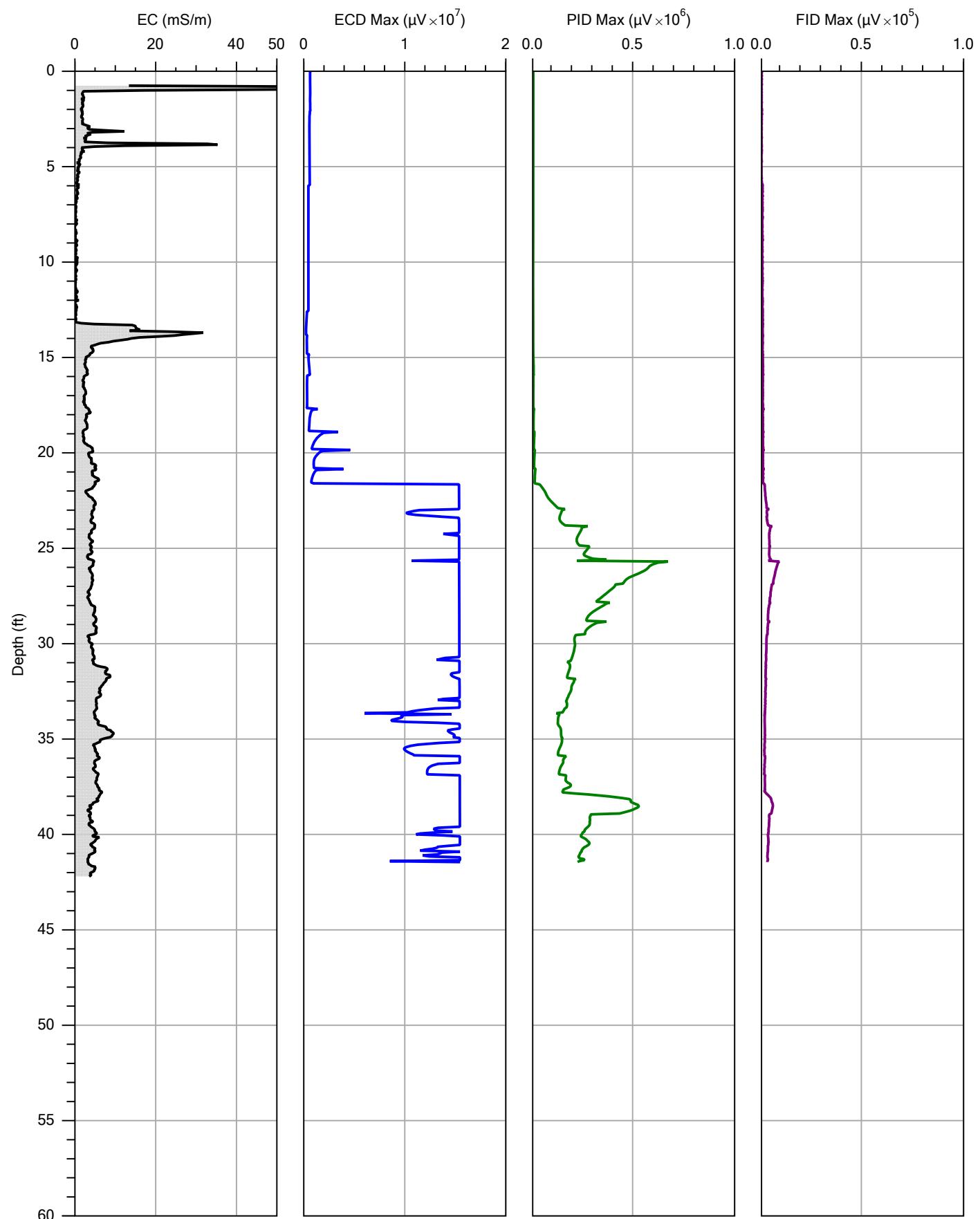


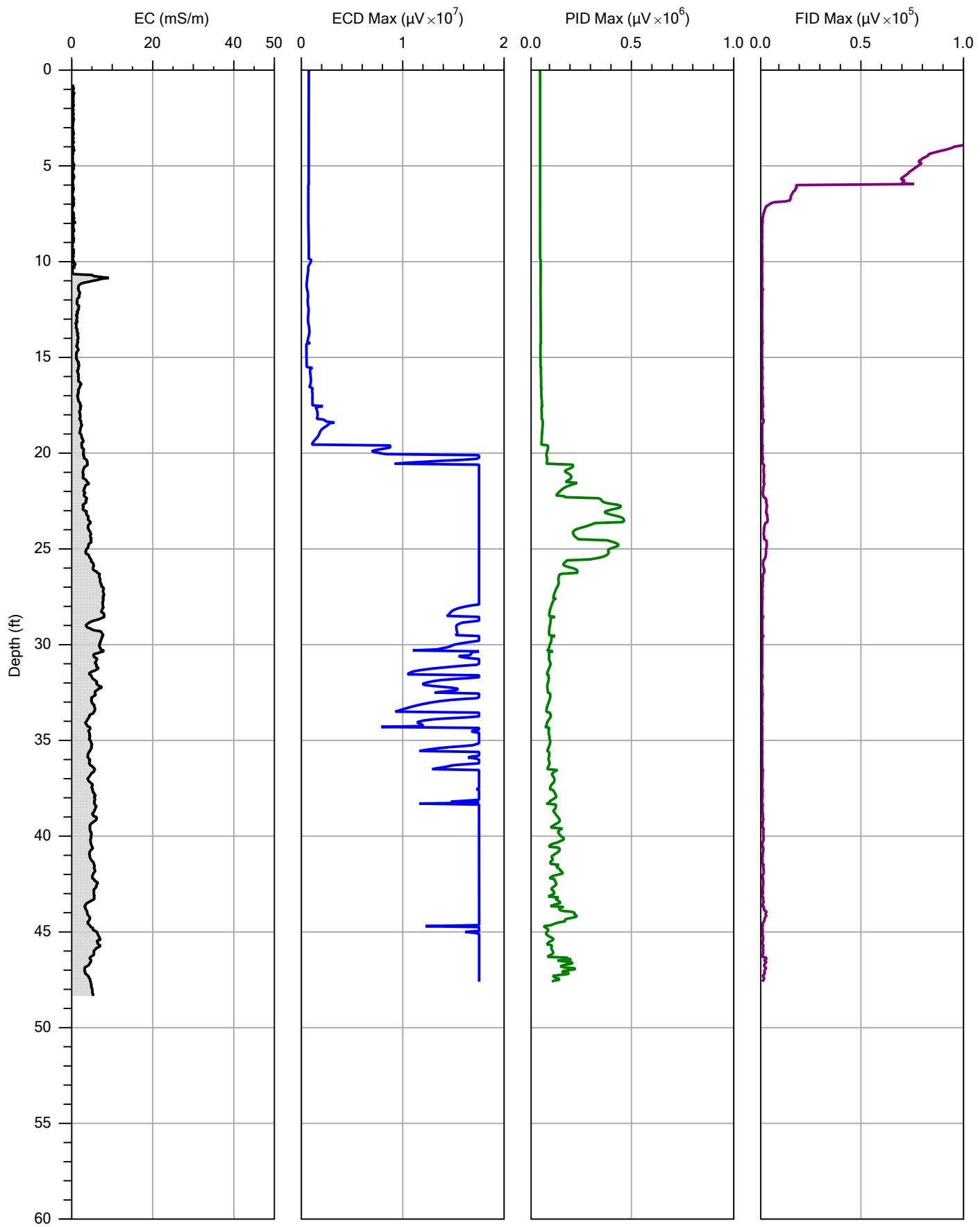


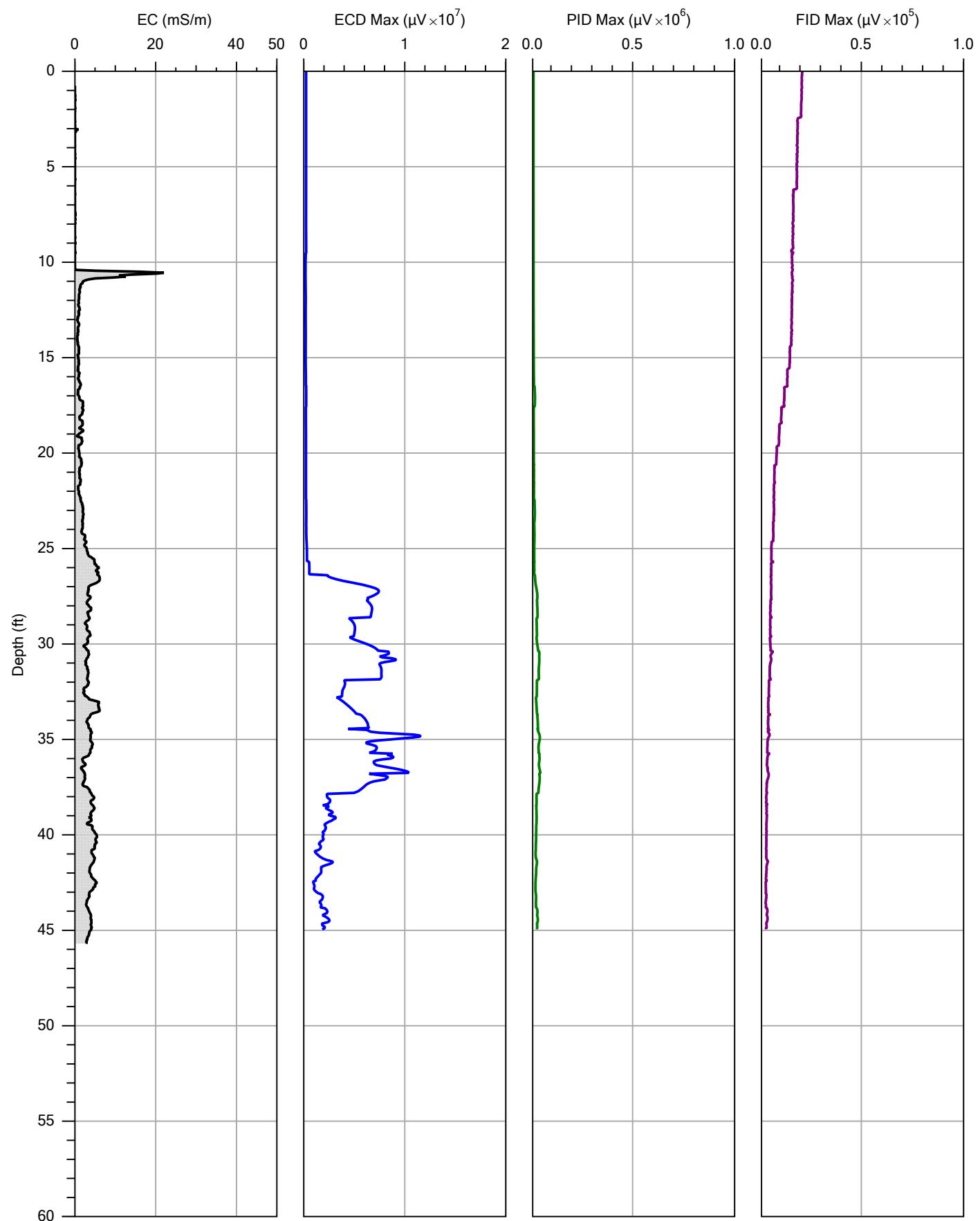


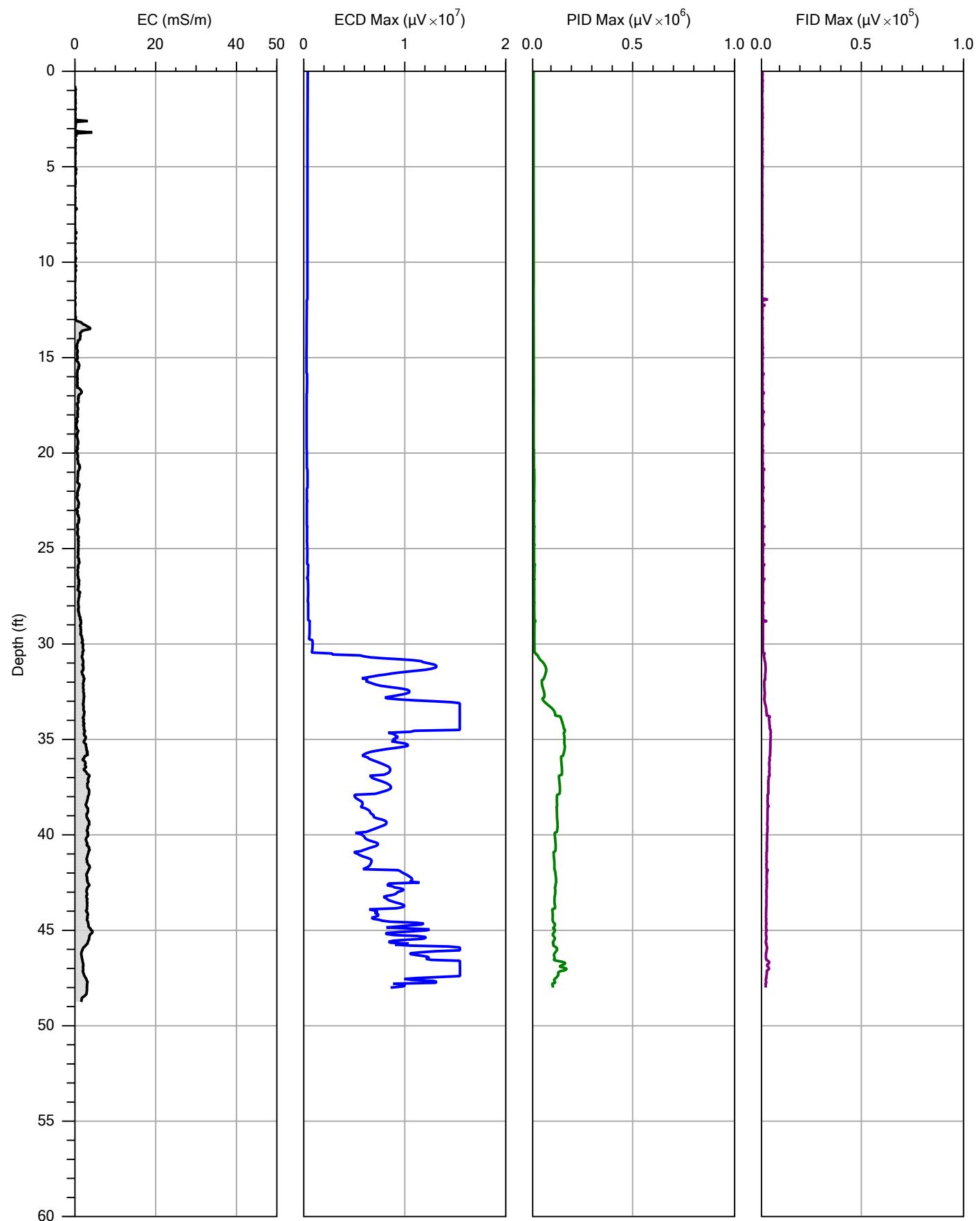


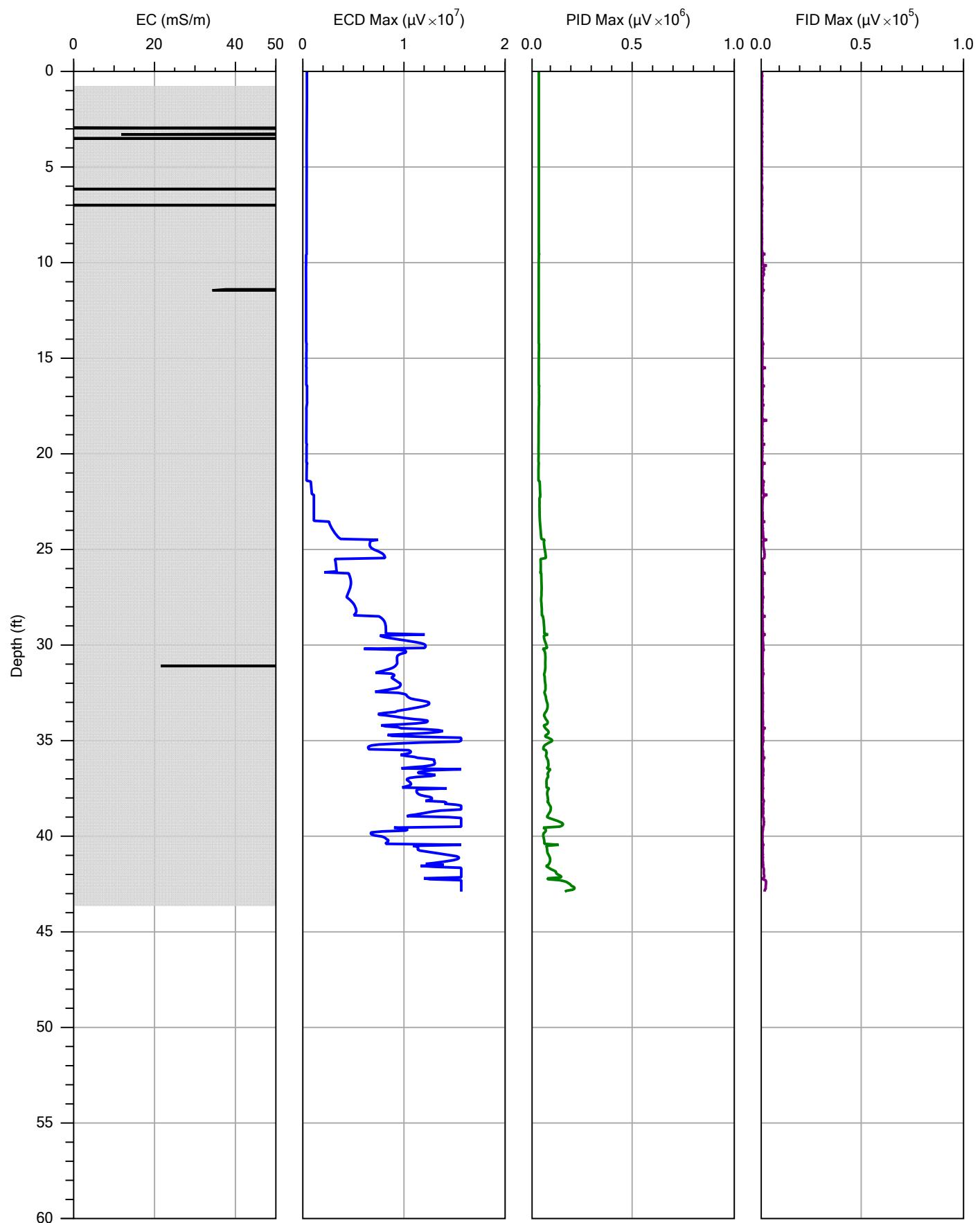


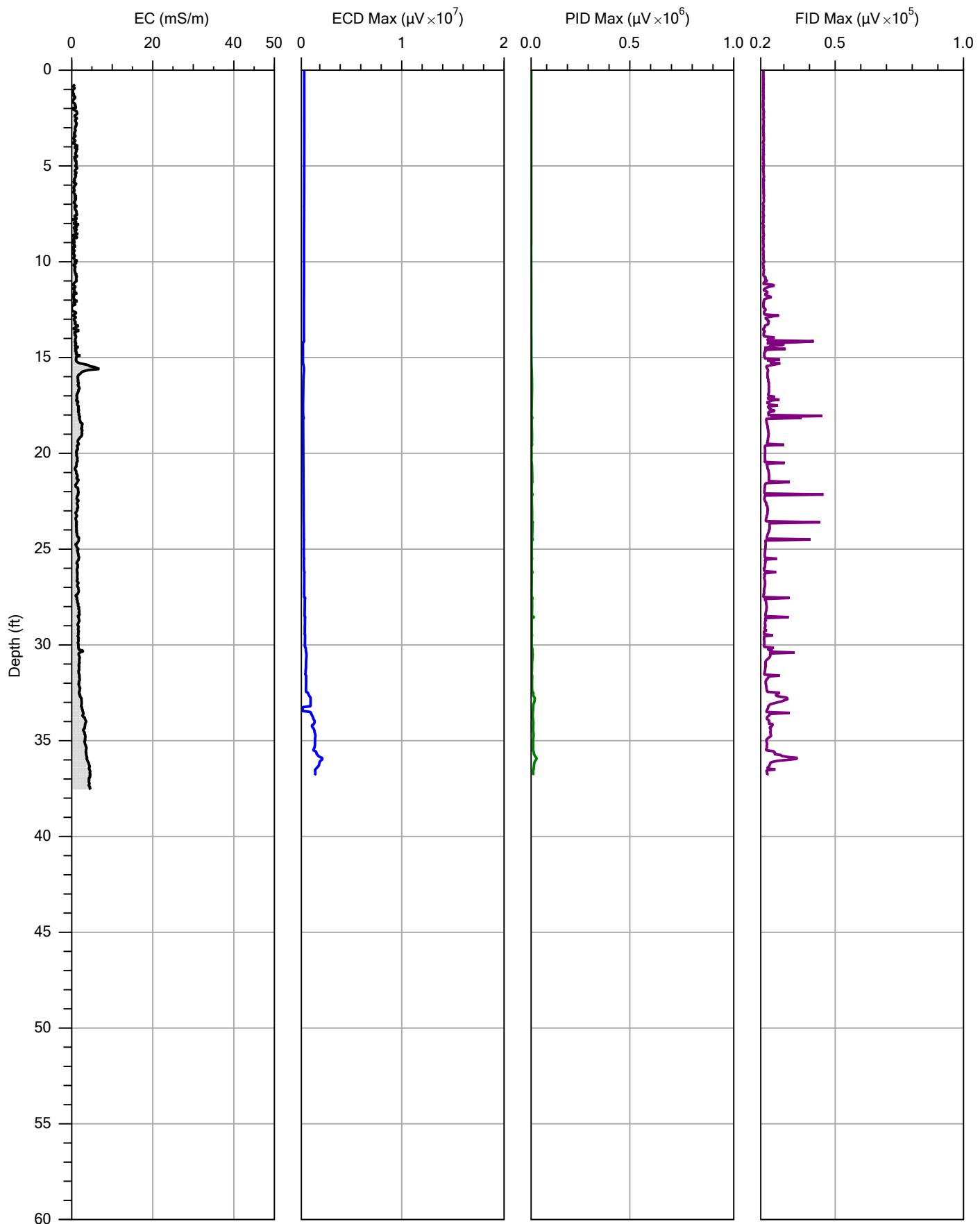


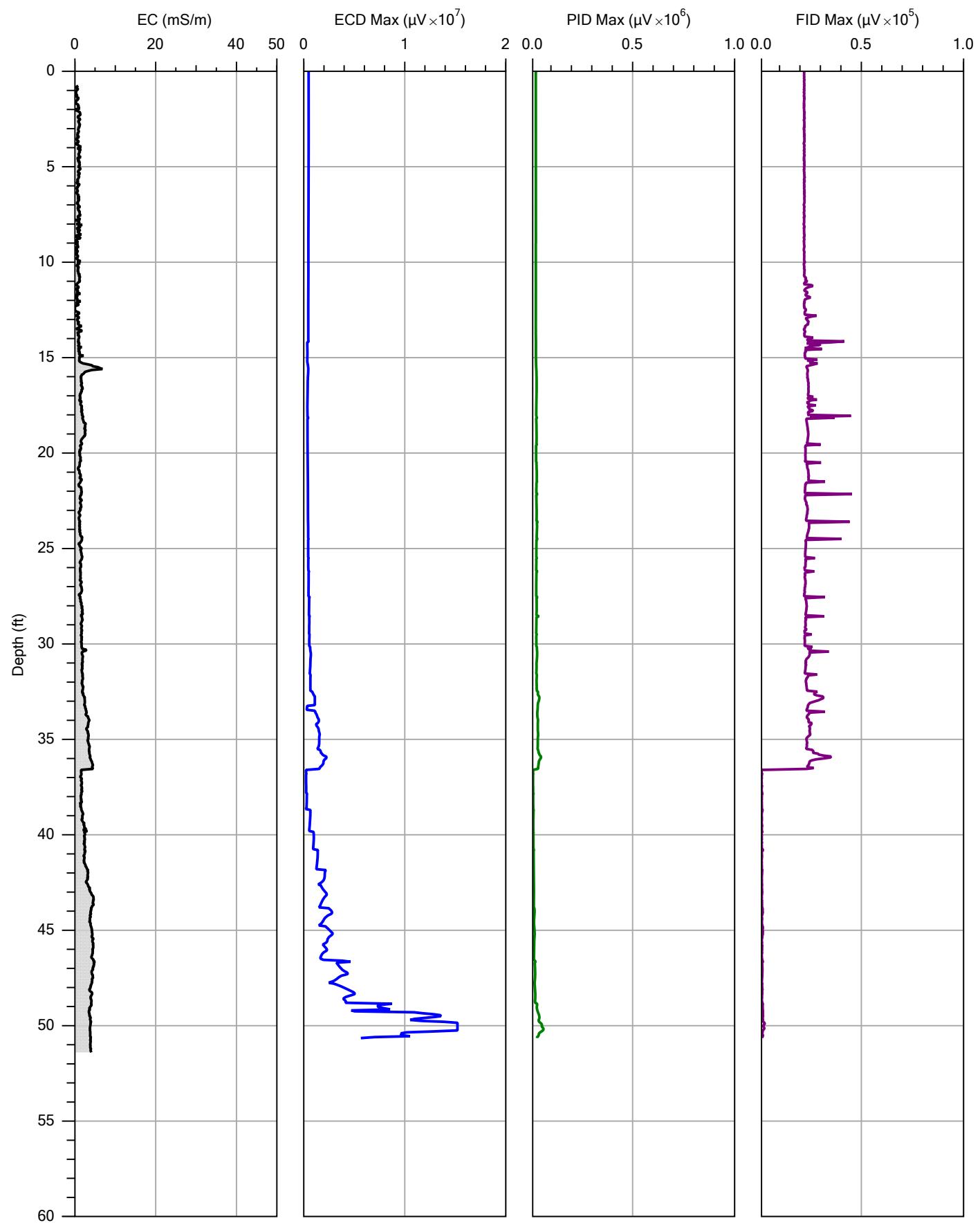


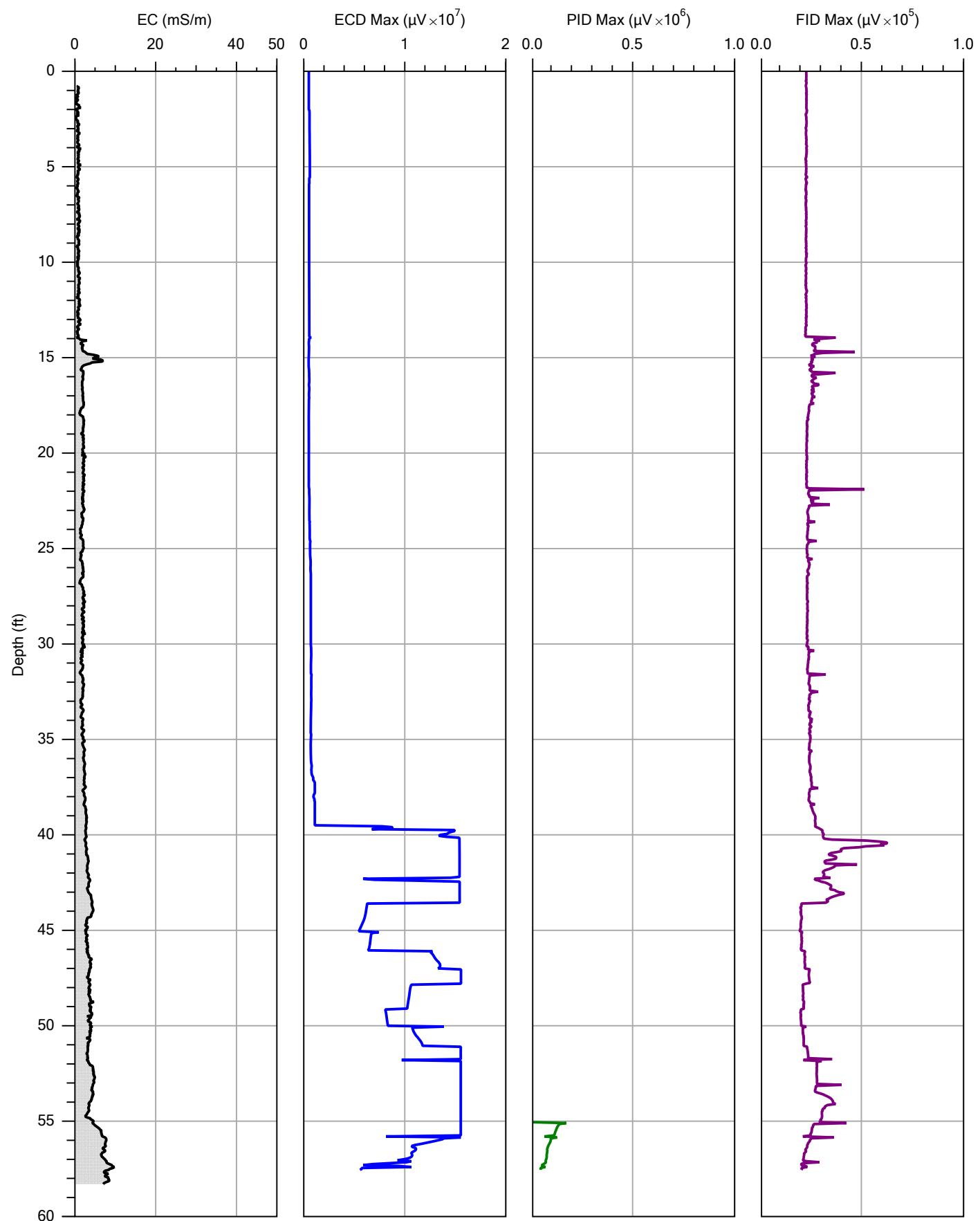


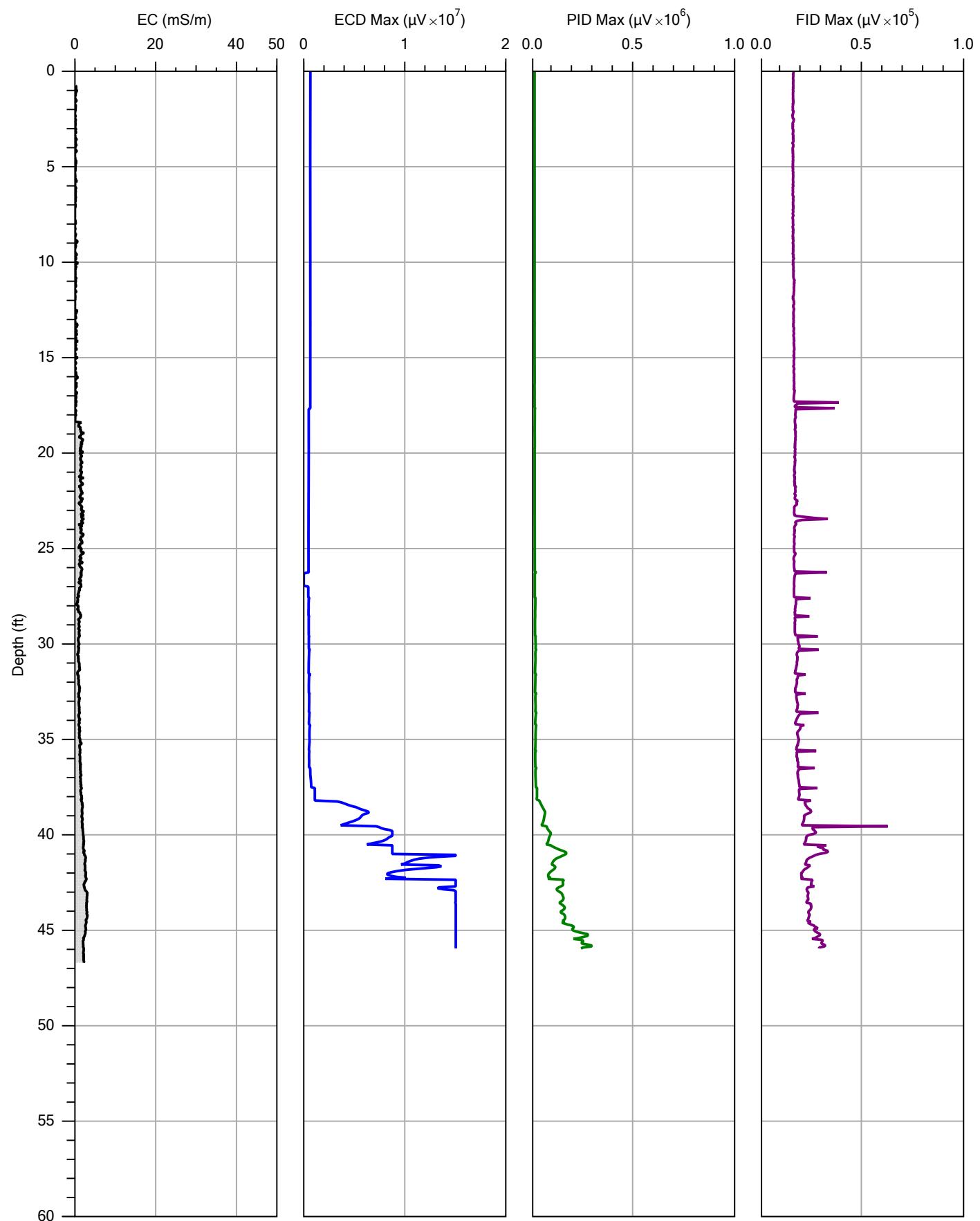


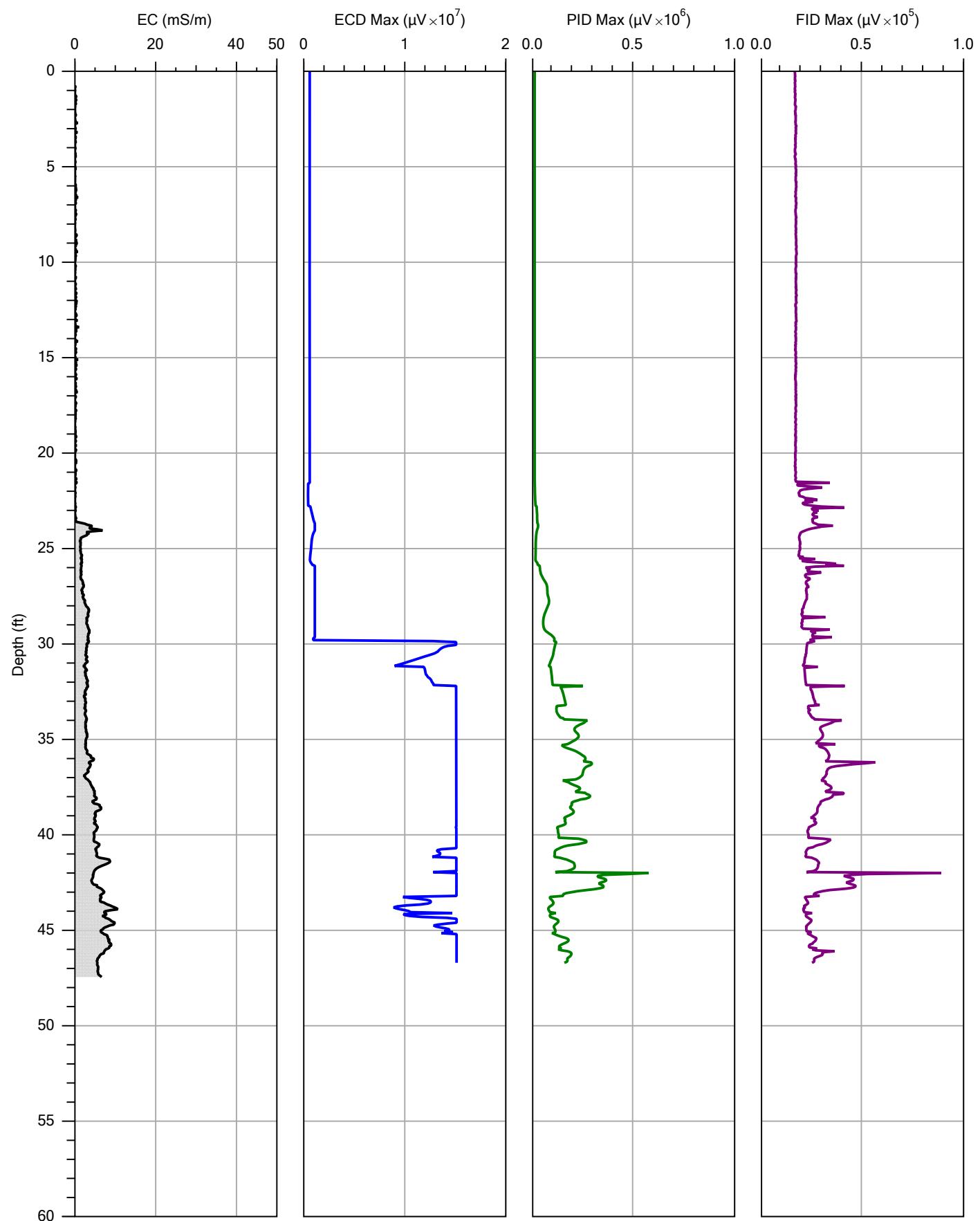


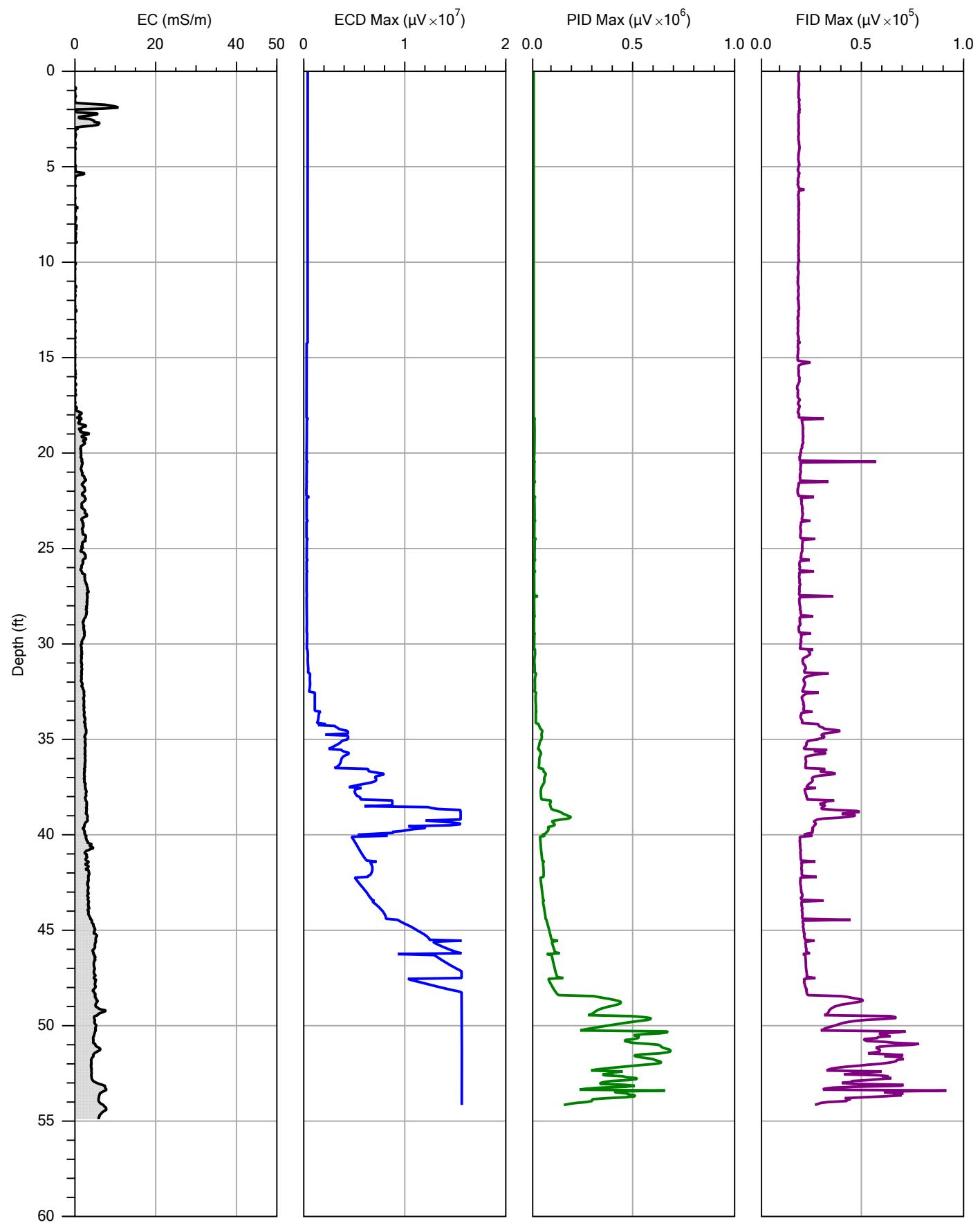


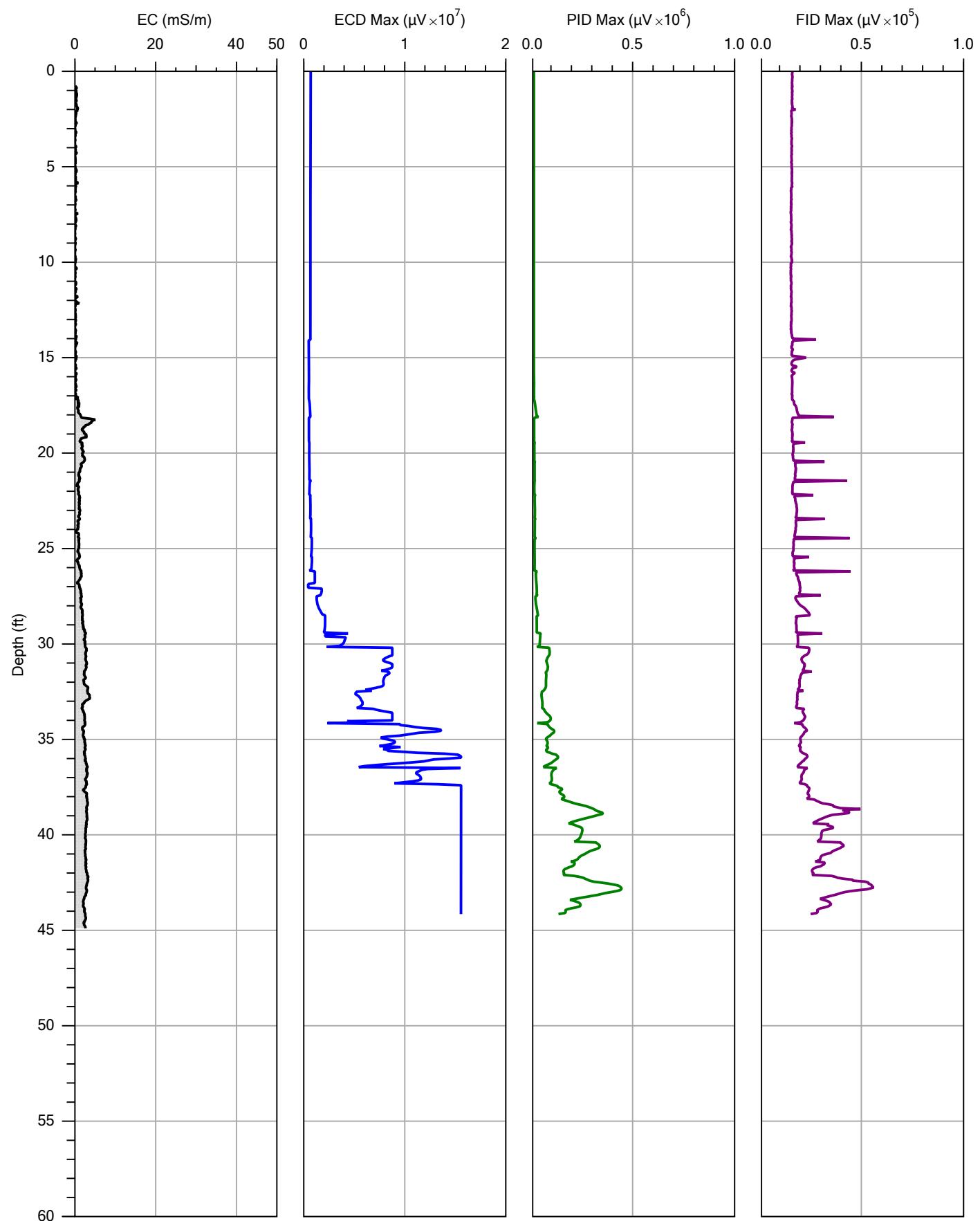


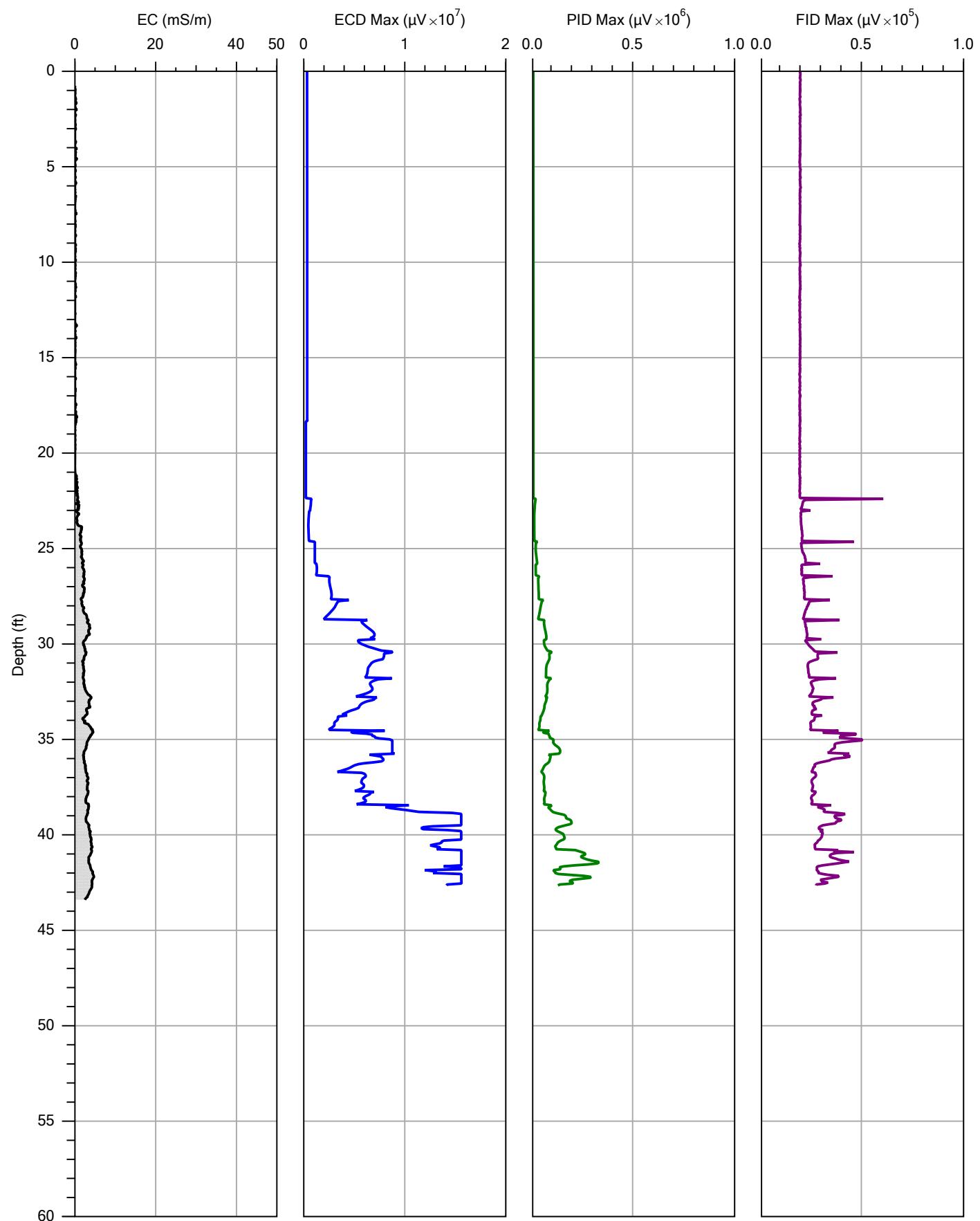


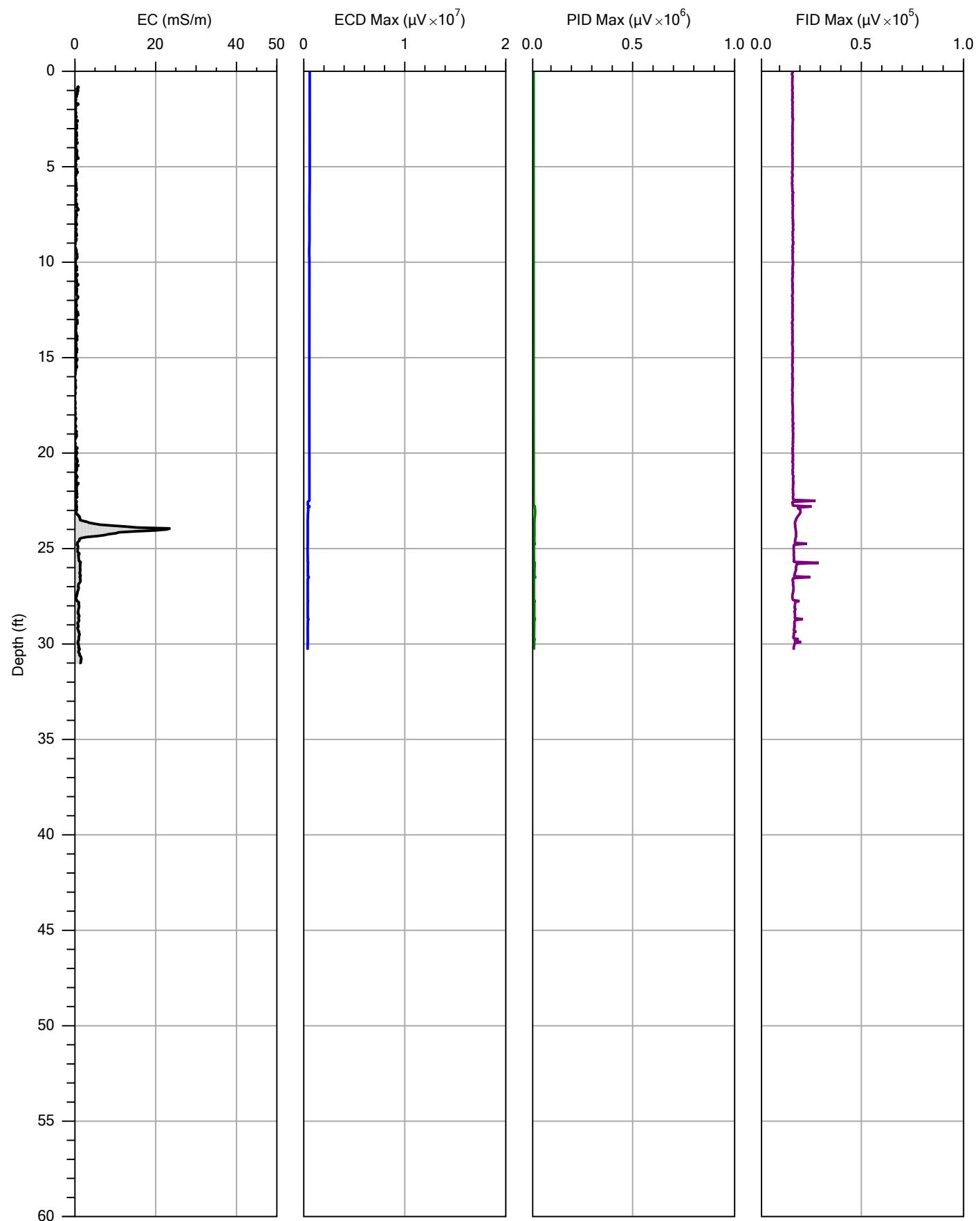


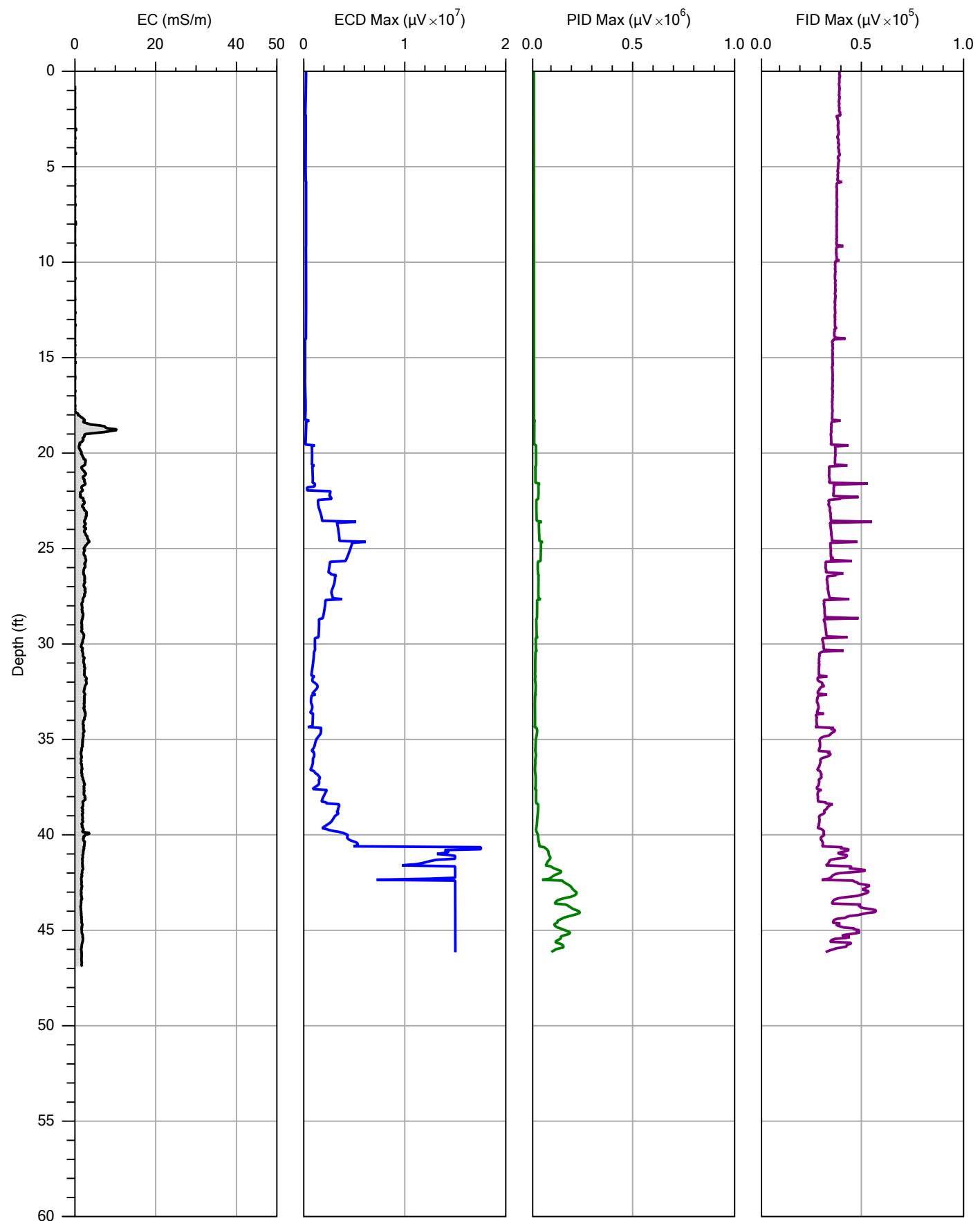


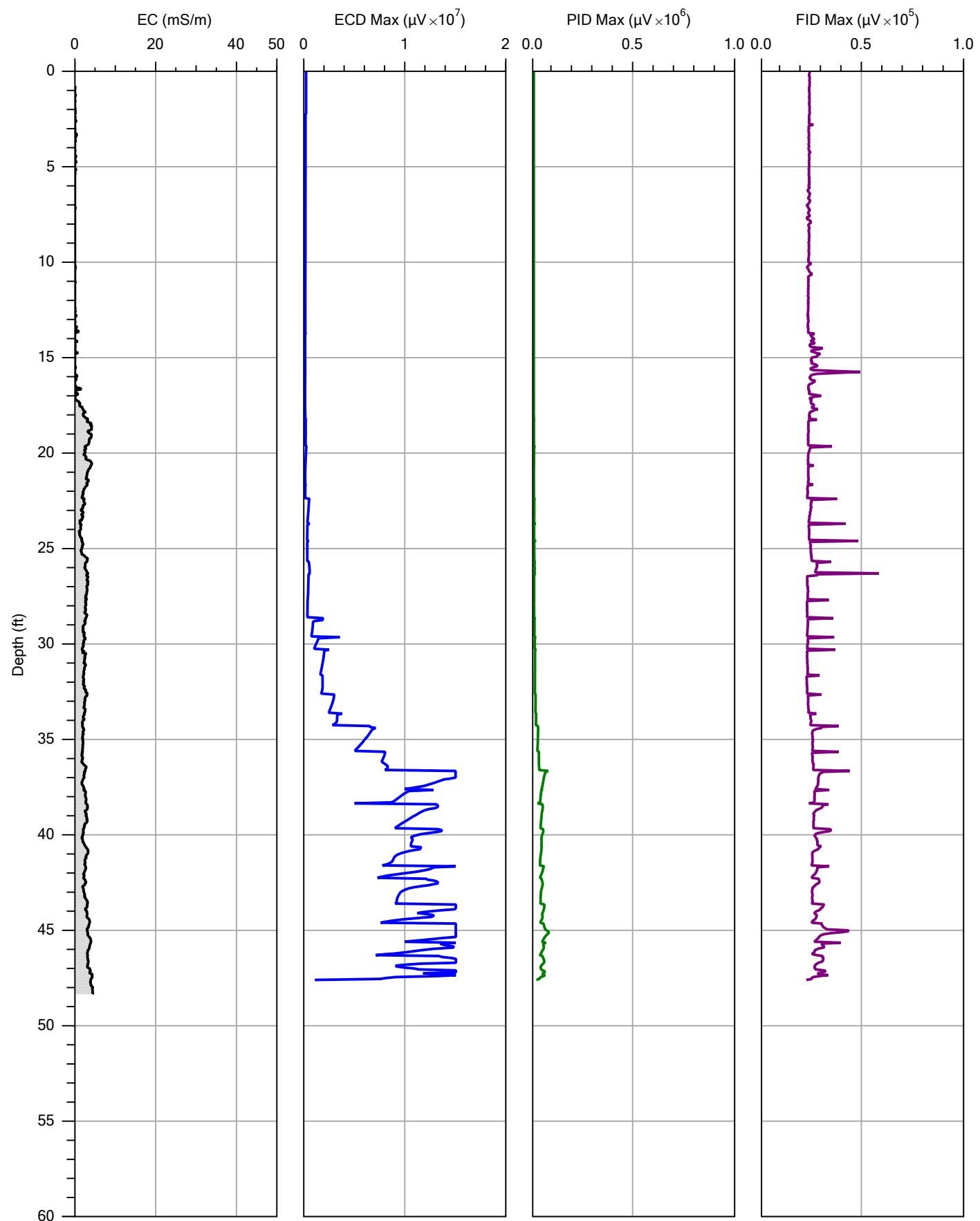


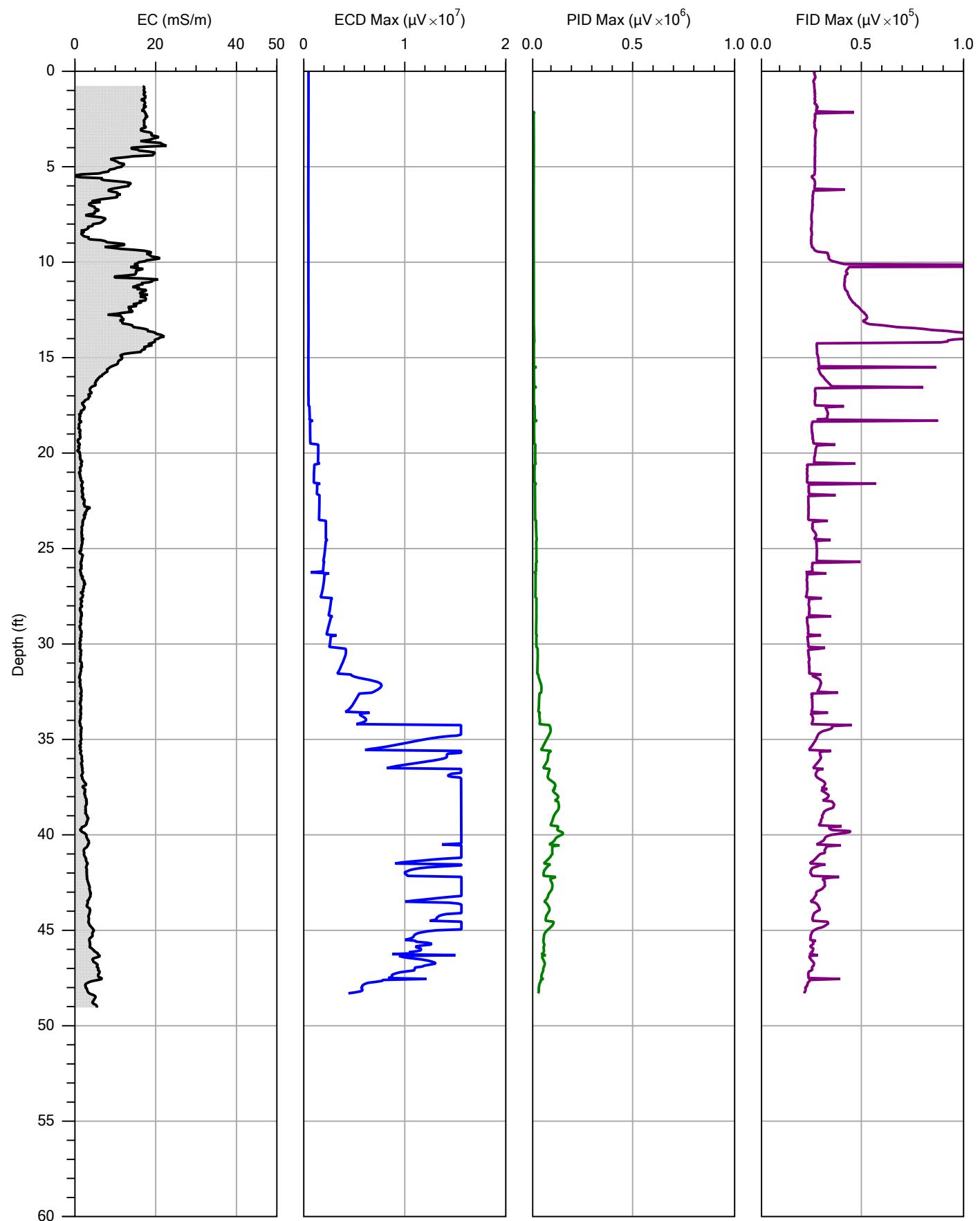


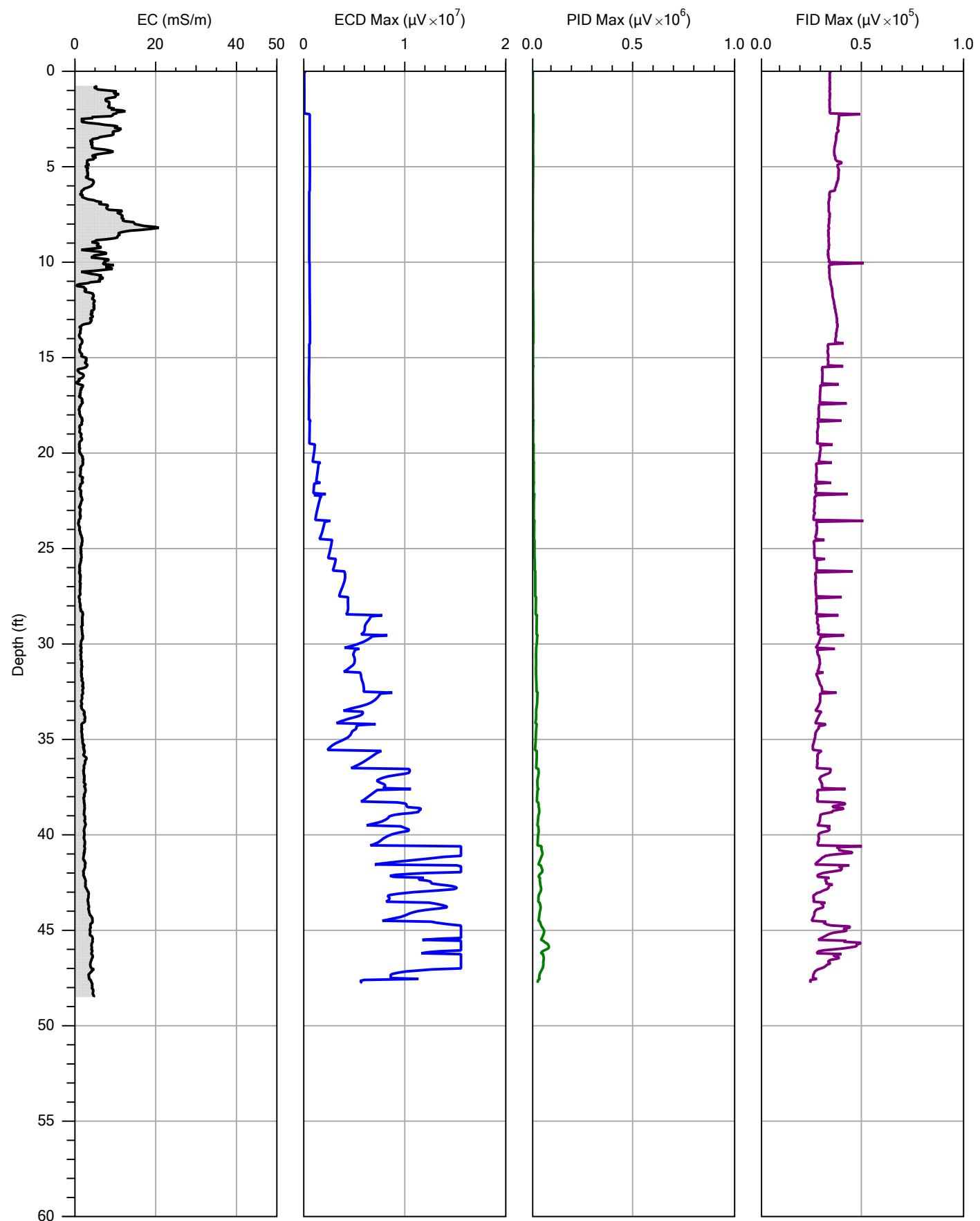


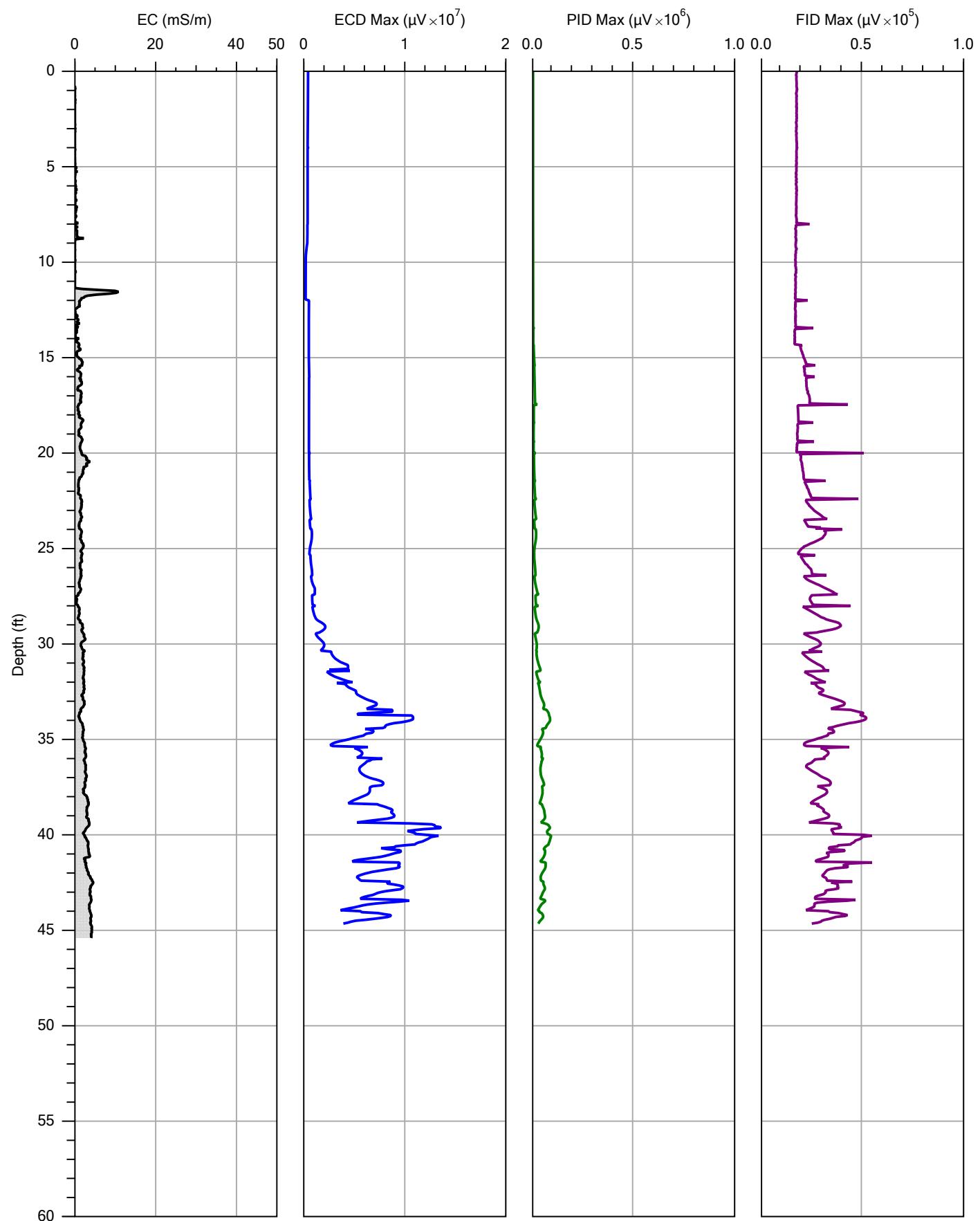


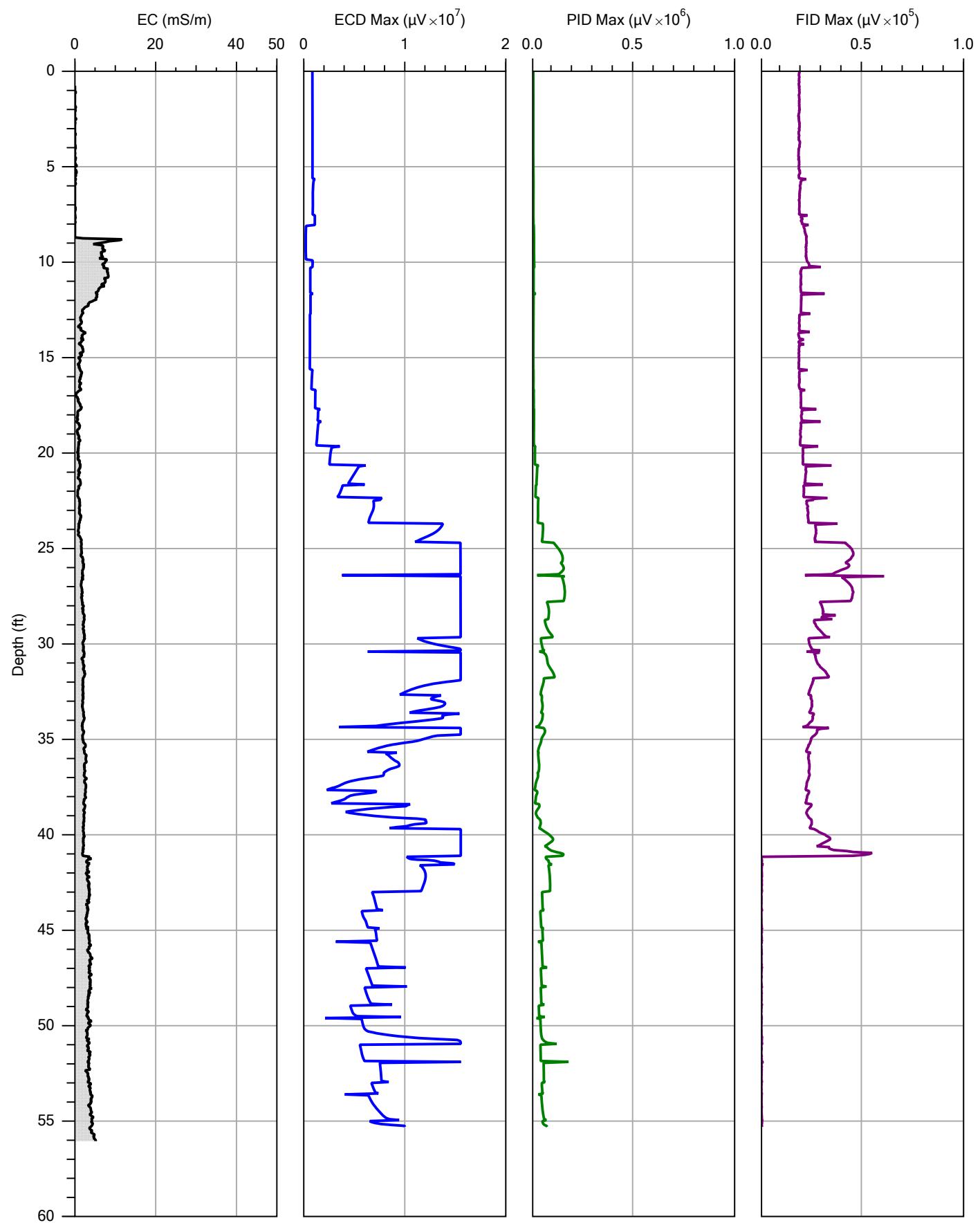


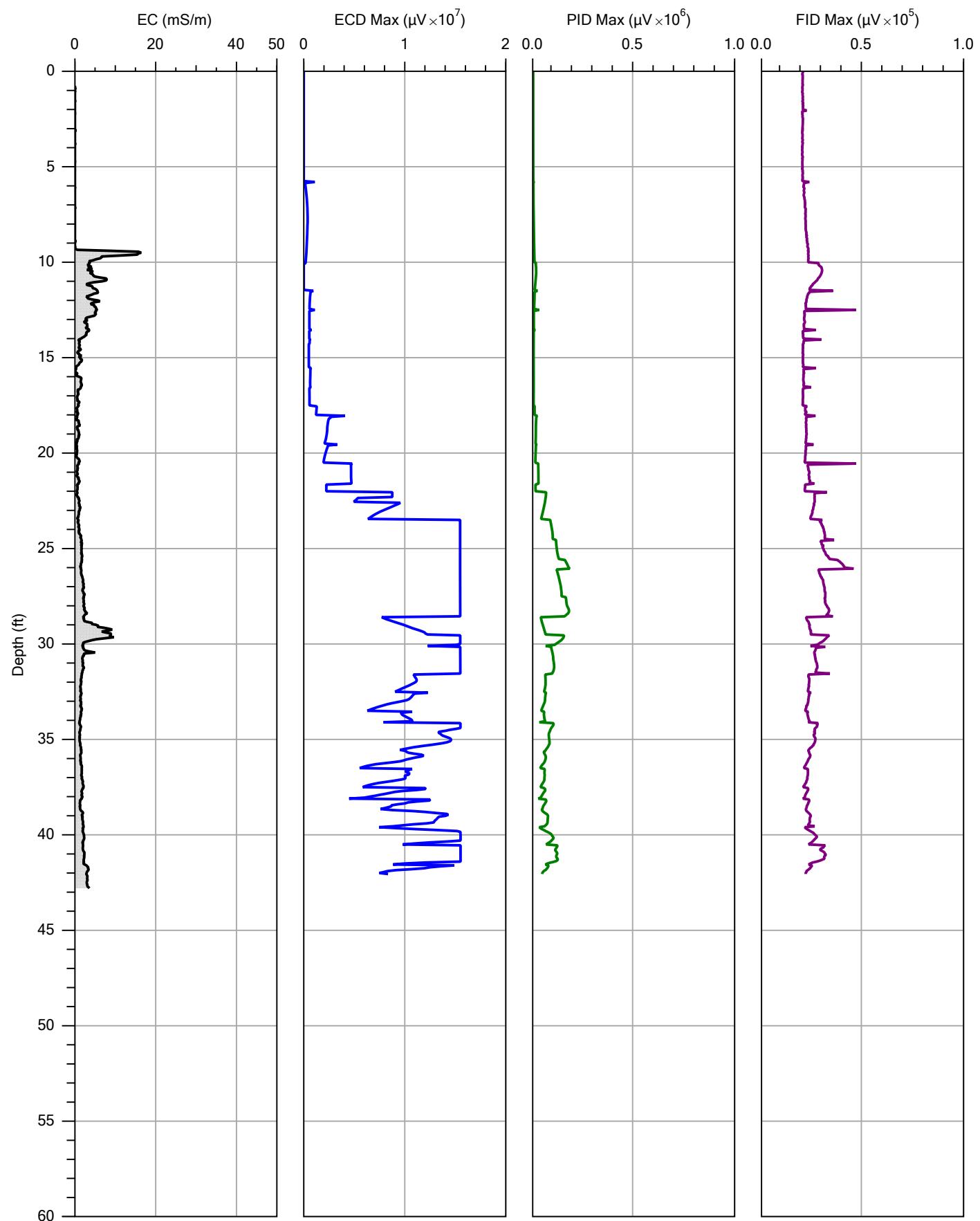


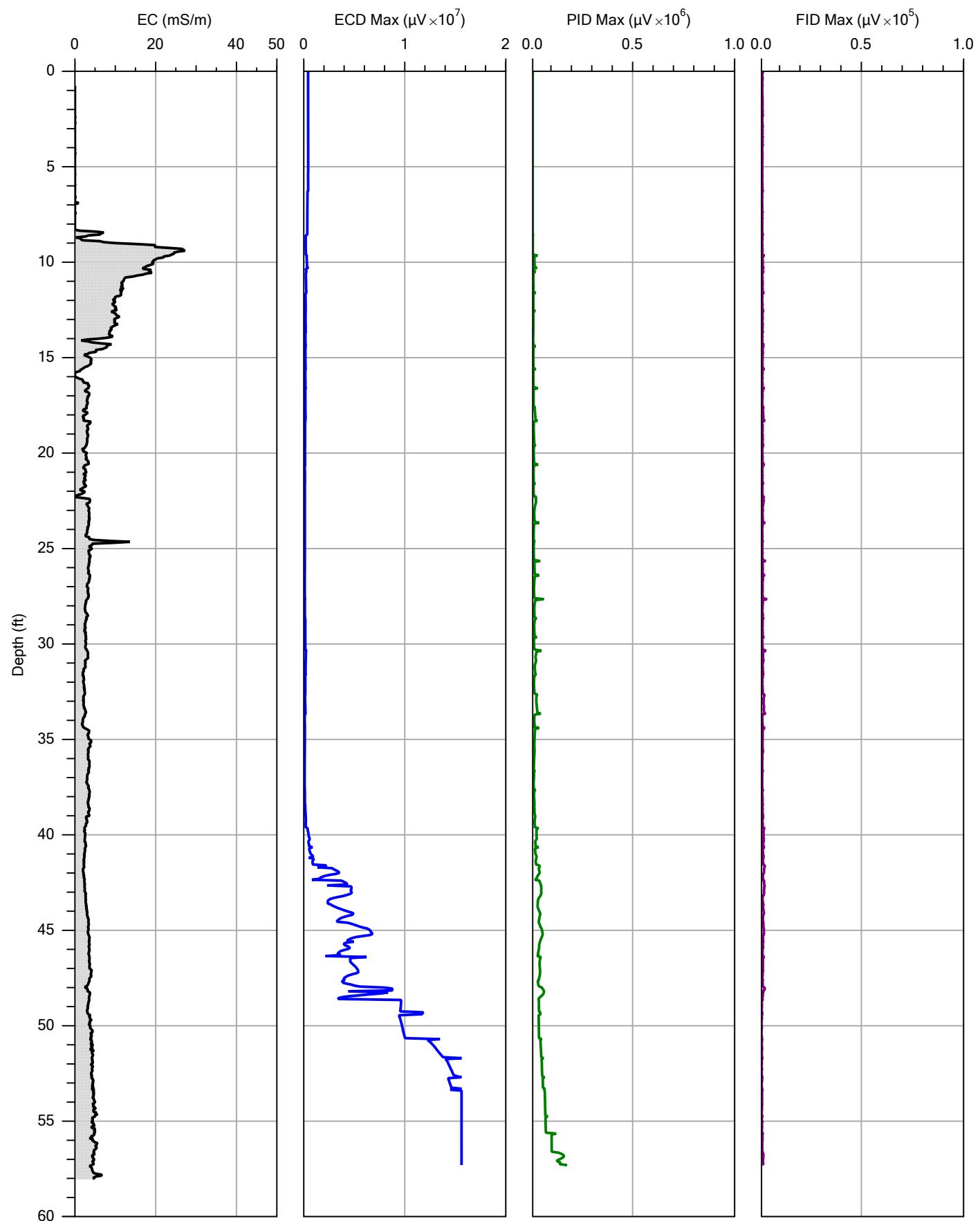


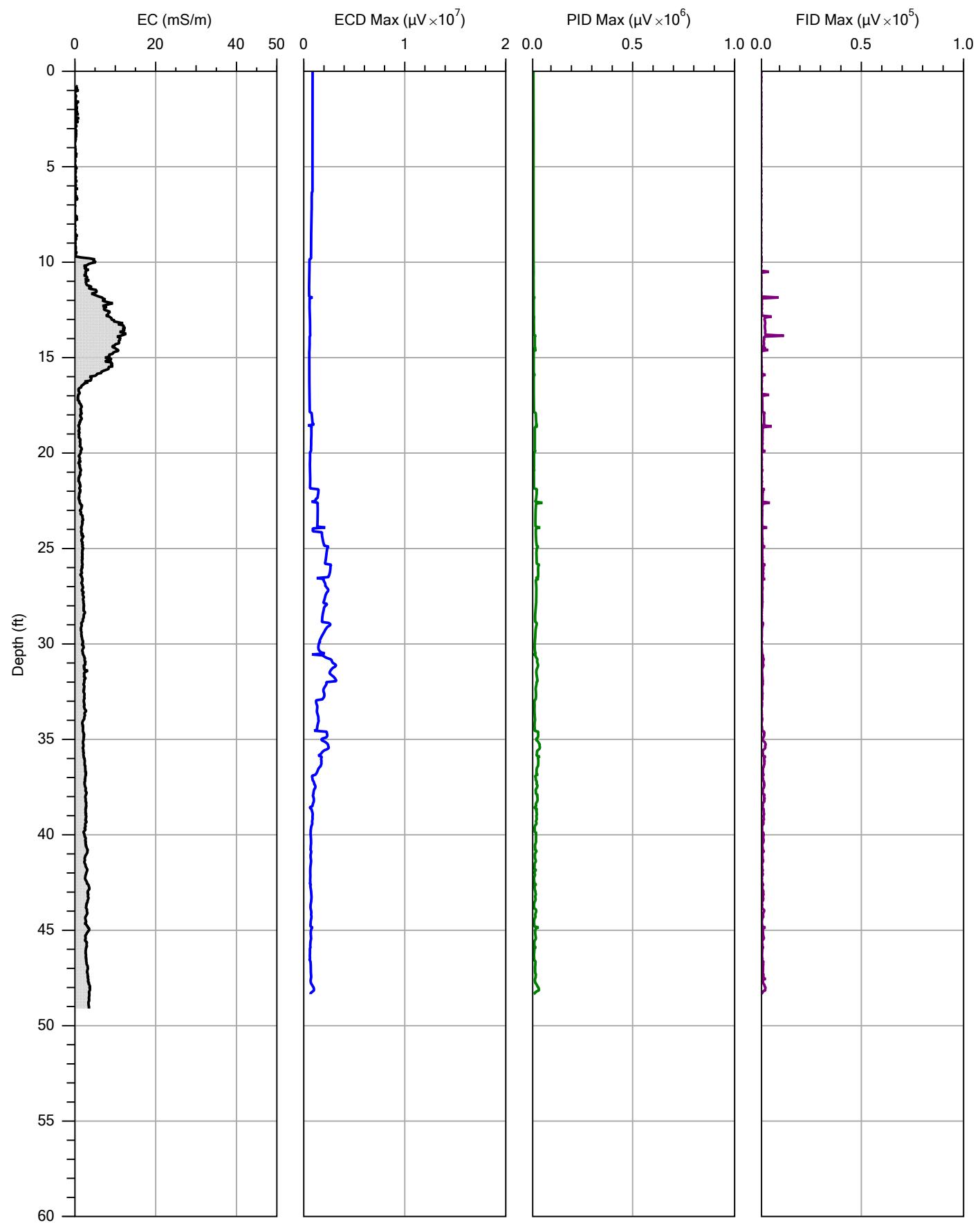


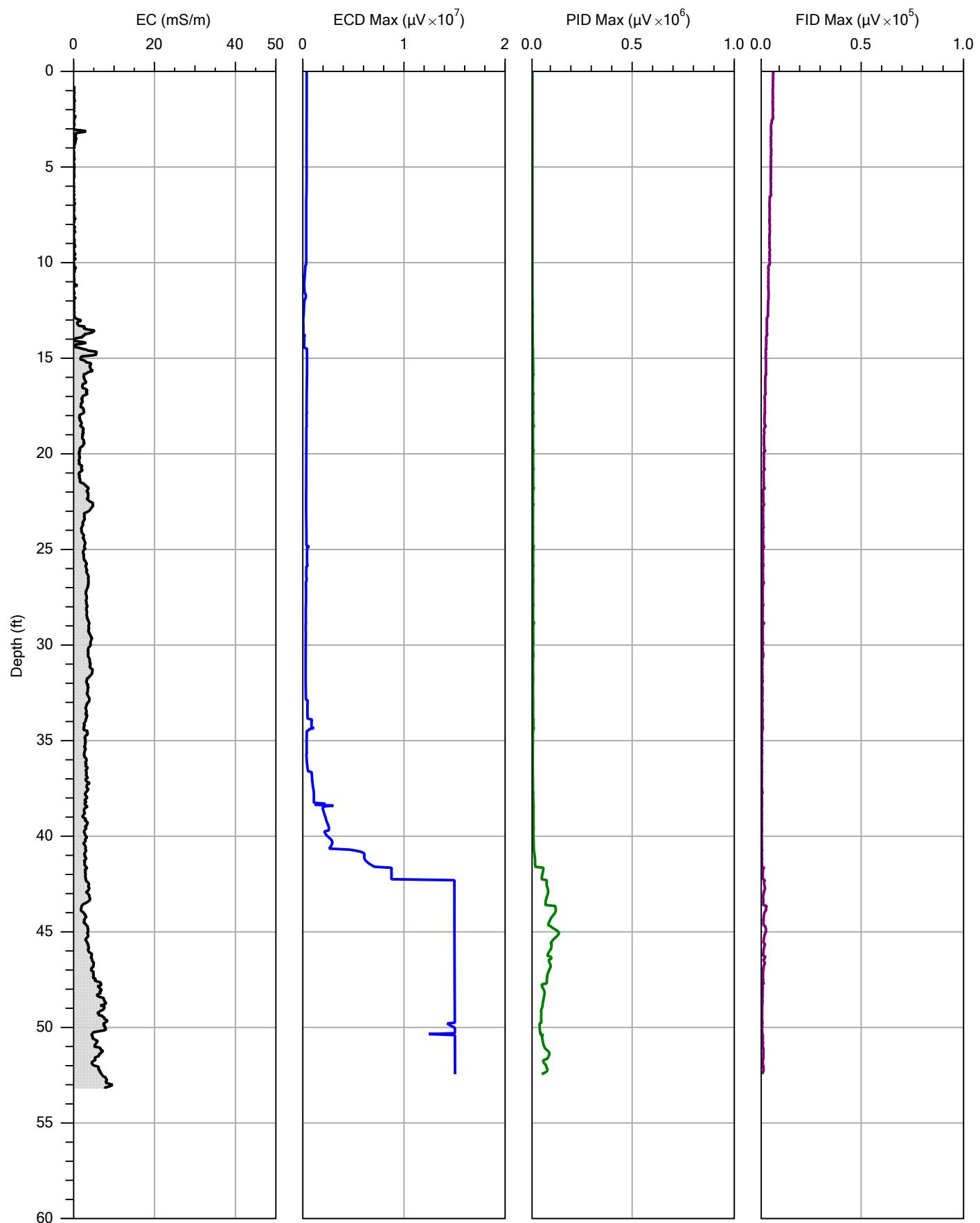


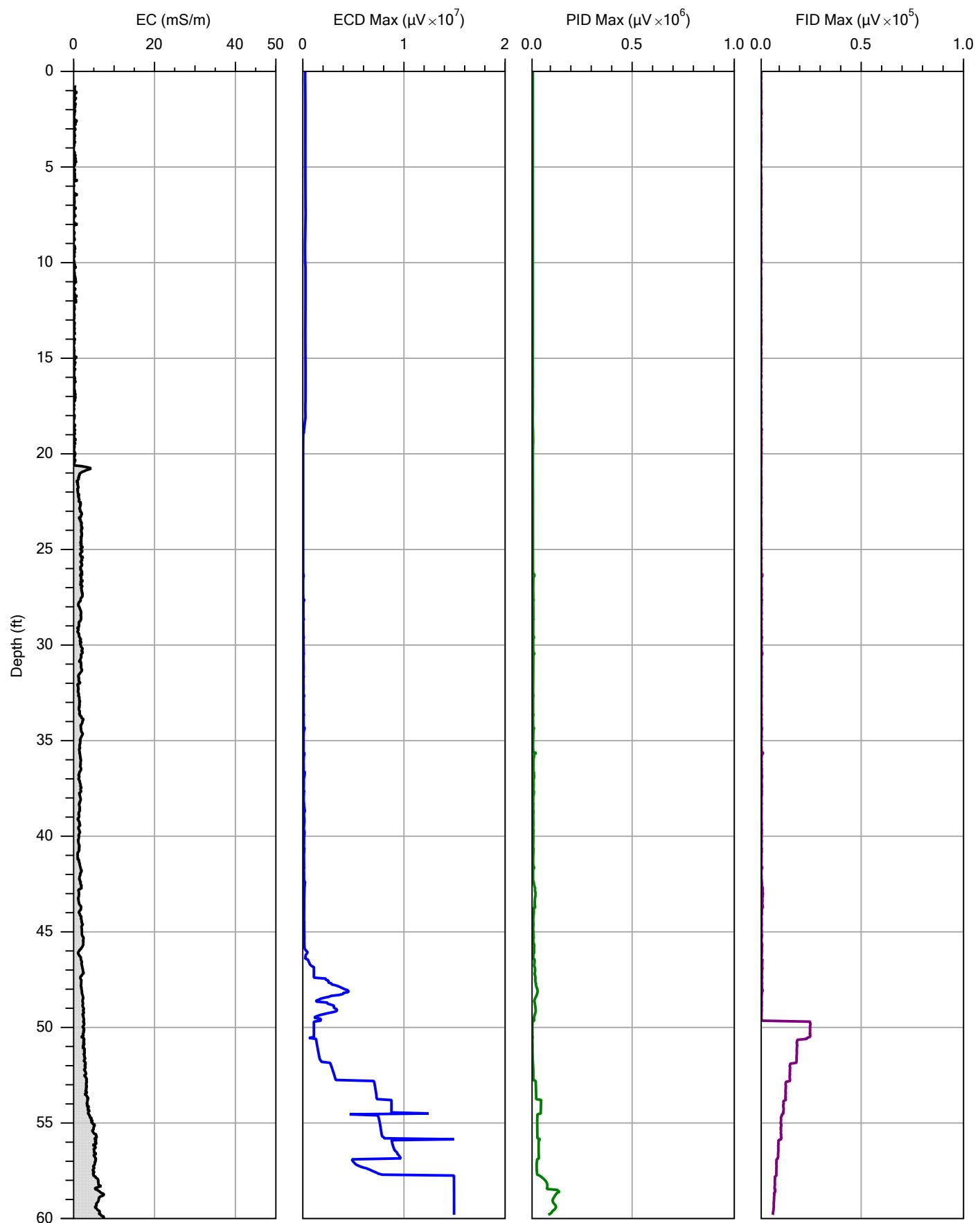


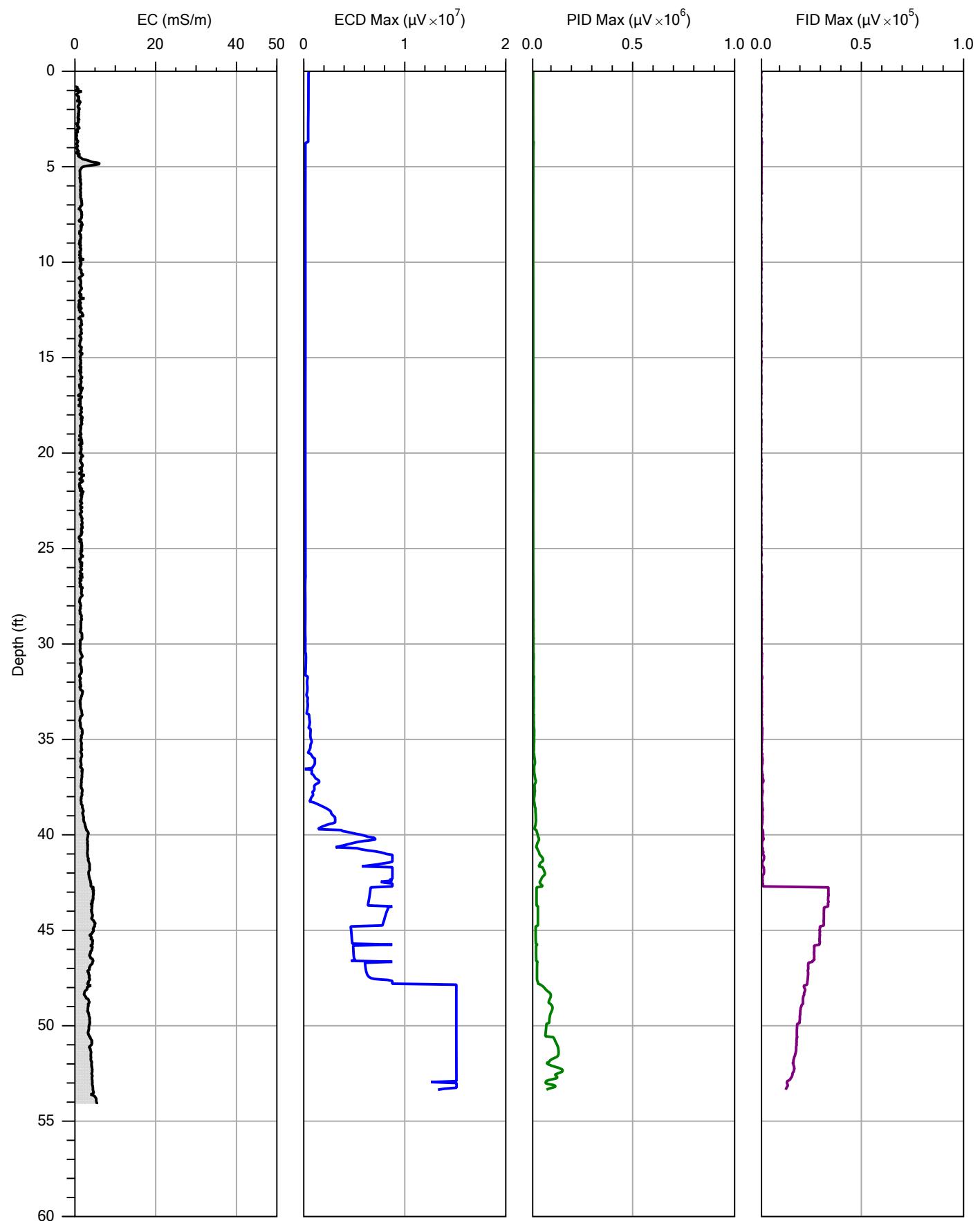


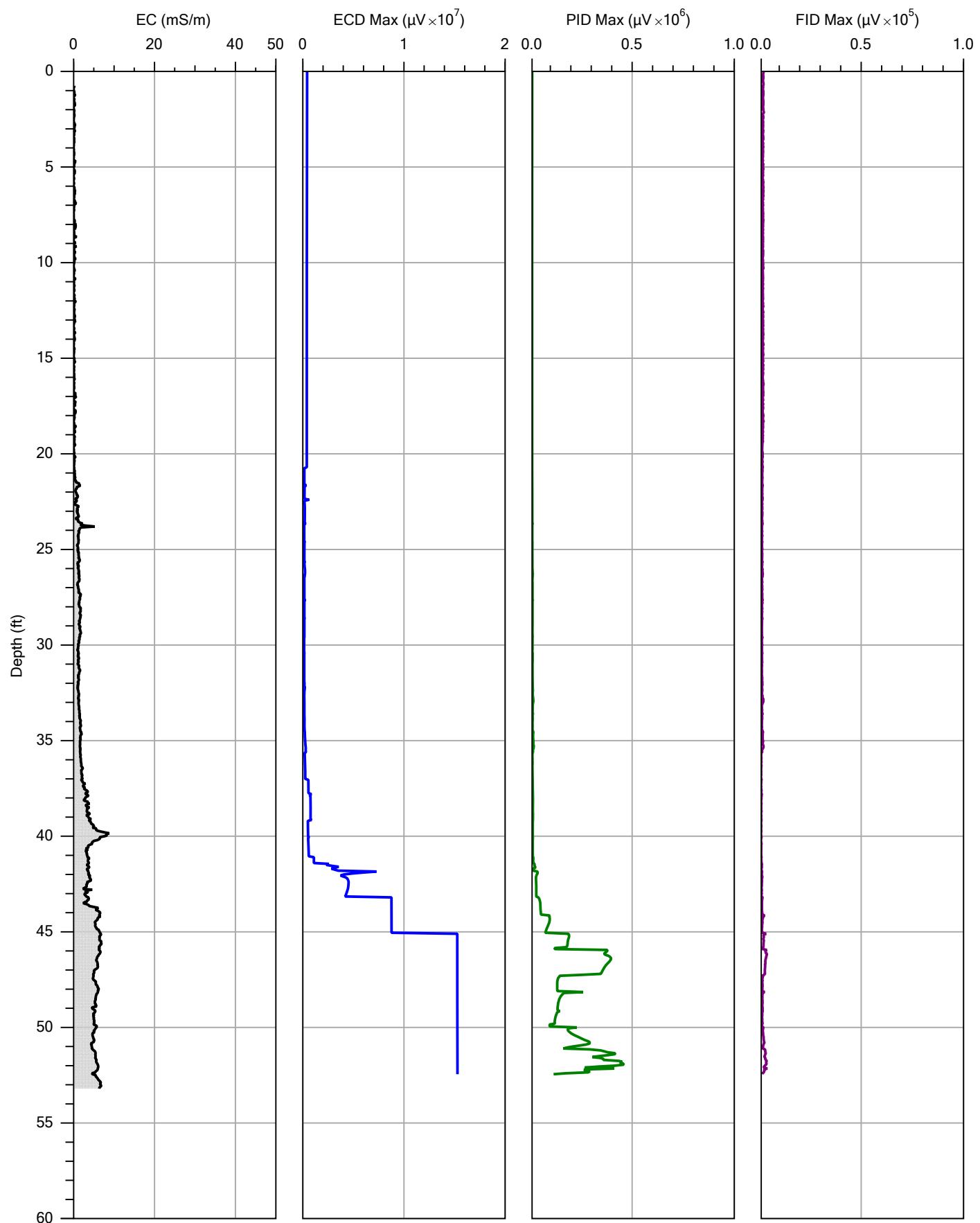


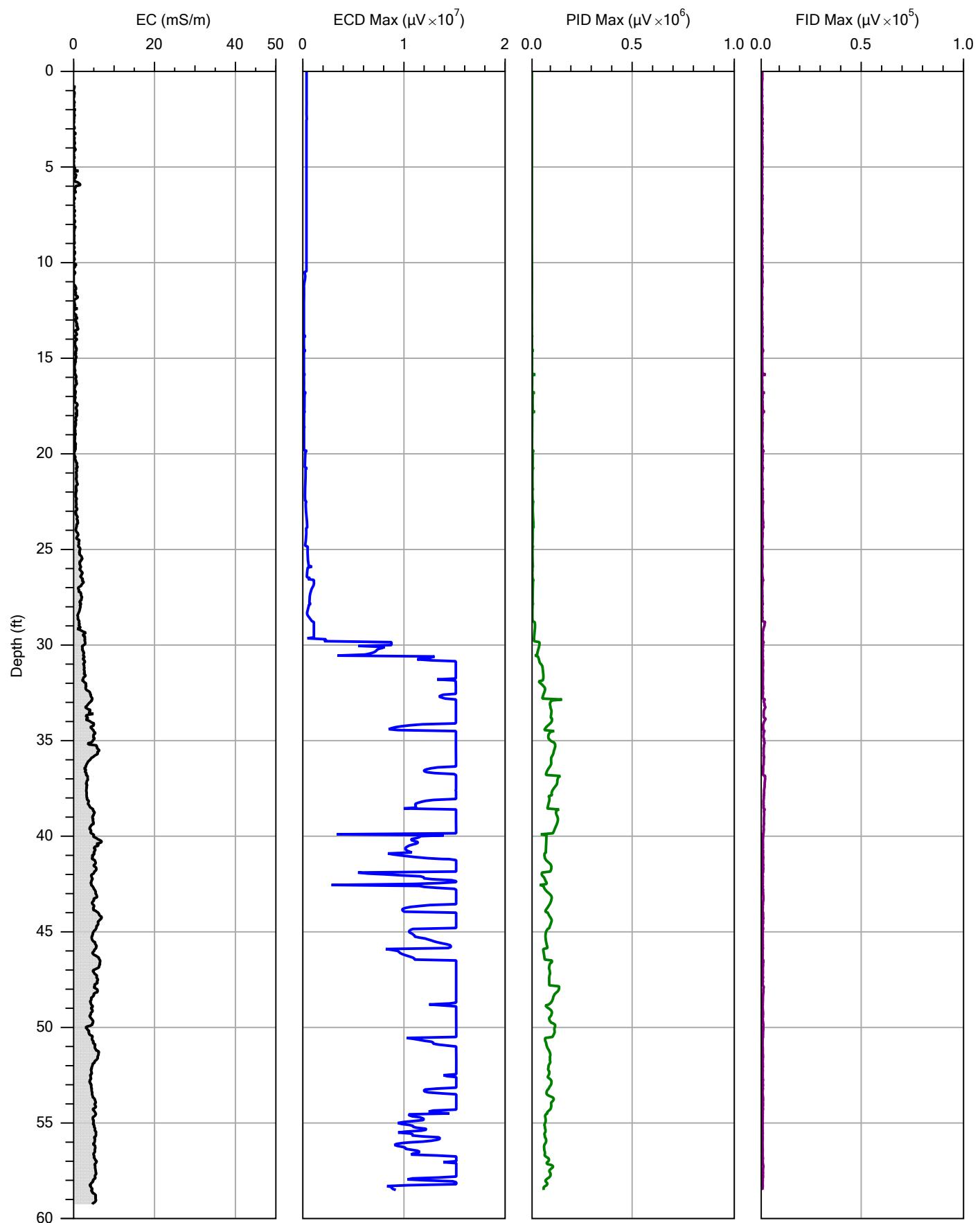


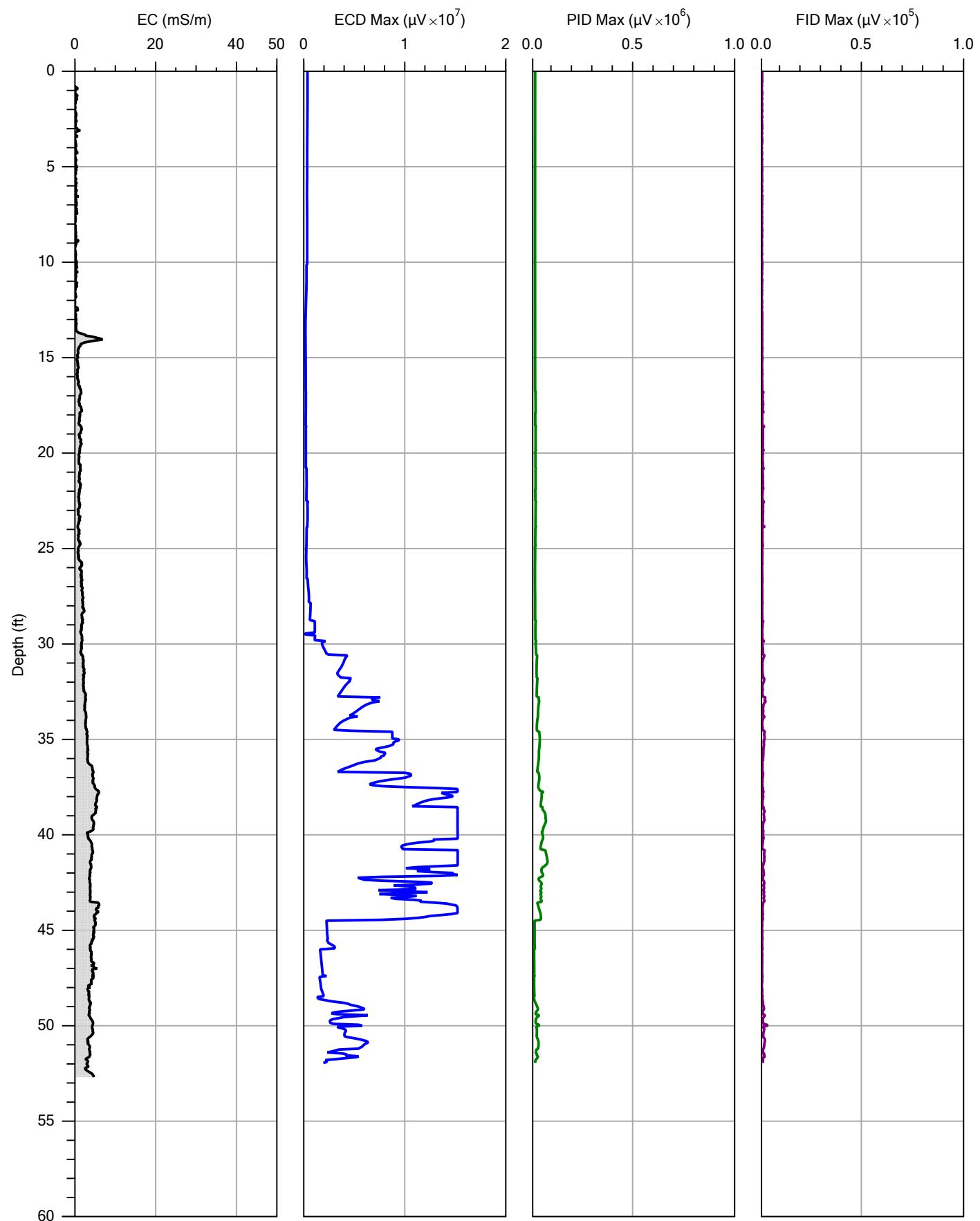


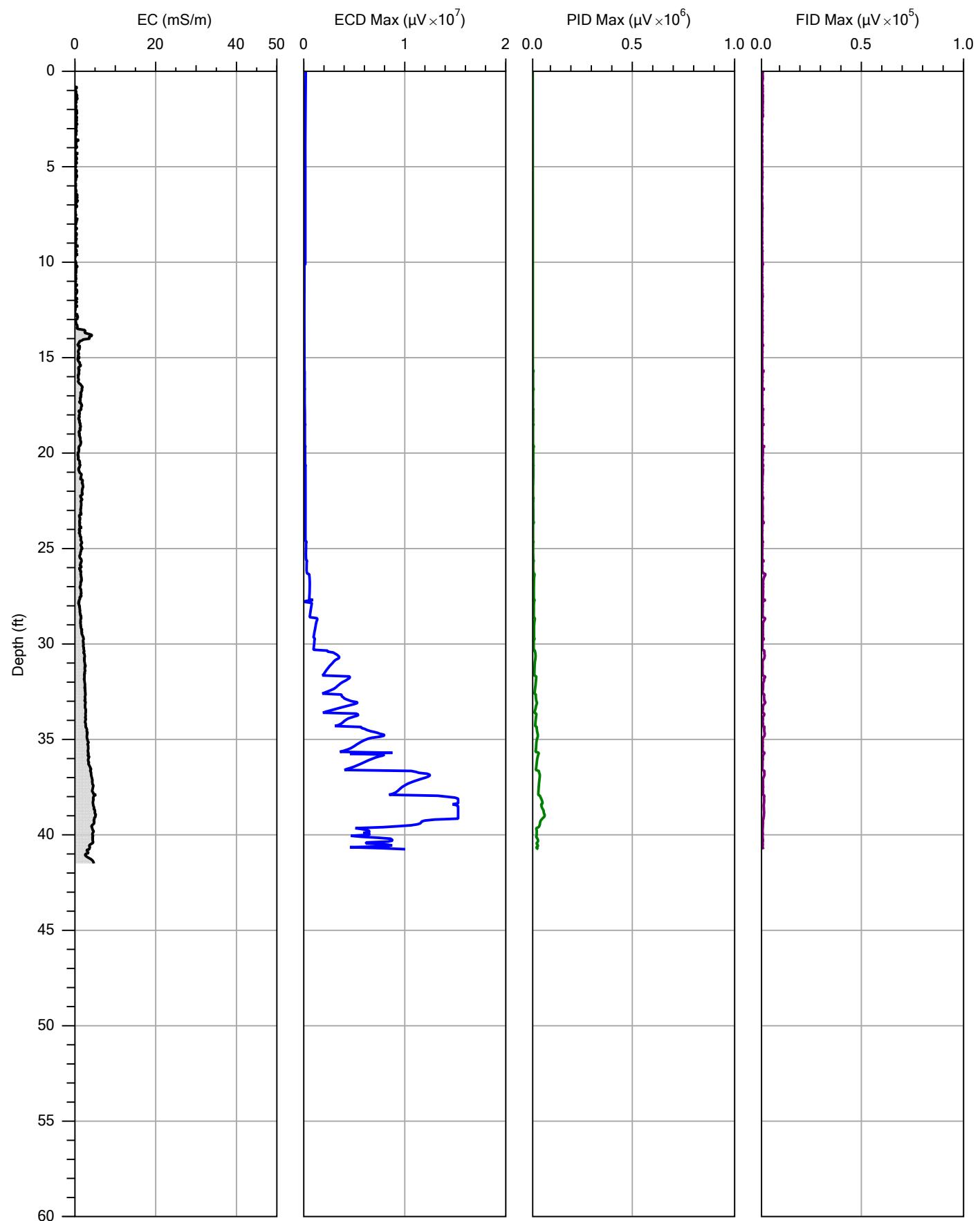












APPENDIX C

SOIL BORING LOGS

BORING LOG

Amec Foster Wheeler Environment & Infrastructure, Inc.
1308 Patton Avenue
Asheville, North Carolina 28806

Boring ID: SB-75

Project: CTS of Asheville, Inc. Superfund Site			Drilling Company: Cascade Drilling		
Location: Asheville, North Carolina			Driller: Dan Ferrell (NC 3221)		
Project Number: 6252162012			Boring Method: Direct-Push Technology		
Logged By: R. Clark		Checked By: S. Kelly		Equipment: Geoprobe 7822DT	
Approximate Ground Surface Elevation (feet): 2415 ft.			Boring Date: 6/26/2017		

Depth (feet)	Sample	Sample Name	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
5						No soil sampling to 19 feet.
10						
15						
20			19-24 80%			Light, reddish, brown, silty, fine sand, moist, some mica
25		SS-75-23 SS-75-24 GW-75-26				

Boring terminated at 28 feet

REMARKS:

PID (ppm) = Photoionization Detector (parts per million)

BORING LOG

Amec Foster Wheeler Environment & Infrastructure, Inc.
1308 Patton Avenue
Asheville, North Carolina 28806

Boring ID: SB-78

Project: CTS of Asheville, Inc. Superfund Site			Drilling Company: Cascade Drilling		
Location: Asheville, North Carolina			Driller: Dan Ferrell (NC 3221)		
Project Number: 6252162012			Boring Method: Direct-Push Technology		
Logged By: R. Clark		Checked By: S. Kelly		Equipment: Geoprobe 7822DT	
Approximate Ground Surface Elevation (feet): 2417 ft.			Boring Date: 6/27/2017		

Depth (feet)	Sample	Sample Name	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
5						No soil sampling to 45 feet.
10						
15						
20						
25						
30						
35						
40						
45						
		SS-78-46 GW-78-46	45-48 100%	14.2 18.7		Light brown, silty, fine sand, wet, massive, some mica

Equipment refusal encountered at 48 feet

REMARKS:

PID (ppm) = Photoionization Detector (parts per million)

BORING LOG

Amec Foster Wheeler Environment & Infrastructure, Inc.
1308 Patton Avenue
Asheville, North Carolina 28806

Boring ID: SB-80

Project: CTS of Asheville, Inc. Superfund Site			Drilling Company: Cascade Drilling		
Location: Asheville, North Carolina			Driller: Dan Ferrell (NC 3221)		
Project Number: 6252162012			Boring Method: Direct-Push Technology		
Logged By: R. Clark		Checked By: S. Kelly	Equipment: Geoprobe 7822DT		
Approximate Ground Surface Elevation (feet): 2417 ft.			Boring Date: 6/27/2017		

Depth (feet)	Sample	Sample Name	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
5						No soil sampling to 25 feet.
10						
15						
20						
25			25-30 80%	52.1 26.3 18.9 22.1 23.8 190 149.6 53 56.1 48.9 15.6 21.6 15.9		Light yellowish brown to light brown, silty, fine sand, moist, massive, some mica
30			30-35 80%			
35			35-38 100%			
40		SS-80-37 GW-80-40				

Boring terminated at 42 feet.

REMARKS:

PID (ppm) = Photoionization Detector (parts per million)

BORING LOG

Amec Foster Wheeler Environment & Infrastructure, Inc.
1308 Patton Avenue
Asheville, North Carolina 28806

Boring ID: SB-81

Project: CTS of Asheville, Inc. Superfund Site			Drilling Company: Cascade Drilling		
Location: Asheville, North Carolina			Driller: Dan Ferrell (NC 3221)		
Project Number: 6252162012			Boring Method: Direct-Push Technology		
Logged By: R. Clark		Checked By: S. Kelly		Equipment: Geoprobe 7822DT	
Approximate Ground Surface Elevation (feet): 2416 ft.			Boring Date: 6/27/2017		

Depth (feet)	Sample	Sample Name	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
5						No soil sampling to 30 feet.
10						
15						
20						
25						
30			30-33 70%	0.5 3.5 4.3		Light brown, silty, fine sand, wet, little structure
35	SS-81-33					
	GW-81-36					

Boring terminated at 38 feet.

REMARKS:

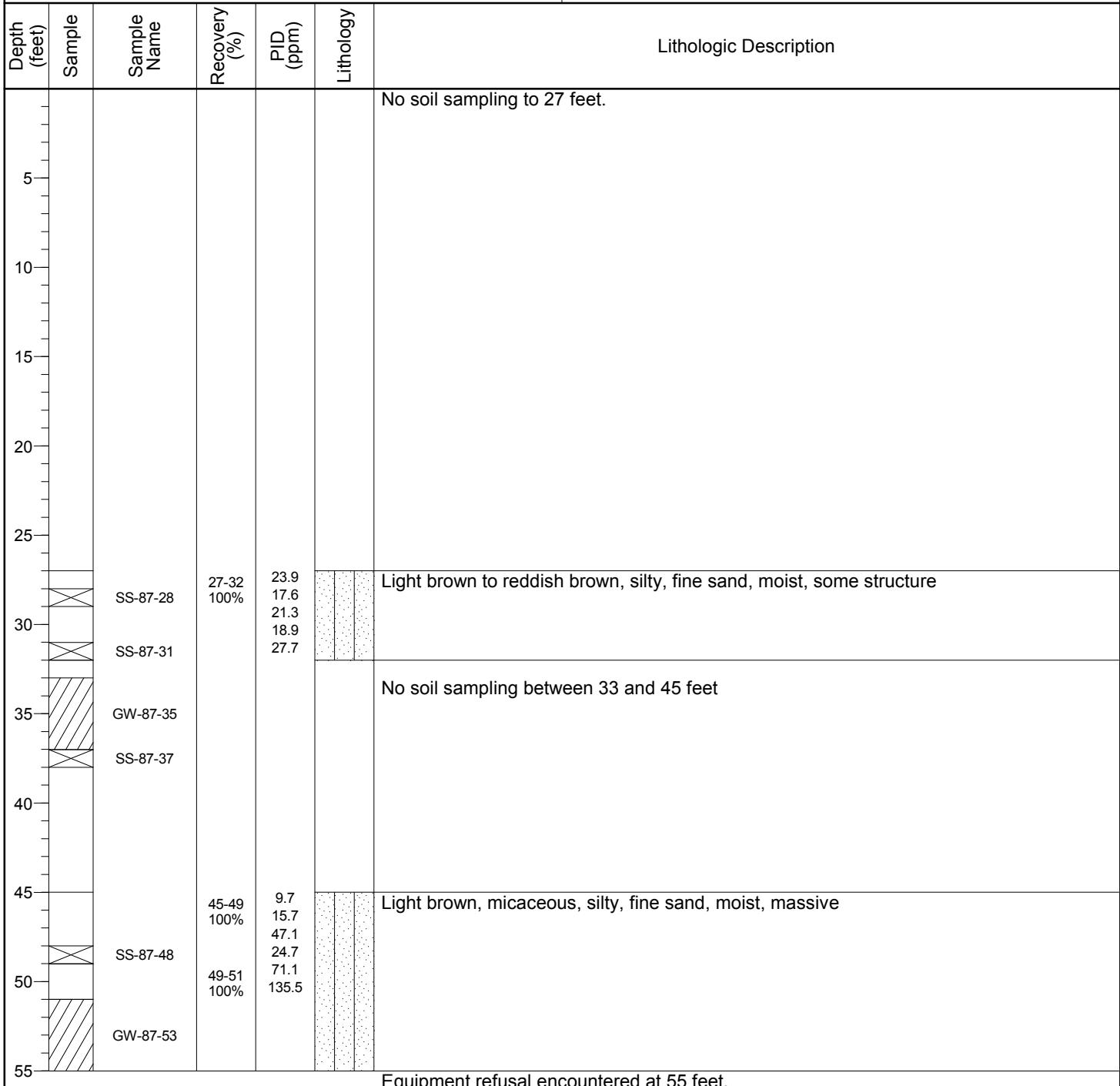
PID (ppm) = Photoionization Detector (parts per million)

BORING LOG

Amec Foster Wheeler Environment & Infrastructure, Inc.
1308 Patton Avenue
Asheville, North Carolina 28806

Boring ID: SB-87

Project: CTS of Asheville, Inc. Superfund Site			Drilling Company: Cascade Drilling		
Location: Asheville, North Carolina			Driller: Dan Ferrell (NC 3221)		
Project Number: 6252162012			Boring Method: Direct-Push Technology		
Logged By: R. Clark		Checked By: S. Kelly	Equipment: Geoprobe 7822DT		
Approximate Ground Surface Elevation (feet): 2415 ft.			Boring Date: 6/28/2017		



REMARKS:

PID (ppm) = Photoionization Detector (parts per million)

BORING LOG

Amec Foster Wheeler Environment & Infrastructure, Inc.
1308 Patton Avenue
Asheville, North Carolina 28806

Boring ID: SB-90

Project: CTS of Asheville, Inc. Superfund Site			Drilling Company: Cascade Drilling		
Location: Asheville, North Carolina			Driller: Dan Ferrell (NC 3221)		
Project Number: 6252162012			Boring Method: Direct-Push Technology		
Logged By: R. Clark		Checked By: S. Kelly	Equipment: Geoprobe 7822DT		
Approximate Ground Surface Elevation (feet): 2418 ft.			Boring Date: 6/28/2017		

Depth (feet)	Sample	Sample Name	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
5						No soil sampling to 25 feet.
10						
15						
20						
25						
27	SS-90-27		25-30 100%	0.3 0.1 0.5 1.3 0.8		Light reddish brown, silty, fine sand, moist, massive
30			30-35 100%	5.1 4.9 3.8 5.4 10.3		Brown, light reddish brown, silty, fine sand, moist, some structure, some mica
34	SS-90-34		35-39 90%	8.7 9.6 21.3 19.6		Light reddish brown, light brown, micaceous, silty, fine sand, moist, massive
37	SS-90-37					
39	SS-90-39					
40	GW-90-42					
Boring terminated at 44 feet.						

REMARKS:

PID (ppm) = Photoionization Detector (parts per million)

BORING LOG

Amec Foster Wheeler Environment & Infrastructure, Inc.
1308 Patton Avenue
Asheville, North Carolina 28806

Boring ID: SB-93

Project: CTS of Asheville, Inc. Superfund Site	Drilling Company: Cascade Drilling
Location: Asheville, North Carolina	Driller: Dan Ferrell (NC 3221)
Project Number: 6252162012	Boring Method: Direct-Push Technology
Logged By: R. Clark	Checked By: S. Kelly
Approximate Ground Surface Elevation (feet): 2411 ft.	Boring Date: 6/28/2017

Depth (feet)	Sample	Sample Name	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
						No soil sampling to 20 feet.
5						
10						
15						
20						
25	SS-93-22		20-25 80%	0.0 0.0 0.0 0.0 0.1 0.0 0.3 0.5 1.1		Light brown, silty, fine sand, moist, massive, little to some mica
30	SS-93-28		25-30 95%			
35	SS-93-33		30-35 65%			Light brown, silty, fine sand, moist, little to some mica, some relict rock structure
40	SS-93-42		35-40 80%	3.5 4.1 6.9 9.5 8.2 12.1 13.4 17.7		
45	GW-93-46					

Boring terminated at 48 feet.

REMARKS:

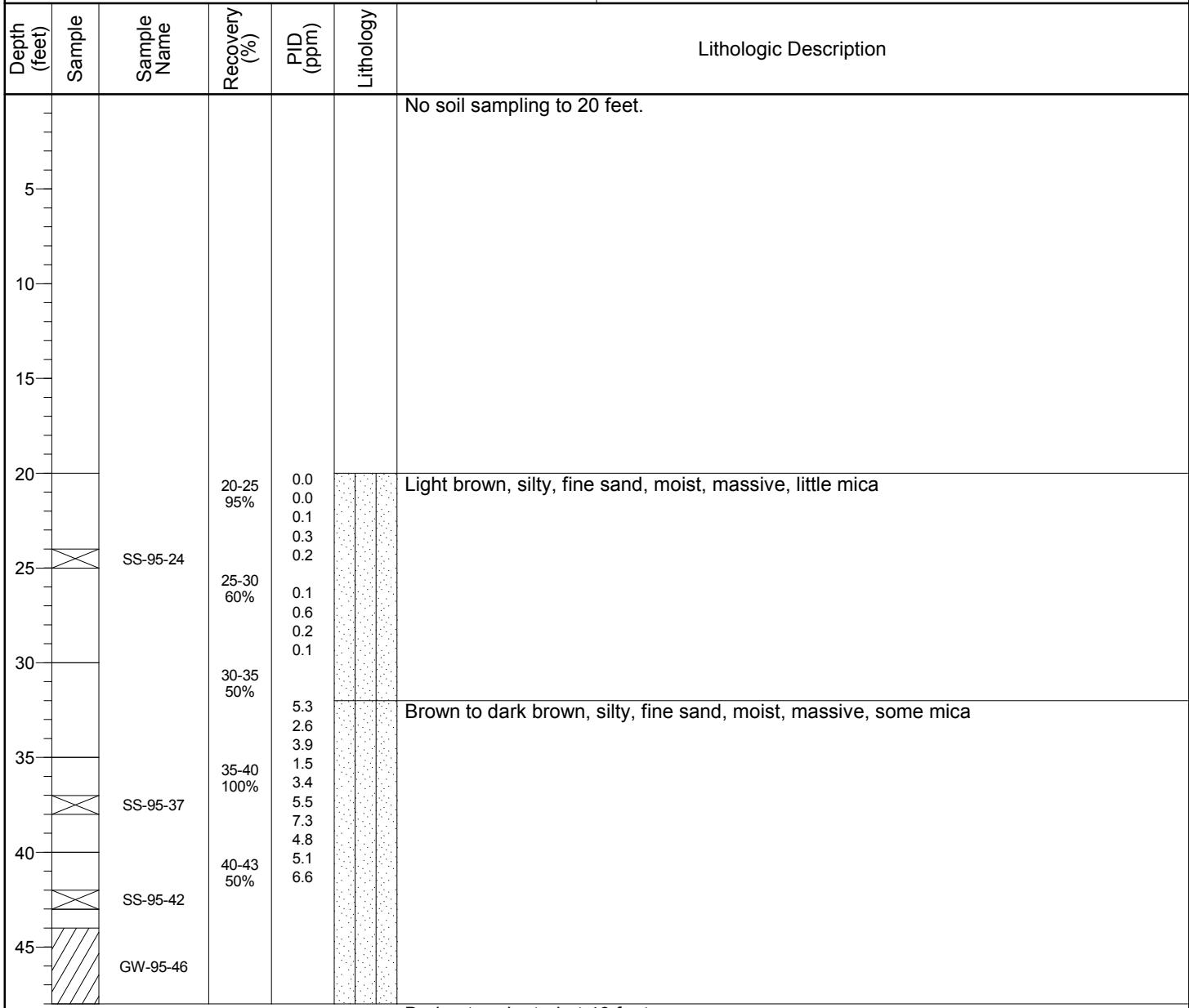
PID (ppm) = Photoionization Detector (parts per million)

BORING LOG

Amec Foster Wheeler Environment & Infrastructure, Inc.
1308 Patton Avenue
Asheville, North Carolina 28806

Boring ID: SB-95

Project: CTS of Asheville, Inc. Superfund Site			Drilling Company: Cascade Drilling		
Location: Asheville, North Carolina			Driller: Dan Ferrell (NC 3221)		
Project Number: 6252162012			Boring Method: Direct-Push Technology		
Logged By: R. Clark		Checked By: S. Kelly	Equipment: Geoprobe 7822DT		
Approximate Ground Surface Elevation (feet): 2411 ft.			Boring Date: 6/27/2017		



REMARKS:

PID (ppm) = Photoionization Detector (parts per million)

BORING LOG

Amec Foster Wheeler Environment & Infrastructure, Inc.
1308 Patton Avenue
Asheville, North Carolina 28806

Boring ID: SB-102

Project: CTS of Asheville, Inc. Superfund Site					Drilling Company: Cascade Drilling	
Location: Asheville, North Carolina					Driller: Dan Ferrell (NC 3221)	
Project Number: 6252162012					Boring Method: Direct-Push Technology	
Logged By: R. Clark		Checked By: S. Kelly		Equipment: Geoprobe 7822DT		
Approximate Ground Surface Elevation (feet): 2420 ft.		Boring Date: 6/29/2017				
Depth (feet)	Sample	Sample Name	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
						No soil sampling to 30 feet.
5						
10						
15						
20						
25						
30	SS-102-32		30-35 60%	0.2 0.5 0.1 0.3		Light yellowish brown/tan, silty, fine sand, moist to wet, massive
35	SS-102-38		35-40 90%	0.5 1.2 7.4		
40			40-45 85%	7.7 11.8 15.5 14.1		
45	SS-102-47		45-50 60%	13.5 18.8 16.8		Brown, silty, fine sand, wet, some structure, some mica, trace quartz vein
50	GW-102-52 SS-102-53					Equipment refusal at 54 feet
REMARKS: PID (ppm) = Photoionization Detector (parts per million)						

APPENDIX D

WASTE DISPOSAL MANIFEST

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number NCD003149558	2. Page 1 of 1	3. Emergency Response Phone 800-255-3924-MIS0007951	4. Manifest Tracking Number 015460295 JJK		
5. Generator's Name and Mailing Address CTS Corporation-Skyland 905 West Boulevard North Elkhart, IN 46514 USA 574-523-3800		Generator's Site Address (if different than mailing address) 236 Mills Gap Road Skyland, NC 28803					
Generator's Phone: 6. Transporter 1 Company Name A&D Environmental Services (SC), LLC		U.S. EPA ID Number SCD987598331					
7. Transporter 2 Company Name Clean Harbors Energy Inc. (MAD3932005)		U.S. EPA ID Number TXD055141378					
8. Designated Facility Name and Site Address Clean Harbors Deepark, L.P. 2027 Independence Parkway South La Porte, TX 77571 USA 281-930-2300		U.S. EPA ID Number TXD055141378					
Facility's Phone:							
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) X 1. UN3082, Waste Environmentally hazardous substance, liquid, n.o.s. (trichloroethylene), 9, PG III, ERG# 171	10. Containers No. 1	Type DM	11. Total Quantity 350	12. Unit Wt./Vol. P	13. Waste Codes D040
	X	2. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (trichloroethylene), 9, PG III, ERG# 171	1	DM	350	P	D040
		3.					
		4.					
14. Special Handling Instructions and Additional Information 8b 1) CH411113 (liquids) 1 x 55gal. 2) CH392220 (solids) 1 x 55gal.							
A&D Job#: 382302		P.O. #: 43152		1704119486			
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Officer's Printed/Typed Name Rodney M. Clark, as agent for CTS Corporation		Signature 		Month 18	Day 19	Year 17	
TRANSPORTER INT'L	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: _____		Date leaving U.S.: _____		
	Transporter signature (for exports only): 						
17. Transporter Acknowledgment of Receipt of Materials							
Transporter 1 Printed/Typed Name Darrell M. Clark		Signature 		Month 18	Day 19	Year 17	
Transporter 2 Printed/Typed Name Gina Chambers		Signature 		Month 18	Day 19	Year 17	
18. Discrepancy							
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type		<input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection		<input type="checkbox"/> Full Rejection			
Manifest Reference Number: _____							
18b. Alternate Facility (or Generator)		U.S. EPA ID Number					
Facility's Phone:							
18c. Signature of Alternate Facility (or Generator)		Month Day Year					
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1. HClO		2. HClO4		3.		4.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							
Printed/Typed Name JKoh		Signature 		Month 10	Day 23	Year 17	

APPENDIX E

VOC ANALYTICAL RESULTS

June 29, 2017

Ms. Susan Kelly
Amec Foster Wheeler
1308 Patton Avenue
Asheville, NC 28806

RE: Project: CTS OF ASHEVILLE 6252162012
Pace Project No.: 92345484

Dear Ms. Kelly:

Enclosed are the analytical results for sample(s) received by the laboratory on June 23, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Kevin Godwin
kevin.godwin@pacelabs.com
1(704)875-9092
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CTS OF ASHEVILLE 6252162012
Pace Project No.: 92345484

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
Virginia/VELAP Certification #: 460221

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SAMPLE SUMMARY

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92345484001	MW-6	Water	06/22/17 15:15	06/23/17 15:45
92345484002	MW-6A	Water	06/22/17 17:00	06/23/17 15:45
92345484003	MW-7A	Water	06/22/17 11:45	06/23/17 15:45
92345484004	FD-08	Water	06/22/17 00:00	06/23/17 15:45
92345484005	TB-07	Water	06/22/17 00:00	06/23/17 15:45
92345484006	MW-7	Water	06/22/17 10:45	06/23/17 15:45

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SAMPLE ANALYTE COUNT

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92345484001	MW-6	EPA 8260	ZDO	55	PASI-C
92345484002	MW-6A	EPA 8260	ZDO	55	PASI-C
92345484003	MW-7A	EPA 8260	ZDO	55	PASI-C
92345484004	FD-08	EPA 8260	ZDO	55	PASI-C
92345484005	TB-07	EPA 8260	ZDO	55	PASI-C
92345484006	MW-7	EPA 8260	ZDO	55	PASI-C

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SUMMARY OF DETECTION

Project: CTS OF ASHEVILLE 6252162012
Pace Project No.: 92345484

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92345484001	MW-6					
EPA 8260	Methylene Chloride	72.0J	ug/L	100	06/27/17 17:38	
EPA 8260	Trichloroethene	7890	ug/L	50.0	06/27/17 17:38	
92345484002	MW-6A					
EPA 8260	cis-1,2-Dichloroethene	98.6J	ug/L	500	06/24/17 18:48	
EPA 8260	Trichloroethene	60600	ug/L	500	06/24/17 18:48	
92345484003	MW-7A					
EPA 8260	Methylene Chloride	434J	ug/L	500	06/27/17 17:55	
EPA 8260	Trichloroethene	30800	ug/L	250	06/27/17 17:55	
92345484004	FD-08					
EPA 8260	Trichloroethene	33100	ug/L	200	06/27/17 18:30	
92345484005	TB-07					
EPA 8260	Acetone	17.8J	ug/L	25.0	06/27/17 13:52	
EPA 8260	Chloromethane	0.27J	ug/L	1.0	06/27/17 13:52	
92345484006	MW-7					
EPA 8260	Chloroform	6.1	ug/L	1.0	06/27/17 17:03	
EPA 8260	Trichloroethene	42.5	ug/L	1.0	06/27/17 17:03	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CTS OF ASHEVILLE 6252162012
Pace Project No.: 92345484

Method: EPA 8260

Description: 8260 MSV Low Level

Client: Amec Foster Wheeler, Asheville

Date: June 29, 2017

General Information:

6 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Internal Standards:

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

Surrogates:

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

Method Blank:

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

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 366675

L1: Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

- LCS (Lab ID: 2032541)
- 1,4-Dioxane (p-Dioxane)

Matrix Spikes:

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

QC Batch: 366359

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92345409044

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2031934)
- 2-Butanone (MEK)
- Acetone
- Bromomethane
- Chloromethane
- Dichlorodifluoromethane

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CTS OF ASHEVILLE 6252162012
Pace Project No.: 92345484

Method: **EPA 8260**

Description: 8260 MSV Low Level

Client: Amec Foster Wheeler, Asheville

Date: June 29, 2017

QC Batch: 366675

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92345484006

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

- MSD (Lab ID: 2032546)
 - 1,4-Dioxane (p-Dioxane)

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2032545)
 - 2-Butanone (MEK)
 - Acetone
 - Bromomethane
 - Chloromethane
 - Dichlorodifluoromethane
 - Vinyl chloride
- MSD (Lab ID: 2032546)
 - Acetone
 - Bromomethane
 - Chloromethane
 - Dichlorodifluoromethane
 - Vinyl chloride

R1: RPD value was outside control limits.

- MSD (Lab ID: 2032546)
 - 1,4-Dioxane (p-Dioxane)

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

Sample: MW-6	Lab ID: 92345484001	Collected: 06/22/17 15:15	Received: 06/23/17 15:45	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	1250	500	50		06/27/17 17:38	67-64-1	
Benzene	ND	ug/L	50.0	12.5	50		06/27/17 17:38	71-43-2	
Bromochloromethane	ND	ug/L	50.0	8.5	50		06/27/17 17:38	74-97-5	
Bromodichloromethane	ND	ug/L	50.0	9.0	50		06/27/17 17:38	75-27-4	
Bromoform	ND	ug/L	50.0	13.0	50		06/27/17 17:38	75-25-2	
Bromomethane	ND	ug/L	100	14.5	50		06/27/17 17:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	250	48.0	50		06/27/17 17:38	78-93-3	
Carbon disulfide	ND	ug/L	100	57.5	50		06/27/17 17:38	75-15-0	
Carbon tetrachloride	ND	ug/L	50.0	12.5	50		06/27/17 17:38	56-23-5	
Chlorobenzene	ND	ug/L	50.0	11.5	50		06/27/17 17:38	108-90-7	
Chloroethane	ND	ug/L	50.0	27.0	50		06/27/17 17:38	75-00-3	
Chloroform	ND	ug/L	50.0	7.0	50		06/27/17 17:38	67-66-3	
Chloromethane	ND	ug/L	50.0	5.5	50		06/27/17 17:38	74-87-3	
Cyclohexane	ND	ug/L	50.0	18.0	50		06/27/17 17:38	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	100	100	50		06/27/17 17:38	96-12-8	
Dibromochloromethane	ND	ug/L	50.0	10.5	50		06/27/17 17:38	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	50.0	13.5	50		06/27/17 17:38	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	50.0	15.0	50		06/27/17 17:38	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	50.0	12.0	50		06/27/17 17:38	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	50.0	16.5	50		06/27/17 17:38	106-46-7	
Dichlorodifluoromethane	ND	ug/L	50.0	10.5	50		06/27/17 17:38	75-71-8	
1,1-Dichloroethane	ND	ug/L	50.0	16.0	50		06/27/17 17:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	50.0	12.0	50		06/27/17 17:38	107-06-2	
1,1-Dichloroethene	ND	ug/L	50.0	28.0	50		06/27/17 17:38	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	50.0	9.5	50		06/27/17 17:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	50.0	24.5	50		06/27/17 17:38	156-60-5	
1,2-Dichloropropane	ND	ug/L	50.0	13.5	50		06/27/17 17:38	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	50.0	6.5	50		06/27/17 17:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	50.0	13.0	50		06/27/17 17:38	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	7500	3920	50		06/27/17 17:38	123-91-1	L1
Ethylbenzene	ND	ug/L	50.0	15.0	50		06/27/17 17:38	100-41-4	
2-Hexanone	ND	ug/L	250	23.0	50		06/27/17 17:38	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	50.0	20.0	50		06/27/17 17:38	98-82-8	
Methyl acetate	ND	ug/L	500	41.0	50		06/27/17 17:38	79-20-9	
Methylcyclohexane	ND	ug/L	500	93.5	50		06/27/17 17:38	108-87-2	
Methylene Chloride	72.0J	ug/L	100	48.5	50		06/27/17 17:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	250	16.5	50		06/27/17 17:38	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	50.0	10.5	50		06/27/17 17:38	1634-04-4	
Styrene	ND	ug/L	50.0	13.0	50		06/27/17 17:38	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	50.0	20.0	50		06/27/17 17:38	79-34-5	
Tetrachloroethene	ND	ug/L	50.0	23.0	50		06/27/17 17:38	127-18-4	
Toluene	ND	ug/L	50.0	13.0	50		06/27/17 17:38	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	50.0	16.5	50		06/27/17 17:38	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	50.0	17.5	50		06/27/17 17:38	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	50.0	24.0	50		06/27/17 17:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	50.0	14.5	50		06/27/17 17:38	79-00-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

Sample: MW-6	Lab ID: 92345484001	Collected: 06/22/17 15:15	Received: 06/23/17 15:45	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	7890	ug/L	50.0	23.5	50		06/27/17 17:38	79-01-6	
Trichlorofluoromethane	ND	ug/L	50.0	10.0	50		06/27/17 17:38	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	50.0	9.5	50		06/27/17 17:38	76-13-1	
Vinyl chloride	ND	ug/L	50.0	31.0	50		06/27/17 17:38	75-01-4	
m&p-Xylene	ND	ug/L	100	33.0	50		06/27/17 17:38	179601-23-1	
o-Xylene	ND	ug/L	50.0	11.5	50		06/27/17 17:38	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		50		06/27/17 17:38	460-00-4	
1,2-Dichloroethane-d4 (S)	117	%	70-130		50		06/27/17 17:38	17060-07-0	
Toluene-d8 (S)	103	%	70-130		50		06/27/17 17:38	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

Sample: MW-6A	Lab ID: 92345484002	Collected: 06/22/17 17:00	Received: 06/23/17 15:45	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	12500	5000	500		06/24/17 18:48	67-64-1	
Benzene	ND	ug/L	500	125	500		06/24/17 18:48	71-43-2	
Bromochloromethane	ND	ug/L	500	85.0	500		06/24/17 18:48	74-97-5	
Bromodichloromethane	ND	ug/L	500	90.0	500		06/24/17 18:48	75-27-4	
Bromoform	ND	ug/L	500	130	500		06/24/17 18:48	75-25-2	
Bromomethane	ND	ug/L	1000	145	500		06/24/17 18:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	2500	480	500		06/24/17 18:48	78-93-3	
Carbon disulfide	ND	ug/L	1000	575	500		06/24/17 18:48	75-15-0	
Carbon tetrachloride	ND	ug/L	500	125	500		06/24/17 18:48	56-23-5	
Chlorobenzene	ND	ug/L	500	115	500		06/24/17 18:48	108-90-7	
Chloroethane	ND	ug/L	500	270	500		06/24/17 18:48	75-00-3	
Chloroform	ND	ug/L	500	70.0	500		06/24/17 18:48	67-66-3	
Chloromethane	ND	ug/L	500	55.0	500		06/24/17 18:48	74-87-3	
Cyclohexane	ND	ug/L	500	180	500		06/24/17 18:48	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	1000	1000	500		06/24/17 18:48	96-12-8	
Dibromochloromethane	ND	ug/L	500	105	500		06/24/17 18:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	500	135	500		06/24/17 18:48	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	500	150	500		06/24/17 18:48	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	500	120	500		06/24/17 18:48	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	500	165	500		06/24/17 18:48	106-46-7	
Dichlorodifluoromethane	ND	ug/L	500	105	500		06/24/17 18:48	75-71-8	
1,1-Dichloroethane	ND	ug/L	500	160	500		06/24/17 18:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	500	120	500		06/24/17 18:48	107-06-2	
1,1-Dichloroethene	ND	ug/L	500	280	500		06/24/17 18:48	75-35-4	
cis-1,2-Dichloroethene	98.6J	ug/L	500	95.0	500		06/24/17 18:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	500	245	500		06/24/17 18:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	500	135	500		06/24/17 18:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	500	65.0	500		06/24/17 18:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	500	130	500		06/24/17 18:48	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	75000	39200	500		06/24/17 18:48	123-91-1	
Ethylbenzene	ND	ug/L	500	150	500		06/24/17 18:48	100-41-4	
2-Hexanone	ND	ug/L	2500	230	500		06/24/17 18:48	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	500	200	500		06/24/17 18:48	98-82-8	
Methyl acetate	ND	ug/L	5000	410	500		06/24/17 18:48	79-20-9	
Methylcyclohexane	ND	ug/L	5000	935	500		06/24/17 18:48	108-87-2	
Methylene Chloride	ND	ug/L	1000	485	500		06/24/17 18:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	165	500		06/24/17 18:48	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	500	105	500		06/24/17 18:48	1634-04-4	
Styrene	ND	ug/L	500	130	500		06/24/17 18:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	500	200	500		06/24/17 18:48	79-34-5	
Tetrachloroethene	ND	ug/L	500	230	500		06/24/17 18:48	127-18-4	
Toluene	ND	ug/L	500	130	500		06/24/17 18:48	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	500	165	500		06/24/17 18:48	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	500	175	500		06/24/17 18:48	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	500	240	500		06/24/17 18:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	500	145	500		06/24/17 18:48	79-00-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

Sample: MW-6A	Lab ID: 92345484002	Collected: 06/22/17 17:00	Received: 06/23/17 15:45	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	60600	ug/L	500	235	500		06/24/17 18:48	79-01-6	
Trichlorofluoromethane	ND	ug/L	500	100	500		06/24/17 18:48	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	500	95.0	500		06/24/17 18:48	76-13-1	
Vinyl chloride	ND	ug/L	500	310	500		06/24/17 18:48	75-01-4	
m&p-Xylene	ND	ug/L	1000	330	500		06/24/17 18:48	179601-23-1	
o-Xylene	ND	ug/L	500	115	500		06/24/17 18:48	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		500		06/24/17 18:48	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		500		06/24/17 18:48	17060-07-0	
Toluene-d8 (S)	104	%	70-130		500		06/24/17 18:48	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

Sample: MW-7A	Lab ID: 92345484003	Collected: 06/22/17 11:45	Received: 06/23/17 15:45	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	6250	2500	250		06/27/17 17:55	67-64-1	
Benzene	ND	ug/L	250	62.5	250		06/27/17 17:55	71-43-2	
Bromochloromethane	ND	ug/L	250	42.5	250		06/27/17 17:55	74-97-5	
Bromodichloromethane	ND	ug/L	250	45.0	250		06/27/17 17:55	75-27-4	
Bromoform	ND	ug/L	250	65.0	250		06/27/17 17:55	75-25-2	
Bromomethane	ND	ug/L	500	72.5	250		06/27/17 17:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	1250	240	250		06/27/17 17:55	78-93-3	
Carbon disulfide	ND	ug/L	500	288	250		06/27/17 17:55	75-15-0	
Carbon tetrachloride	ND	ug/L	250	62.5	250		06/27/17 17:55	56-23-5	
Chlorobenzene	ND	ug/L	250	57.5	250		06/27/17 17:55	108-90-7	
Chloroethane	ND	ug/L	250	135	250		06/27/17 17:55	75-00-3	
Chloroform	ND	ug/L	250	35.0	250		06/27/17 17:55	67-66-3	
Chloromethane	ND	ug/L	250	27.5	250		06/27/17 17:55	74-87-3	
Cyclohexane	ND	ug/L	250	90.0	250		06/27/17 17:55	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	500	500	250		06/27/17 17:55	96-12-8	
Dibromochloromethane	ND	ug/L	250	52.5	250		06/27/17 17:55	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	250	67.5	250		06/27/17 17:55	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	250	75.0	250		06/27/17 17:55	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	250	60.0	250		06/27/17 17:55	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	250	82.5	250		06/27/17 17:55	106-46-7	
Dichlorodifluoromethane	ND	ug/L	250	52.5	250		06/27/17 17:55	75-71-8	
1,1-Dichloroethane	ND	ug/L	250	80.0	250		06/27/17 17:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	250	60.0	250		06/27/17 17:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	250	140	250		06/27/17 17:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	250	47.5	250		06/27/17 17:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	250	122	250		06/27/17 17:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	250	67.5	250		06/27/17 17:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	250	32.5	250		06/27/17 17:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	250	65.0	250		06/27/17 17:55	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	37500	19600	250		06/27/17 17:55	123-91-1	L1
Ethylbenzene	ND	ug/L	250	75.0	250		06/27/17 17:55	100-41-4	
2-Hexanone	ND	ug/L	1250	115	250		06/27/17 17:55	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	250	100	250		06/27/17 17:55	98-82-8	
Methyl acetate	ND	ug/L	2500	205	250		06/27/17 17:55	79-20-9	
Methylcyclohexane	ND	ug/L	2500	468	250		06/27/17 17:55	108-87-2	
Methylene Chloride	434J	ug/L	500	242	250		06/27/17 17:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	1250	82.5	250		06/27/17 17:55	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	250	52.5	250		06/27/17 17:55	1634-04-4	
Styrene	ND	ug/L	250	65.0	250		06/27/17 17:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	250	100	250		06/27/17 17:55	79-34-5	
Tetrachloroethene	ND	ug/L	250	115	250		06/27/17 17:55	127-18-4	
Toluene	ND	ug/L	250	65.0	250		06/27/17 17:55	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	250	82.5	250		06/27/17 17:55	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	250	87.5	250		06/27/17 17:55	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	250	120	250		06/27/17 17:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	72.5	250		06/27/17 17:55	79-00-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

Sample: MW-7A	Lab ID: 92345484003	Collected: 06/22/17 11:45	Received: 06/23/17 15:45	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	30800	ug/L	250	118	250		06/27/17 17:55	79-01-6	
Trichlorofluoromethane	ND	ug/L	250	50.0	250		06/27/17 17:55	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	250	47.5	250		06/27/17 17:55	76-13-1	
Vinyl chloride	ND	ug/L	250	155	250		06/27/17 17:55	75-01-4	
m&p-Xylene	ND	ug/L	500	165	250		06/27/17 17:55	179601-23-1	
o-Xylene	ND	ug/L	250	57.5	250		06/27/17 17:55	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		250		06/27/17 17:55	460-00-4	
1,2-Dichloroethane-d4 (S)	122	%	70-130		250		06/27/17 17:55	17060-07-0	
Toluene-d8 (S)	106	%	70-130		250		06/27/17 17:55	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

Sample: FD-08	Lab ID: 92345484004	Collected: 06/22/17 00:00	Received: 06/23/17 15:45	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	5000	2000	200		06/27/17 18:30	67-64-1	
Benzene	ND	ug/L	200	50.0	200		06/27/17 18:30	71-43-2	
Bromochloromethane	ND	ug/L	200	34.0	200		06/27/17 18:30	74-97-5	
Bromodichloromethane	ND	ug/L	200	36.0	200		06/27/17 18:30	75-27-4	
Bromoform	ND	ug/L	200	52.0	200		06/27/17 18:30	75-25-2	
Bromomethane	ND	ug/L	400	58.0	200		06/27/17 18:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	1000	192	200		06/27/17 18:30	78-93-3	
Carbon disulfide	ND	ug/L	400	230	200		06/27/17 18:30	75-15-0	
Carbon tetrachloride	ND	ug/L	200	50.0	200		06/27/17 18:30	56-23-5	
Chlorobenzene	ND	ug/L	200	46.0	200		06/27/17 18:30	108-90-7	
Chloroethane	ND	ug/L	200	108	200		06/27/17 18:30	75-00-3	
Chloroform	ND	ug/L	200	28.0	200		06/27/17 18:30	67-66-3	
Chloromethane	ND	ug/L	200	22.0	200		06/27/17 18:30	74-87-3	
Cyclohexane	ND	ug/L	200	72.0	200		06/27/17 18:30	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	400	400	200		06/27/17 18:30	96-12-8	
Dibromochloromethane	ND	ug/L	200	42.0	200		06/27/17 18:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	200	54.0	200		06/27/17 18:30	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	200	60.0	200		06/27/17 18:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	200	48.0	200		06/27/17 18:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	200	66.0	200		06/27/17 18:30	106-46-7	
Dichlorodifluoromethane	ND	ug/L	200	42.0	200		06/27/17 18:30	75-71-8	
1,1-Dichloroethane	ND	ug/L	200	64.0	200		06/27/17 18:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	200	48.0	200		06/27/17 18:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	200	112	200		06/27/17 18:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	200	38.0	200		06/27/17 18:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	200	98.0	200		06/27/17 18:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	200	54.0	200		06/27/17 18:30	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	200	26.0	200		06/27/17 18:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	200	52.0	200		06/27/17 18:30	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	30000	15700	200		06/27/17 18:30	123-91-1	L1
Ethylbenzene	ND	ug/L	200	60.0	200		06/27/17 18:30	100-41-4	
2-Hexanone	ND	ug/L	1000	92.0	200		06/27/17 18:30	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	200	80.0	200		06/27/17 18:30	98-82-8	
Methyl acetate	ND	ug/L	2000	164	200		06/27/17 18:30	79-20-9	
Methylcyclohexane	ND	ug/L	2000	374	200		06/27/17 18:30	108-87-2	
Methylene Chloride	ND	ug/L	400	194	200		06/27/17 18:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	1000	66.0	200		06/27/17 18:30	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	200	42.0	200		06/27/17 18:30	1634-04-4	
Styrene	ND	ug/L	200	52.0	200		06/27/17 18:30	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	200	80.0	200		06/27/17 18:30	79-34-5	
Tetrachloroethene	ND	ug/L	200	92.0	200		06/27/17 18:30	127-18-4	
Toluene	ND	ug/L	200	52.0	200		06/27/17 18:30	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	200	66.0	200		06/27/17 18:30	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	200	70.0	200		06/27/17 18:30	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	200	96.0	200		06/27/17 18:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	200	58.0	200		06/27/17 18:30	79-00-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

Sample: FD-08	Lab ID: 92345484004	Collected: 06/22/17 00:00	Received: 06/23/17 15:45	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	33100	ug/L	200	94.0	200		06/27/17 18:30	79-01-6	
Trichlorofluoromethane	ND	ug/L	200	40.0	200		06/27/17 18:30	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	200	38.0	200		06/27/17 18:30	76-13-1	
Vinyl chloride	ND	ug/L	200	124	200		06/27/17 18:30	75-01-4	
m&p-Xylene	ND	ug/L	400	132	200		06/27/17 18:30	179601-23-1	
o-Xylene	ND	ug/L	200	46.0	200		06/27/17 18:30	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		200		06/27/17 18:30	460-00-4	
1,2-Dichloroethane-d4 (S)	120	%	70-130		200		06/27/17 18:30	17060-07-0	
Toluene-d8 (S)	105	%	70-130		200		06/27/17 18:30	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

Sample: TB-07	Lab ID: 92345484005	Collected: 06/22/17 00:00	Received: 06/23/17 15:45	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	17.8J	ug/L	25.0	10.0	1		06/27/17 13:52	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		06/27/17 13:52	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		06/27/17 13:52	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		06/27/17 13:52	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		06/27/17 13:52	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		06/27/17 13:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		06/27/17 13:52	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		06/27/17 13:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		06/27/17 13:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		06/27/17 13:52	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		06/27/17 13:52	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		06/27/17 13:52	67-66-3	
Chloromethane	0.27J	ug/L	1.0	0.11	1		06/27/17 13:52	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		06/27/17 13:52	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		06/27/17 13:52	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		06/27/17 13:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		06/27/17 13:52	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		06/27/17 13:52	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		06/27/17 13:52	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		06/27/17 13:52	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		06/27/17 13:52	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		06/27/17 13:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		06/27/17 13:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		06/27/17 13:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		06/27/17 13:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		06/27/17 13:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		06/27/17 13:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		06/27/17 13:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		06/27/17 13:52	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		06/27/17 13:52	123-91-1	L1
Ethylbenzene	ND	ug/L	1.0	0.30	1		06/27/17 13:52	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		06/27/17 13:52	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		06/27/17 13:52	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		06/27/17 13:52	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		06/27/17 13:52	108-87-2	
Methylene Chloride	ND	ug/L	2.0	0.97	1		06/27/17 13:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		06/27/17 13:52	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		06/27/17 13:52	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		06/27/17 13:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		06/27/17 13:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		06/27/17 13:52	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		06/27/17 13:52	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		06/27/17 13:52	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		06/27/17 13:52	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		06/27/17 13:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		06/27/17 13:52	79-00-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

Sample: TB-07	Lab ID: 92345484005		Collected: 06/22/17 00:00	Received: 06/23/17 15:45	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	ND	ug/L	1.0	0.47	1		06/27/17 13:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		06/27/17 13:52	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		06/27/17 13:52	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		06/27/17 13:52	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		06/27/17 13:52	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		06/27/17 13:52	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		06/27/17 13:52	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	70-130		1		06/27/17 13:52	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		06/27/17 13:52	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

Sample: MW-7	Lab ID: 92345484006	Collected: 06/22/17 10:45	Received: 06/23/17 15:45	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		06/27/17 17:03	67-64-1	M1
Benzene	ND	ug/L	1.0	0.25	1		06/27/17 17:03	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		06/27/17 17:03	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		06/27/17 17:03	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		06/27/17 17:03	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		06/27/17 17:03	74-83-9	M1
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		06/27/17 17:03	78-93-3	M1
Carbon disulfide	ND	ug/L	2.0	1.2	1		06/27/17 17:03	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		06/27/17 17:03	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		06/27/17 17:03	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		06/27/17 17:03	75-00-3	
Chloroform	6.1	ug/L	1.0	0.14	1		06/27/17 17:03	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		06/27/17 17:03	74-87-3	M1
Cyclohexane	ND	ug/L	1.0	0.36	1		06/27/17 17:03	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		06/27/17 17:03	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		06/27/17 17:03	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		06/27/17 17:03	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		06/27/17 17:03	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		06/27/17 17:03	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		06/27/17 17:03	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		06/27/17 17:03	75-71-8	M1
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		06/27/17 17:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		06/27/17 17:03	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		06/27/17 17:03	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		06/27/17 17:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		06/27/17 17:03	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		06/27/17 17:03	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		06/27/17 17:03	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		06/27/17 17:03	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		06/27/17 17:03	123-91-1	L1,M0, R1
Ethylbenzene	ND	ug/L	1.0	0.30	1		06/27/17 17:03	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		06/27/17 17:03	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		06/27/17 17:03	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		06/27/17 17:03	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		06/27/17 17:03	108-87-2	
Methylene Chloride	ND	ug/L	2.0	0.97	1		06/27/17 17:03	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		06/27/17 17:03	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		06/27/17 17:03	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		06/27/17 17:03	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		06/27/17 17:03	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		06/27/17 17:03	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		06/27/17 17:03	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		06/27/17 17:03	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		06/27/17 17:03	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		06/27/17 17:03	71-55-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

Sample: MW-7	Lab ID: 92345484006	Collected: 06/22/17 10:45	Received: 06/23/17 15:45	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		06/27/17 17:03	79-00-5	
Trichloroethene	42.5	ug/L	1.0	0.47	1		06/27/17 17:03	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		06/27/17 17:03	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		06/27/17 17:03	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		06/27/17 17:03	75-01-4	M1
m&p-Xylene	ND	ug/L	2.0	0.66	1		06/27/17 17:03	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		06/27/17 17:03	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		06/27/17 17:03	460-00-4	
1,2-Dichloroethane-d4 (S)	118	%	70-130		1		06/27/17 17:03	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		06/27/17 17:03	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

QC Batch:	366359	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV Low Level
Associated Lab Samples:	92345484002		

METHOD BLANK: 2031937 Matrix: Water

Associated Lab Samples: 92345484002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	06/24/17 13:30	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.40	06/24/17 13:30	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	06/24/17 13:30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	0.19	06/24/17 13:30	
1,1-Dichloroethane	ug/L	ND	1.0	0.32	06/24/17 13:30	
1,1-Dichloroethene	ug/L	ND	1.0	0.56	06/24/17 13:30	
1,2,3-Trichlorobenzene	ug/L	0.56J	1.0	0.33	06/24/17 13:30	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.35	06/24/17 13:30	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	2.0	06/24/17 13:30	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	06/24/17 13:30	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.30	06/24/17 13:30	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	06/24/17 13:30	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	06/24/17 13:30	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.24	06/24/17 13:30	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	06/24/17 13:30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	78.4	06/24/17 13:30	
2-Butanone (MEK)	ug/L	ND	5.0	0.96	06/24/17 13:30	
2-Hexanone	ug/L	ND	5.0	0.46	06/24/17 13:30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	0.33	06/24/17 13:30	
Acetone	ug/L	ND	25.0	10.0	06/24/17 13:30	
Benzene	ug/L	ND	1.0	0.25	06/24/17 13:30	
Bromochloromethane	ug/L	ND	1.0	0.17	06/24/17 13:30	
Bromodichloromethane	ug/L	ND	1.0	0.18	06/24/17 13:30	
Bromoform	ug/L	ND	1.0	0.26	06/24/17 13:30	
Bromomethane	ug/L	ND	2.0	0.29	06/24/17 13:30	
Carbon disulfide	ug/L	ND	2.0	1.2	06/24/17 13:30	
Carbon tetrachloride	ug/L	ND	1.0	0.25	06/24/17 13:30	
Chlorobenzene	ug/L	ND	1.0	0.23	06/24/17 13:30	
Chloroethane	ug/L	ND	1.0	0.54	06/24/17 13:30	
Chloroform	ug/L	ND	1.0	0.14	06/24/17 13:30	
Chloromethane	ug/L	ND	1.0	0.11	06/24/17 13:30	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.19	06/24/17 13:30	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	06/24/17 13:30	
Cyclohexane	ug/L	ND	1.0	0.36	06/24/17 13:30	
Dibromochloromethane	ug/L	ND	1.0	0.21	06/24/17 13:30	
Dichlorodifluoromethane	ug/L	ND	1.0	0.21	06/24/17 13:30	
Ethylbenzene	ug/L	ND	1.0	0.30	06/24/17 13:30	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.40	06/24/17 13:30	
m&p-Xylene	ug/L	ND	2.0	0.66	06/24/17 13:30	
Methyl acetate	ug/L	ND	10.0	0.82	06/24/17 13:30	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.21	06/24/17 13:30	

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REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

METHOD BLANK: 2031937

Matrix: Water

Associated Lab Samples: 92345484002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylcyclohexane	ug/L	ND	10.0	1.9	06/24/17 13:30	
Methylene Chloride	ug/L	ND	2.0	0.97	06/24/17 13:30	
o-Xylene	ug/L	ND	1.0	0.23	06/24/17 13:30	
Styrene	ug/L	ND	1.0	0.26	06/24/17 13:30	
Tetrachloroethene	ug/L	ND	1.0	0.46	06/24/17 13:30	
Toluene	ug/L	ND	1.0	0.26	06/24/17 13:30	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.49	06/24/17 13:30	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	06/24/17 13:30	
Trichloroethene	ug/L	ND	1.0	0.47	06/24/17 13:30	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	06/24/17 13:30	
Vinyl chloride	ug/L	ND	1.0	0.62	06/24/17 13:30	
1,2-Dichloroethane-d4 (S)	%	99	70-130		06/24/17 13:30	
4-Bromofluorobenzene (S)	%	105	70-130		06/24/17 13:30	
Toluene-d8 (S)	%	101	70-130		06/24/17 13:30	

LABORATORY CONTROL SAMPLE: 2031038

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	50.6	101	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	47.8	96	70-130	
1,1,2-Trichloroethane	ug/L	50	46.8	94	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	52.1	104	70-130	
1,1-Dichloroethane	ug/L	50	46.8	94	70-130	
1,1-Dichloroethene	ug/L	50	47.7	95	70-132	
1,2,3-Trichlorobenzene	ug/L	50	47.5	95	70-135	
1,2,4-Trichlorobenzene	ug/L	50	50.7	101	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	48.7	97	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	51.3	103	70-130	
1,2-Dichlorobenzene	ug/L	50	49.9	100	70-130	
1,2-Dichloroethane	ug/L	50	47.9	96	70-130	
1,2-Dichloropropane	ug/L	50	47.7	95	70-130	
1,3-Dichlorobenzene	ug/L	50	47.2	94	70-130	
1,4-Dichlorobenzene	ug/L	50	48.4	97	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	950	95	71-125	
2-Butanone (MEK)	ug/L	100	101	101	70-145	
2-Hexanone	ug/L	100	91.1	91	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	89.0	89	70-140	
Acetone	ug/L	100	102	102	50-175	
Benzene	ug/L	50	48.6	97	70-130	
Bromochloromethane	ug/L	50	48.1	96	70-130	
Bromodichloromethane	ug/L	50	48.0	96	70-130	
Bromoform	ug/L	50	43.5	87	70-130	
Bromomethane	ug/L	50	64.4	129	54-130	
Carbon disulfide	ug/L	50	46.5	93	70-131	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

LABORATORY CONTROL SAMPLE: 2031038

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	51.5	103	70-132	
Chlorobenzene	ug/L	50	49.4	99	70-130	
Chloroethane	ug/L	50	38.2	76	64-134	
Chloroform	ug/L	50	48.9	98	70-130	
Chloromethane	ug/L	50	46.0	92	64-130	
cis-1,2-Dichloroethene	ug/L	50	46.2	92	70-131	
cis-1,3-Dichloropropene	ug/L	50	49.8	100	70-130	
Cyclohexane	ug/L	50	48.3	97	70-130	
Dibromochloromethane	ug/L	50	46.3	93	70-130	
Dichlorodifluoromethane	ug/L	50	36.6	73	56-130	
Ethylbenzene	ug/L	50	48.6	97	70-130	
Isopropylbenzene (Cumene)	ug/L	50	46.9	94	70-130	
m&p-Xylene	ug/L	100	97.8	98	70-130	
Methyl acetate	ug/L	50	44.5	89	70-130	
Methyl-tert-butyl ether	ug/L	50	52.6	105	70-130	
Methylcyclohexane	ug/L	50	45.0	90	70-130	
Methylene Chloride	ug/L	50	44.6	89	63-130	
o-Xylene	ug/L	50	48.2	96	70-130	
Styrene	ug/L	50	48.3	97	70-130	
Tetrachloroethene	ug/L	50	47.1	94	70-130	
Toluene	ug/L	50	44.8	90	70-130	
trans-1,2-Dichloroethene	ug/L	50	46.6	93	70-130	
trans-1,3-Dichloropropene	ug/L	50	49.3	99	70-132	
Trichloroethene	ug/L	50	47.3	95	70-130	
Trichlorofluoromethane	ug/L	50	48.6	97	62-133	
Vinyl chloride	ug/L	50	40.8	82	50-150	
1,2-Dichloroethane-d4 (S)	%			101	70-130	
4-Bromofluorobenzene (S)	%			104	70-130	
Toluene-d8 (S)	%			92	70-130	

MATRIX SPIKE SAMPLE: 2031934

Parameter	Units	92345409044 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	20	22.5	113	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	21.9	110	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	22.9	115	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	21.8	109	70-130	
1,1-Dichloroethane	ug/L	ND	20	21.9	110	70-130	
1,1-Dichloroethene	ug/L	ND	20	21.3	107	70-166	
1,2,3-Trichlorobenzene	ug/L	ND	20	19.3	97	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	20	18.9	95	70-130	
1,2-Dibromo-3-chloropropane	ug/L			22.2			
1,2-Dibromoethane (EDB)	ug/L	ND	20	22.2	111	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	20.6	103	70-130	
1,2-Dichloroethane	ug/L	ND	20	22.3	112	70-130	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

MATRIX SPIKE SAMPLE:	2031934						
Parameter	Units	92345409044	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloropropane	ug/L	ND	20	22.1	111	70-130	
1,3-Dichlorobenzene	ug/L	ND	20	20.7	104	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	20.5	103	70-130	
1,4-Dioxane (p-Dioxane)	ug/L			336			
2-Butanone (MEK)	ug/L	ND	40	53.3	133	70-130	M1
2-Hexanone	ug/L	ND	40	48.1	120	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	49.6	124	70-130	
Acetone	ug/L	ND	40	68.0	170	70-130	M1
Benzene	ug/L	ND	20	22.6	113	70-148	
Bromochloromethane	ug/L	ND	20	21.9	110	70-130	
Bromodichloromethane	ug/L	ND	20	22.7	113	70-130	
Bromoform	ug/L	ND	20	18.3	91	70-130	
Bromomethane	ug/L	ND	20	11.9	60	70-130	M1
Carbon disulfide	ug/L			18.9			
Carbon tetrachloride	ug/L	ND	20	21.9	110	70-130	
Chlorobenzene	ug/L	ND	20	20.5	103	70-146	
Chloroethane	ug/L	ND	20	19.0	95	70-130	
Chloroform	ug/L	ND	20	21.7	108	70-130	
Chloromethane	ug/L	ND	20	13.6	68	70-130	M1
cis-1,2-Dichloroethene	ug/L	0.23J	20	24.5	121	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	21.9	109	70-130	
Cyclohexane	ug/L			21.0			
Dibromochloromethane	ug/L	ND	20	22.3	112	70-130	
Dichlorodifluoromethane	ug/L	ND	20	7.7	39	70-130	M1
Ethylbenzene	ug/L	ND	20	21.3	106	70-130	
Isopropylbenzene (Cumene)	ug/L			21.4			
m&p-Xylene	ug/L	ND	40	42.8	107	70-130	
Methyl acetate	ug/L			22.6			
Methyl-tert-butyl ether	ug/L	ND	20	22.7	113	70-130	
Methylcyclohexane	ug/L			20.1			
Methylene Chloride	ug/L	ND	20	23.9	120	70-130	
o-Xylene	ug/L	ND	20	21.6	108	70-130	
Styrene	ug/L	ND	20	21.4	107	70-130	
Tetrachloroethene	ug/L	ND	20	19.4	97	70-130	
Toluene	ug/L	0.27J	20	22.1	109	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	22.0	110	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	21.8	109	70-130	
Trichloroethene	ug/L	ND	20	22.2	111	69-151	
Trichlorofluoromethane	ug/L	ND	20	21.2	106	70-130	
Vinyl chloride	ug/L	ND	20	15.4	77	70-130	
1,2-Dichloroethane-d4 (S)	%				111	70-130	
4-Bromofluorobenzene (S)	%				103	70-130	
Toluene-d8 (S)	%				100	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

SAMPLE DUPLICATE: 2031935

Parameter	Units	92345409045 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/L		ND			
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
1,4-Dioxane (p-Dioxane)	ug/L		ND			
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Hexanone	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	14.1J		30	
Benzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon disulfide	ug/L		ND			
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	0.50J		30	
cis-1,2-Dichloroethene	ug/L	ND	0.63J		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Cyclohexane	ug/L		ND			
Dibromochloromethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L		ND			
m&p-Xylene	ug/L	ND	ND		30	
Methyl acetate	ug/L		ND			
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylcyclohexane	ug/L		ND			
Methylene Chloride	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	0.31J	0.35J		30	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

SAMPLE DUPLICATE: 2031935

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	95	115	19		
4-Bromofluorobenzene (S)	%	104	104	0		
Toluene-d8 (S)	%	106	103	3		

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

QC Batch:	366675	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV Low Level
Associated Lab Samples:	92345484001, 92345484003, 92345484004, 92345484005, 92345484006		

METHOD BLANK: 2032540 Matrix: Water

Associated Lab Samples: 92345484001, 92345484003, 92345484004, 92345484005, 92345484006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	06/27/17 13:17	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.40	06/27/17 13:17	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	06/27/17 13:17	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	0.19	06/27/17 13:17	
1,1-Dichloroethane	ug/L	ND	1.0	0.32	06/27/17 13:17	
1,1-Dichloroethene	ug/L	ND	1.0	0.56	06/27/17 13:17	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.33	06/27/17 13:17	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.35	06/27/17 13:17	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	2.0	06/27/17 13:17	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	06/27/17 13:17	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.30	06/27/17 13:17	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	06/27/17 13:17	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	06/27/17 13:17	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.24	06/27/17 13:17	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	06/27/17 13:17	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	78.4	06/27/17 13:17	
2-Butanone (MEK)	ug/L	ND	5.0	0.96	06/27/17 13:17	
2-Hexanone	ug/L	ND	5.0	0.46	06/27/17 13:17	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	0.33	06/27/17 13:17	
Acetone	ug/L	ND	25.0	10.0	06/27/17 13:17	
Benzene	ug/L	ND	1.0	0.25	06/27/17 13:17	
Bromochloromethane	ug/L	ND	1.0	0.17	06/27/17 13:17	
Bromodichloromethane	ug/L	ND	1.0	0.18	06/27/17 13:17	
Bromoform	ug/L	ND	1.0	0.26	06/27/17 13:17	
Bromomethane	ug/L	ND	2.0	0.29	06/27/17 13:17	
Carbon disulfide	ug/L	ND	2.0	1.2	06/27/17 13:17	
Carbon tetrachloride	ug/L	ND	1.0	0.25	06/27/17 13:17	
Chlorobenzene	ug/L	ND	1.0	0.23	06/27/17 13:17	
Chloroethane	ug/L	ND	1.0	0.54	06/27/17 13:17	
Chloroform	ug/L	ND	1.0	0.14	06/27/17 13:17	
Chloromethane	ug/L	ND	1.0	0.11	06/27/17 13:17	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.19	06/27/17 13:17	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	06/27/17 13:17	
Cyclohexane	ug/L	ND	1.0	0.36	06/27/17 13:17	
Dibromochloromethane	ug/L	ND	1.0	0.21	06/27/17 13:17	
Dichlorodifluoromethane	ug/L	ND	1.0	0.21	06/27/17 13:17	
Ethylbenzene	ug/L	ND	1.0	0.30	06/27/17 13:17	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.40	06/27/17 13:17	
m&p-Xylene	ug/L	ND	2.0	0.66	06/27/17 13:17	
Methyl acetate	ug/L	ND	10.0	0.82	06/27/17 13:17	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.21	06/27/17 13:17	

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REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

METHOD BLANK: 2032540

Matrix: Water

Associated Lab Samples: 92345484001, 92345484003, 92345484004, 92345484005, 92345484006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylcyclohexane	ug/L	ND	10.0	1.9	06/27/17 13:17	
Methylene Chloride	ug/L	ND	2.0	0.97	06/27/17 13:17	
o-Xylene	ug/L	ND	1.0	0.23	06/27/17 13:17	
Styrene	ug/L	ND	1.0	0.26	06/27/17 13:17	
Tetrachloroethene	ug/L	ND	1.0	0.46	06/27/17 13:17	
Toluene	ug/L	ND	1.0	0.26	06/27/17 13:17	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.49	06/27/17 13:17	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	06/27/17 13:17	
Trichloroethene	ug/L	ND	1.0	0.47	06/27/17 13:17	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	06/27/17 13:17	
Vinyl chloride	ug/L	ND	1.0	0.62	06/27/17 13:17	
1,2-Dichloroethane-d4 (S)	%	114	70-130		06/27/17 13:17	
4-Bromofluorobenzene (S)	%	102	70-130		06/27/17 13:17	
Toluene-d8 (S)	%	105	70-130		06/27/17 13:17	

LABORATORY CONTROL SAMPLE: 2032541

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	51.1	102	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	51.6	103	70-130	
1,1,2-Trichloroethane	ug/L	50	52.1	104	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	44.3	89	70-130	
1,1-Dichloroethane	ug/L	50	49.5	99	70-130	
1,1-Dichloroethene	ug/L	50	47.9	96	70-132	
1,2,3-Trichlorobenzene	ug/L	50	49.1	98	70-135	
1,2,4-Trichlorobenzene	ug/L	50	48.1	96	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	57.1	114	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	54.6	109	70-130	
1,2-Dichlorobenzene	ug/L	50	50.0	100	70-130	
1,2-Dichloroethane	ug/L	50	50.6	101	70-130	
1,2-Dichloropropane	ug/L	50	51.4	103	70-130	
1,3-Dichlorobenzene	ug/L	50	48.8	98	70-130	
1,4-Dichlorobenzene	ug/L	50	48.6	97	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	1620	162	71-125 L1	
2-Butanone (MEK)	ug/L	100	138	138	70-145	
2-Hexanone	ug/L	100	128	128	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	114	114	70-140	
Acetone	ug/L	100	171	171	50-175	
Benzene	ug/L	50	51.4	103	70-130	
Bromochloromethane	ug/L	50	48.1	96	70-130	
Bromodichloromethane	ug/L	50	51.2	102	70-130	
Bromoform	ug/L	50	51.9	104	70-130	
Bromomethane	ug/L	50	40.2	80	54-130	
Carbon disulfide	ug/L	50	47.6	95	70-131	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

LABORATORY CONTROL SAMPLE: 2032541

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	48.1	96	70-132	
Chlorobenzene	ug/L	50	48.8	98	70-130	
Chloroethane	ug/L	50	44.9	90	64-134	
Chloroform	ug/L	50	50.0	100	70-130	
Chloromethane	ug/L	50	47.1	94	64-130	
cis-1,2-Dichloroethene	ug/L	50	52.4	105	70-131	
cis-1,3-Dichloropropene	ug/L	50	54.4	109	70-130	
Cyclohexane	ug/L	50	46.8	94	70-130	
Dibromochloromethane	ug/L	50	57.2	114	70-130	
Dichlorodifluoromethane	ug/L	50	48.8	98	56-130	
Ethylbenzene	ug/L	50	47.7	95	70-130	
Isopropylbenzene (Cumene)	ug/L	50	47.1	94	70-130	
m&p-Xylene	ug/L	100	95.5	95	70-130	
Methyl acetate	ug/L	50	57.6	115	70-130	
Methyl-tert-butyl ether	ug/L	50	57.8	116	70-130	
Methylcyclohexane	ug/L	50	45.1	90	70-130	
Methylene Chloride	ug/L	50	54.0	108	63-130	
o-Xylene	ug/L	50	47.6	95	70-130	
Styrene	ug/L	50	47.2	94	70-130	
Tetrachloroethene	ug/L	50	46.2	92	70-130	
Toluene	ug/L	50	48.6	97	70-130	
trans-1,2-Dichloroethene	ug/L	50	49.1	98	70-130	
trans-1,3-Dichloropropene	ug/L	50	50.5	101	70-132	
Trichloroethene	ug/L	50	50.8	102	70-130	
Trichlorofluoromethane	ug/L	50	48.2	96	62-133	
Vinyl chloride	ug/L	50	48.2	96	50-150	
1,2-Dichloroethane-d4 (S)	%			106	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2032545 2032546

Parameter	Units	MS Spike		MSD Spike		MS		MSD		% Rec Limits	RPD	RPD	Max Qual
		92345484006	Result	Conc.	Conc.	Result	% Rec	Result	% Rec				
1,1,1-Trichloroethane	ug/L	ND	20	20	22.6	21.4	113	107	70-130	5	30		
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	21.7	21.0	109	105	70-130	3	30		
1,1,2-Trichloroethane	ug/L	ND	20	20	22.4	21.1	112	105	70-130	6	30		
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	20	20.1	19.2	100	96	70-130	5	30		
1,1-Dichloroethane	ug/L	ND	20	20	22.0	20.9	110	104	70-130	5	30		
1,1-Dichloroethene	ug/L	ND	20	20	20.9	20.8	104	104	70-166	0	30		
1,2,3-Trichlorobenzene	ug/L	ND	20	20	19.0	18.9	95	95	70-130	1	30		
1,2,4-Trichlorobenzene	ug/L	ND	20	20	18.3	18.9	91	95	70-130	3	30		
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20	21.0	21.2	105	106	70-130	1	30		
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	21.5	21.5	108	107	70-130	0	30		

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

Parameter	Units	2032545		2032546						Max		
		92345484006	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD RPD	Qual
1,2-Dichlorobenzene	ug/L	ND	20	20	20.0	20.1	100	100	70-130	0	30	
1,2-Dichloroethane	ug/L	ND	20	20	22.6	21.0	113	105	70-130	8	30	
1,2-Dichloropropane	ug/L	ND	20	20	22.4	21.3	112	107	70-130	5	30	
1,3-Dichlorobenzene	ug/L	ND	20	20	20.4	19.6	102	98	70-130	4	30	
1,4-Dichlorobenzene	ug/L	ND	20	20	19.6	19.6	98	98	70-130	0	30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	400	316	737	79	184	70-130	80	30	M0,R1
2-Butanone (MEK)	ug/L	ND	40	40	54.3	52.0	136	130	70-130	4	30	M1
2-Hexanone	ug/L	ND	40	40	49.4	47.4	124	118	70-130	4	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	40	47.5	44.4	119	111	70-130	7	30	
Acetone	ug/L	ND	40	40	59.5	55.3	149	138	70-130	7	30	M1
Benzene	ug/L	ND	20	20	21.5	20.7	108	104	70-148	4	30	
Bromochloromethane	ug/L	ND	20	20	22.0	20.8	110	104	70-130	6	30	
Bromodichloromethane	ug/L	ND	20	20	22.0	20.5	110	102	70-130	7	30	
Bromoform	ug/L	ND	20	20	18.2	17.6	91	88	70-130	3	30	
Bromomethane	ug/L	ND	20	20	9.3	8.4	47	42	70-130	11	30	M1
Carbon disulfide	ug/L	ND	20	20	17.0	15.8	85	79	70-130	7	30	
Carbon tetrachloride	ug/L	ND	20	20	20.8	19.8	104	99	70-130	5	30	
Chlorobenzene	ug/L	ND	20	20	21.1	20.5	105	103	70-146	3	30	
Chloroethane	ug/L	ND	20	20	17.3	16.9	86	84	70-130	2	30	
Chloroform	ug/L	6.1	20	20	27.3	27.6	106	108	70-130	1	30	
Chloromethane	ug/L	ND	20	20	10.9	10.9	54	55	70-130	0	30	M1
cis-1,2-Dichloroethene	ug/L	ND	20	20	23.4	22.7	117	113	70-130	3	30	
cis-1,3-Dichloropropene	ug/L	ND	20	20	20.7	20.2	104	101	70-130	3	30	
Cyclohexane	ug/L	ND	20	20	20.5	19.5	102	98	70-130	5	30	
Dibromochloromethane	ug/L	ND	20	20	22.2	21.8	111	109	70-130	2	30	
Dichlorodifluoromethane	ug/L	ND	20	20	4.1	4.3	21	22	70-130	5	30	M1
Ethylbenzene	ug/L	ND	20	20	21.5	20.7	107	103	70-130	4	30	
Isopropylbenzene (Cumene)	ug/L	ND	20	20	21.3	20.6	106	103	70-130	3	30	
m&p-Xylene	ug/L	ND	40	40	42.6	41.1	107	103	70-130	4	30	
Methyl acetate	ug/L	ND	20	20	22.9	20.1	115	100	70-130	13	30	
Methyl-tert-butyl ether	ug/L	ND	20	20	22.9	21.1	115	105	70-130	8	30	
Methylcyclohexane	ug/L	ND	20	20	19.7	19.7	99	99	70-130	0	30	
Methylene Chloride	ug/L	ND	20	20	23.9	22.1	119	111	70-130	8	30	
o-Xylene	ug/L	ND	20	20	21.4	20.4	107	102	70-130	5	30	
Styrene	ug/L	ND	20	20	20.1	20.3	101	101	70-130	1	30	
Tetrachloroethene	ug/L	ND	20	20	19.6	20.0	98	100	70-130	2	30	
Toluene	ug/L	ND	20	20	21.3	21.2	107	106	70-155	1	30	
trans-1,2-Dichloroethene	ug/L	ND	20	20	21.4	21.1	107	105	70-130	1	30	
trans-1,3-Dichloropropene	ug/L	ND	20	20	20.6	20.0	103	100	70-130	3	30	
Trichloroethene	ug/L	42.5	20	20	68.5	68.2	130	128	69-151	0	30	
Trichlorofluoromethane	ug/L	ND	20	20	18.3	18.0	92	90	70-130	2	30	
Vinyl chloride	ug/L	ND	20	20	13.1	12.7	66	63	70-130	3	30	M1
1,2-Dichloroethane-d4 (S)	%						111	106	70-130			
4-Bromofluorobenzene (S)	%						105	103	70-130			
Toluene-d8 (S)	%						100	100	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

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.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-C Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

- | | |
|----|---|
| L1 | Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high. |
| M0 | Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits. |
| M1 | Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery. |
| R1 | RPD value was outside control limits. |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CTS OF ASHEVILLE 6252162012

Pace Project No.: 92345484

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92345484001	MW-6	EPA 8260	366675		
92345484002	MW-6A	EPA 8260	366359		
92345484003	MW-7A	EPA 8260	366675		
92345484004	FD-08	EPA 8260	366675		
92345484005	TB-07	EPA 8260	366675		
92345484006	MW-7	EPA 8260	366675		

REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville

WO# : 92345484

Sample Condition Upon
Receipt

Client Name:

Project #:

AMIE Foster Wheeler



92345484

Courier:
 Commercial FedEx UPS USPS Other: _____

Custody Seal Present?

 Yes No

Seals Intact?

 Yes No

Packing Material:

 Bubble Wrap Bubble Bags None Other: _____

Thermometer:

 IR Gun ID: 5

Type of ice:

 Wet Blue None Samples on ice, cooling process has begun

Correction Factor:

 Cooler Temp Corrected (°C): 5.7

Temp should be above freezing to 6°C

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

 Yes NoDid samples originate from a foreign source (internationally,
including Hawaii and Puerto Rico)? Yes No N/A

Comments/Discrepancy:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? -Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Containers Intact?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8. Note if sediment is visible in the dissolved container
Sample Labels Match COC?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Includes Date/Time/ID/Analysis Matrix:	<u>WT</u>	
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted:

Date/Time:

Comments/Sample
Discrepancy:

Project Manager SCURF Review:

Date: 6/24/17

Project Manager SRF Review:

Date: 6/24/17

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)

Document Name:
Sample Condition Upon Receipt:
Document No.:
F-CAR-CS-033-Rev.01

Document Revised: Sept. 21, 2016

WO# : 92345484

Due Date: 06/30/17

PM: KRG
Pr. CLIENT: 92-AMEC A

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

**Bottom half of box is to list number of bottles

1	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP3S-250 mL Plastic H ₂ SO ₄ (pH < 2) (Cl-)	BP3N-250 mL plastic HNO ₃ (pH < 2)	BP3Z-250 mL Plastic Zn Acetate & NaOH (>9)	BP3C-250 mL Plastic NaOH (pH > 12) (Cl-)	WGFLU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H ₂ SO ₄ (pH < 2)	AG3S-250 mL Amber H ₂ SO ₄ (pH < 2)	AG3A(DG3A)-250 mL Amber NH ₄ Cl (N/A)(Cl-)	DG3H-40 mL VOA HCl (N/A)	VGSU-40 mL VOA Na ₂ S ₂ O ₃ (N/A)	DGSP-40 mL VOA H ₃ PO ₄ (N/A)	VOAK (6 vials per kit)-5D35 Kit (N/A)	V/GK (3 vials per kit)-VPH/Gas lkr (N/A)	SPST-125 mL Sterile Plastic (N/A-lab5)	SP2T-250 mL Sterile Plastic (N/A-lab)	BP3A-250 mL Plastic (NH ₄) ₂ SO ₄ (9.3-9.7)	Cubitainer	VSGU-20 mL Scintillation vials (N/A)	GN
2																										
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12																										

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #



CHAIN-OF-CUSTODY / Analytical Request Document

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

Important Note: By signing this form you are accepting Payless' 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

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

Redman & Clark

110

104

3

10

viii

10

100
• Co

114

1

214

1

July 07, 2017

Ms. Susan Kelly
Amec Foster Wheeler
1308 Patton Avenue
Asheville, NC 28806

RE: Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Dear Ms. Kelly:

Enclosed are the analytical results for sample(s) received by the laboratory on June 29, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Kevin Godwin
kevin.godwin@pacelabs.com
1(704)875-9092
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CTS OF ASHEVILLE

Pace Project No.: 92346162

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
Virginia/VELAP Certification #: 460221

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92346162001	TB-08	Water	06/26/17 00:00	06/29/17 15:05
92346162002	FD-10	Water	06/26/17 00:00	06/29/17 15:05
92346162003	GW-75-26	Water	06/26/17 17:45	06/29/17 15:05
92346162004	GW-80-40	Water	06/27/17 11:11	06/29/17 15:05
92346162005	GW-81-36	Water	06/27/17 13:15	06/29/17 15:05
92346162006	EB-03	Water	06/27/17 14:50	06/29/17 15:05
92346162007	GW-78-46	Water	06/27/17 16:30	06/29/17 15:05
92346162008	EB-04	Water	06/27/17 17:00	06/29/17 15:05
92346162009	GW-95-46	Water	06/27/17 18:45	06/29/17 15:05
92346162010	GW-93-46	Water	06/28/17 09:50	06/29/17 15:05
92346162011	GW-87-35	Water	06/28/17 12:40	06/29/17 15:05
92346162012	GW-87-53	Water	06/28/17 15:00	06/29/17 15:05
92346162013	GW-90-42	Water	06/28/17 17:50	06/29/17 15:05
92346162014	GW-102-52	Water	06/29/17 10:35	06/29/17 15:05
92346162015	TB-09	Solid	06/26/17 00:00	06/29/17 15:05
92346162016	FD-09	Solid	06/26/17 00:00	06/29/17 15:05
92346162017	SS-75-23	Solid	06/26/17 15:20	06/29/17 15:05
92346162018	SS-80-37	Solid	06/27/17 09:40	06/29/17 15:05
92346162019	SS-81-33	Solid	06/27/17 12:00	06/29/17 15:05
92346162020	SS-78-46	Solid	06/27/17 15:20	06/29/17 15:05
92346162021	SS-95-42	Solid	06/27/17 18:00	06/29/17 15:05
92346162022	SS-93-42	Solid	06/28/17 09:00	06/29/17 15:05
92346162023	SS-87-31	Solid	06/28/17 10:40	06/29/17 15:05
92346162024	SS-87-48	Solid	06/28/17 13:40	06/29/17 15:05
92346162025	SS-90-37	Solid	06/28/17 17:00	06/29/17 15:05
92346162026	SS-102-53	Solid	06/29/17 00:00	06/29/17 15:05

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92346162001	TB-08	EPA 8260	ZDO	55	PASI-C
92346162002	FD-10	EPA 8260	ZDO	55	PASI-C
92346162003	GW-75-26	EPA 8260	ZDO	55	PASI-C
92346162004	GW-80-40	EPA 8260	ZDO	55	PASI-C
92346162005	GW-81-36	EPA 8260	ZDO	55	PASI-C
92346162006	EB-03	EPA 8260	ZDO	55	PASI-C
92346162007	GW-78-46	EPA 8260	ZDO	55	PASI-C
92346162008	EB-04	EPA 8260	ZDO	55	PASI-C
92346162009	GW-95-46	EPA 8260	ZDO	55	PASI-C
92346162010	GW-93-46	EPA 8260	ZDO	55	PASI-C
92346162011	GW-87-35	EPA 8260	ZDO	55	PASI-C
92346162012	GW-87-53	EPA 8260	ZDO	55	PASI-C
92346162013	GW-90-42	EPA 8260	ZDO	55	PASI-C
92346162014	GW-102-52	EPA 8260	ZDO	55	PASI-C
92346162015	TB-09	EPA 8260	DLK	55	PASI-C
92346162016	FD-09	EPA 8260	DLK	55	PASI-C
		ASTM D2974-87	CLW	1	PASI-C
92346162017	SS-75-23	EPA 8260	DLK	55	PASI-C
		ASTM D2974-87	CLW	1	PASI-C
92346162018	SS-80-37	EPA 8260	DLK	55	PASI-C
		ASTM D2974-87	CLW	1	PASI-C
92346162019	SS-81-33	EPA 8260	DLK	55	PASI-C
		ASTM D2974-87	CLW	1	PASI-C
92346162020	SS-78-46	EPA 8260	DLK	55	PASI-C
		ASTM D2974-87	CLW	1	PASI-C
92346162021	SS-95-42	EPA 8260	DLK	55	PASI-C
		ASTM D2974-87	CLW	1	PASI-C
92346162022	SS-93-42	EPA 8260	DLK	55	PASI-C
		ASTM D2974-87	CLW	1	PASI-C
92346162023	SS-87-31	EPA 8260	DLK	55	PASI-C
		ASTM D2974-87	CLW	1	PASI-C
92346162024	SS-87-48	EPA 8260	DLK	55	PASI-C
		ASTM D2974-87	CLW	1	PASI-C
92346162025	SS-90-37	EPA 8260	DLK	55	PASI-C
		ASTM D2974-87	CLW	1	PASI-C
92346162026	SS-102-53	EPA 8260	DLK	55	PASI-C
		ASTM D2974-87	CLW	1	PASI-C

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92346162001	TB-08					
EPA 8260	Acetone	10.6J	ug/L	25.0	06/30/17 22:29	
92346162002	FD-10					
EPA 8260	1,1,1-Trichloroethane	58.2J	ug/L	100	07/03/17 01:58	
EPA 8260	Trichloroethene	18300	ug/L	100	07/03/17 01:58	
EPA 8260	o-Xylene	30.1J	ug/L	100	07/03/17 01:58	
92346162003	GW-75-26					
EPA 8260	2-Butanone (MEK)	182	ug/L	100	07/03/17 02:51	
EPA 8260	Chloroform	12.4J	ug/L	20.0	07/03/17 02:51	
EPA 8260	Trichloroethene	2410	ug/L	20.0	07/03/17 02:51	
92346162004	GW-80-40					
EPA 8260	2-Butanone (MEK)	865	ug/L	500	07/03/17 03:26	
EPA 8260	1,1,1-Trichloroethane	54.7J	ug/L	100	07/03/17 03:26	
EPA 8260	Trichloroethene	17200	ug/L	100	07/03/17 03:26	
EPA 8260	o-Xylene	27.8J	ug/L	100	07/03/17 03:26	
92346162005	GW-81-36					
EPA 8260	Chloroform	18.9J	ug/L	50.0	07/03/17 04:20	
EPA 8260	Trichloroethene	5200	ug/L	50.0	07/03/17 04:20	
92346162006	EB-03					
EPA 8260	Acetone	10.2J	ug/L	25.0	07/02/17 23:37	
EPA 8260	Methylene Chloride	1.5J	ug/L	2.0	07/02/17 23:37	
92346162007	GW-78-46					
EPA 8260	Benzene	70.6J	ug/L	250	07/03/17 04:37	
EPA 8260	2-Butanone (MEK)	3220	ug/L	1250	07/03/17 04:37	
EPA 8260	1,1-Dichloroethene	183J	ug/L	250	07/03/17 04:37	
EPA 8260	cis-1,2-Dichloroethene	726	ug/L	250	07/03/17 04:37	
EPA 8260	1,1,1-Trichloroethane	1110	ug/L	250	07/03/17 04:37	
EPA 8260	Trichloroethene	48500	ug/L	250	07/03/17 04:37	
EPA 8260	o-Xylene	118J	ug/L	250	07/03/17 04:37	
92346162008	EB-04					
EPA 8260	Acetone	12.8J	ug/L	25.0	07/01/17 07:28	
EPA 8260	Methylene Chloride	1.4J	ug/L	2.0	07/01/17 07:28	
92346162009	GW-95-46					
EPA 8260	Trichloroethene	5170	ug/L	40.0	07/03/17 04:55	
92346162010	GW-93-46					
EPA 8260	Trichloroethene	16700	ug/L	125	07/03/17 05:13	
92346162011	GW-87-35					
EPA 8260	2-Butanone (MEK)	2610	ug/L	500	07/03/17 06:06	
EPA 8260	Trichloroethene	14600	ug/L	100	07/03/17 06:06	
92346162012	GW-87-53					
EPA 8260	Methylene Chloride	135J	ug/L	200	07/03/17 15:37	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: CTS OF ASHEVILLE

Pace Project No.: 92346162

Lab Sample ID	Client Sample ID	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92346162012	GW-87-53	Trichloroethene	13900	ug/L	100	07/03/17 15:37	
EPA 8260							
92346162013	GW-90-42	Benzene	83.3J	ug/L	200	07/05/17 23:20	
EPA 8260		Toluene	55.1J	ug/L	200	07/05/17 23:20	
EPA 8260		Trichloroethene	25700	ug/L	200	07/05/17 23:20	
92346162014	GW-102-52	Benzene	167	ug/L	100	07/03/17 16:29	
EPA 8260		2-Butanone (MEK)	544	ug/L	500	07/03/17 16:29	
EPA 8260		Ethylbenzene	41.7J	ug/L	100	07/03/17 16:29	
EPA 8260		Toluene	84.2J	ug/L	100	07/03/17 16:29	
EPA 8260		1,1,1-Trichloroethane	138	ug/L	100	07/03/17 16:29	
EPA 8260		Trichloroethene	17800	ug/L	100	07/03/17 16:29	
EPA 8260		m&p-Xylene	191J	ug/L	200	07/03/17 16:29	
EPA 8260		o-Xylene	139	ug/L	100	07/03/17 16:29	
92346162015	TB-09	Acetone	88.7J	ug/kg	100	06/30/17 16:29	
EPA 8260		Methyl acetate	10.3	ug/kg	10.0	06/30/17 16:29	
EPA 8260		m&p-Xylene	4.6J	ug/kg	10.0	06/30/17 16:29	
92346162016	FD-09	Acetone	76.6J	ug/kg	105	06/30/17 16:49	
EPA 8260		Methyl acetate	7.0J	ug/kg	10.5	06/30/17 16:49	
EPA 8260		Tetrachloroethene	2.1J	ug/kg	5.3	06/30/17 16:49	
EPA 8260		Trichloroethene	3160	ug/kg	1430	07/02/17 16:35	
ASTM D2974-87		Percent Moisture	24.1	%	0.10	07/03/17 12:06	
92346162017	SS-75-23	Acetone	57.8J	ug/kg	108	06/30/17 17:09	
EPA 8260		Methyl acetate	6.7J	ug/kg	10.8	06/30/17 17:09	
EPA 8260		Trichloroethene	13.3	ug/kg	5.4	06/30/17 17:09	
ASTM D2974-87		Percent Moisture	17.0	%	0.10	07/03/17 12:06	
92346162018	SS-80-37	Acetone	43.8J	ug/kg	122	06/30/17 17:30	
EPA 8260		Methyl acetate	10.2J	ug/kg	12.2	06/30/17 17:30	
EPA 8260		Tetrachloroethene	2.2J	ug/kg	6.1	06/30/17 17:30	
EPA 8260		Trichloroethene	3310	ug/kg	1620	07/02/17 16:55	
ASTM D2974-87		Percent Moisture	30.4	%	0.10	07/03/17 12:06	
92346162019	SS-81-33	Acetone	66.2J	ug/kg	110	06/30/17 17:50	
EPA 8260		Methyl acetate	6.5J	ug/kg	11.0	06/30/17 17:50	
EPA 8260		Trichloroethene	25.6	ug/kg	5.5	06/30/17 17:50	
ASTM D2974-87		Percent Moisture	18.5	%	0.10	07/03/17 12:06	
92346162020	SS-78-46	Acetone	38.7J	ug/kg	97.8	06/30/17 18:11	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Lab Sample ID	Client Sample ID						
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers	
92346162020	SS-78-46						
EPA 8260	Benzene	18.0	ug/kg	4.9	06/30/17 18:11		
EPA 8260	1,1-Dichloroethane	2.2J	ug/kg	4.9	06/30/17 18:11		
EPA 8260	1,1-Dichloroethene	11.3	ug/kg	4.9	06/30/17 18:11		
EPA 8260	cis-1,2-Dichloroethene	82.1	ug/kg	4.9	06/30/17 18:11		
EPA 8260	Ethylbenzene	3.3J	ug/kg	4.9	06/30/17 18:11		
EPA 8260	Isopropylbenzene (Cumene)	2.1J	ug/kg	4.9	06/30/17 18:11		
EPA 8260	Methylene Chloride	9.6J	ug/kg	19.6	06/30/17 18:11		
EPA 8260	Toluene	3.3J	ug/kg	4.9	06/30/17 18:11		
EPA 8260	1,1,1-Trichloroethane	75.9	ug/kg	4.9	06/30/17 18:11		
EPA 8260	Trichloroethene	2930	ug/kg	1550	07/02/17 17:16		
EPA 8260	m&p-Xylene	19.7	ug/kg	9.8	06/30/17 18:11		
EPA 8260	o-Xylene	25.4	ug/kg	4.9	06/30/17 18:11		
ASTM D2974-87	Percent Moisture	18.3	%	0.10	07/03/17 12:06		
92346162021	SS-95-42						
EPA 8260	Acetone	97.4J	ug/kg	118	06/30/17 18:31		
EPA 8260	Methyl acetate	9.5J	ug/kg	11.8	06/30/17 18:31		
EPA 8260	Trichloroethene	432	ug/kg	314	07/02/17 17:36		
ASTM D2974-87	Percent Moisture	19.7	%	0.10	07/03/17 12:06		
92346162022	SS-93-42						
EPA 8260	Acetone	30.4J	ug/kg	97.3	06/30/17 18:52		
EPA 8260	Methyl acetate	8.1J	ug/kg	9.7	06/30/17 18:52		
EPA 8260	Trichloroethene	1130	ug/kg	511	07/03/17 13:25		
ASTM D2974-87	Percent Moisture	27.0	%	0.10	07/03/17 12:06		
92346162023	SS-87-31						
EPA 8260	Acetone	32.7J	ug/kg	96.5	06/30/17 19:12		
EPA 8260	1,1-Dichloroethene	4.7J	ug/kg	4.8	06/30/17 19:12		
EPA 8260	Methyl acetate	10.8	ug/kg	9.6	06/30/17 19:12		
EPA 8260	Tetrachloroethene	2.0J	ug/kg	4.8	06/30/17 19:12		
EPA 8260	Trichloroethene	4630	ug/kg	3390	07/02/17 18:17		
ASTM D2974-87	Percent Moisture	24.7	%	0.10	07/03/17 12:06		
92346162024	SS-87-48						
EPA 8260	Acetone	45.7J	ug/kg	114	06/30/17 20:14		
EPA 8260	1,1-Dichloroethene	6.2	ug/kg	5.7	06/30/17 20:14		
EPA 8260	cis-1,2-Dichloroethene	4.2J	ug/kg	5.7	06/30/17 20:14		
EPA 8260	Methyl acetate	4.3J	ug/kg	11.4	06/30/17 20:14		
EPA 8260	Tetrachloroethene	4.1J	ug/kg	5.7	06/30/17 20:14		
EPA 8260	Trichloroethene	5030	ug/kg	2540	07/02/17 18:38		
EPA 8260	1,1,2-Trichlorotrifluoroethane	2.2J	ug/kg	5.7	06/30/17 20:14		
ASTM D2974-87	Percent Moisture	18.1	%	0.10	07/03/17 12:07		
92346162025	SS-90-37						
EPA 8260	Acetone	57.7J	ug/kg	113	06/30/17 20:34		
EPA 8260	Benzene	6.9	ug/kg	5.7	06/30/17 20:34		
EPA 8260	Chloroform	3.5J	ug/kg	5.7	06/30/17 20:34		
EPA 8260	Ethylbenzene	4.2J	ug/kg	5.7	06/30/17 20:34		

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Lab Sample ID	Client Sample ID						
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers	
92346162025	SS-90-37						
EPA 8260	Methyl acetate	4.9J	ug/kg	11.3	06/30/17 20:34		
EPA 8260	Toluene	2.3J	ug/kg	5.7	06/30/17 20:34		
EPA 8260	1,1,1-Trichloroethane	4.3J	ug/kg	5.7	06/30/17 20:34		
EPA 8260	Trichloroethene	1950	ug/kg	604	07/02/17 18:58		
EPA 8260	m&p-Xylene	10.9J	ug/kg	11.3	06/30/17 20:34		
EPA 8260	o-Xylene	9.0	ug/kg	5.7	06/30/17 20:34		
ASTM D2974-87	Percent Moisture	25.5	%	0.10	07/03/17 12:07		
92346162026	SS-102-53						
EPA 8260	Acetone	49.9J	ug/kg	99.0	06/30/17 20:55		
EPA 8260	Benzene	11.8	ug/kg	5.0	06/30/17 20:55		
EPA 8260	1,1-Dichloroethene	2.0J	ug/kg	5.0	06/30/17 20:55		
EPA 8260	Ethylbenzene	3.5J	ug/kg	5.0	06/30/17 20:55		
EPA 8260	Methyl acetate	5.7J	ug/kg	9.9	06/30/17 20:55		
EPA 8260	Toluene	6.5	ug/kg	5.0	06/30/17 20:55		
EPA 8260	1,1,1-Trichloroethane	8.4	ug/kg	5.0	06/30/17 20:55		
EPA 8260	Trichloroethene	438	ug/kg	259	07/02/17 19:19		
EPA 8260	m&p-Xylene	17.2	ug/kg	9.9	06/30/17 20:55		
EPA 8260	o-Xylene	13.0	ug/kg	5.0	06/30/17 20:55		
ASTM D2974-87	Percent Moisture	18.4	%	0.10	07/03/17 12:07		

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Method: **EPA 8260**

Description: 8260 MSV Low Level

Client: Amec Foster Wheeler, Asheville

Date: July 07, 2017

General Information:

14 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Internal Standards:

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

Surrogates:

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

Method Blank:

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

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 367365

L1: Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

- LCS (Lab ID: 2036611)
- 1,4-Dioxane (p-Dioxane)

QC Batch: 367368

L1: Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

- LCS (Lab ID: 2036634)
- 1,4-Dioxane (p-Dioxane)

QC Batch: 367463

L1: Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

- LCS (Lab ID: 2037003)
- 1,4-Dioxane (p-Dioxane)

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PROJECT NARRATIVE

Project: CTS OF ASHEVILLE

Pace Project No.: 92346162

Method: EPA 8260

Description: 8260 MSV Low Level

Client: Amec Foster Wheeler, Asheville

Date: July 07, 2017

QC Batch: 367752

L1: Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

- LCS (Lab ID: 2038173)
- 1,4-Dioxane (p-Dioxane)

Matrix Spikes:

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

QC Batch: 367365

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92346121005

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

- MS (Lab ID: 2036612)
 - 1,4-Dioxane (p-Dioxane)
- MSD (Lab ID: 2036613)
 - 1,4-Dioxane (p-Dioxane)

R1: RPD value was outside control limits.

- MSD (Lab ID: 2036613)
 - 1,4-Dioxane (p-Dioxane)
 - Acetone

QC Batch: 367368

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92346112003

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

- MS (Lab ID: 2036635)
 - 1,4-Dioxane (p-Dioxane)
- MSD (Lab ID: 2036636)
 - 1,4-Dioxane (p-Dioxane)

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MSD (Lab ID: 2036636)
 - Acetone
 - Bromoform
 - Methyl acetate

R1: RPD value was outside control limits.

- MSD (Lab ID: 2036636)
 - Acetone

QC Batch: 367585

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92346222003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2037989)
 - 1,1,1-Trichloroethane
 - 1,1,2,2-Tetrachloroethane
 - 1,1,2-Trichloroethane
 - 1,1,2-Trichlorotrifluoroethane

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Method: EPA 8260

Description: 8260 MSV Low Level

Client: Amec Foster Wheeler, Asheville

Date: July 07, 2017

QC Batch: 367585

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92346222003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- 1,1-Dichloroethane
- 1,1-Dichloroethene
- 1,2,3-Trichlorobenzene
- 1,2,4-Trichlorobenzene
- 1,2-Dibromo-3-chloropropane
- 1,2-Dibromoethane (EDB)
- 1,2-Dichlorobenzene
- 1,2-Dichloroethane
- 1,2-Dichloropropane
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- 1,4-Dioxane (p-Dioxane)
- 2-Butanone (MEK)
- 2-Hexanone
- 4-Methyl-2-pentanone (MIBK)
- Acetone
- Benzene
- Bromochloromethane
- Bromodichloromethane
- Bromoform
- Bromomethane
- Carbon disulfide
- Carbon tetrachloride
- Chlorobenzene
- Chloroethane
- Chloroform
- Chloromethane
- Cyclohexane
- Dibromochloromethane
- Dichlorodifluoromethane
- Ethylbenzene
- Isopropylbenzene (Cumene)
- Methyl acetate
- Methyl-tert-butyl ether
- Methylcyclohexane
- Methylene Chloride
- Styrene
- Tetrachloroethene
- Toluene
- Trichloroethene
- Trichlorofluoromethane
- Vinyl chloride
- cis-1,2-Dichloroethene

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Method: **EPA 8260**

Description: 8260 MSV Low Level

Client: Amec Foster Wheeler, Asheville

Date: July 07, 2017

QC Batch: 367585

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92346222003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- cis-1,3-Dichloropropene
- m&p-Xylene
- o-Xylene
- trans-1,2-Dichloroethene
- trans-1,3-Dichloropropene

QC Batch: 367752

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92346268003

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

- MS (Lab ID: 2039127)
- 1,4-Dioxane (p-Dioxane)

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2039127)
- Cyclohexane

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CTS OF ASHEVILLE

Pace Project No.: 92346162

Method: **EPA 8260**

Description: 8260/5035A Volatile Organics

Client: Amec Foster Wheeler, Asheville

Date: July 07, 2017

General Information:

12 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Internal Standards:

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

Surrogates:

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

Method Blank:

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

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

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

QC Batch: 367297

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92346162023

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2036059)
 - Acetone
 - Methyl acetate
 - Trichloroethene
- MSD (Lab ID: 2036060)
 - Acetone
 - Methyl acetate
 - Trichloroethene

R1: RPD value was outside control limits.

- MSD (Lab ID: 2036060)
 - Trichloroethene

Additional Comments:

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PROJECT NARRATIVE

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Method: **EPA 8260**

Description: 8260/5035A Volatile Organics

Client: Amec Foster Wheeler, Asheville

Date: July 07, 2017

Analyte Comments:

QC Batch: 367297

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- MS (Lab ID: 2036059)
 - Trichloroethene
- MSD (Lab ID: 2036060)
 - Trichloroethene

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: TB-08	Lab ID: 92346162001	Collected: 06/26/17 00:00	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	10.6J	ug/L	25.0	10.0	1		06/30/17 22:29	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		06/30/17 22:29	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		06/30/17 22:29	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		06/30/17 22:29	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		06/30/17 22:29	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		06/30/17 22:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		06/30/17 22:29	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		06/30/17 22:29	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		06/30/17 22:29	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		06/30/17 22:29	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		06/30/17 22:29	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		06/30/17 22:29	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		06/30/17 22:29	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		06/30/17 22:29	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		06/30/17 22:29	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		06/30/17 22:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		06/30/17 22:29	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		06/30/17 22:29	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		06/30/17 22:29	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		06/30/17 22:29	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		06/30/17 22:29	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		06/30/17 22:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		06/30/17 22:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		06/30/17 22:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		06/30/17 22:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		06/30/17 22:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		06/30/17 22:29	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		06/30/17 22:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		06/30/17 22:29	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		06/30/17 22:29	123-91-1	L1
Ethylbenzene	ND	ug/L	1.0	0.30	1		06/30/17 22:29	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		06/30/17 22:29	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		06/30/17 22:29	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		06/30/17 22:29	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		06/30/17 22:29	108-87-2	
Methylene Chloride	ND	ug/L	2.0	0.97	1		06/30/17 22:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		06/30/17 22:29	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		06/30/17 22:29	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		06/30/17 22:29	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		06/30/17 22:29	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		06/30/17 22:29	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		06/30/17 22:29	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		06/30/17 22:29	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		06/30/17 22:29	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		06/30/17 22:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		06/30/17 22:29	79-00-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: TB-08	Lab ID: 92346162001	Collected: 06/26/17 00:00	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	ND	ug/L	1.0	0.47	1		06/30/17 22:29	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		06/30/17 22:29	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		06/30/17 22:29	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		06/30/17 22:29	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		06/30/17 22:29	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		06/30/17 22:29	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		06/30/17 22:29	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		06/30/17 22:29	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		06/30/17 22:29	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: FD-10	Lab ID: 92346162002	Collected: 06/26/17 00:00	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	2500	1000	100		07/03/17 01:58	67-64-1	
Benzene	ND	ug/L	100	25.0	100		07/03/17 01:58	71-43-2	
Bromochloromethane	ND	ug/L	100	17.0	100		07/03/17 01:58	74-97-5	
Bromodichloromethane	ND	ug/L	100	18.0	100		07/03/17 01:58	75-27-4	
Bromoform	ND	ug/L	100	26.0	100		07/03/17 01:58	75-25-2	
Bromomethane	ND	ug/L	200	29.0	100		07/03/17 01:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	500	96.0	100		07/03/17 01:58	78-93-3	
Carbon disulfide	ND	ug/L	200	115	100		07/03/17 01:58	75-15-0	
Carbon tetrachloride	ND	ug/L	100	25.0	100		07/03/17 01:58	56-23-5	
Chlorobenzene	ND	ug/L	100	23.0	100		07/03/17 01:58	108-90-7	
Chloroethane	ND	ug/L	100	54.0	100		07/03/17 01:58	75-00-3	
Chloroform	ND	ug/L	100	14.0	100		07/03/17 01:58	67-66-3	
Chloromethane	ND	ug/L	100	11.0	100		07/03/17 01:58	74-87-3	
Cyclohexane	ND	ug/L	100	36.0	100		07/03/17 01:58	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	200	200	100		07/03/17 01:58	96-12-8	
Dibromochloromethane	ND	ug/L	100	21.0	100		07/03/17 01:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	100	27.0	100		07/03/17 01:58	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	100	30.0	100		07/03/17 01:58	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	100	24.0	100		07/03/17 01:58	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	100	33.0	100		07/03/17 01:58	106-46-7	
Dichlorodifluoromethane	ND	ug/L	100	21.0	100		07/03/17 01:58	75-71-8	
1,1-Dichloroethane	ND	ug/L	100	32.0	100		07/03/17 01:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	100	24.0	100		07/03/17 01:58	107-06-2	
1,1-Dichloroethene	ND	ug/L	100	56.0	100		07/03/17 01:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	100	19.0	100		07/03/17 01:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	100	49.0	100		07/03/17 01:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	100	27.0	100		07/03/17 01:58	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	100	13.0	100		07/03/17 01:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	100	26.0	100		07/03/17 01:58	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	15000	7840	100		07/03/17 01:58	123-91-1	L1
Ethylbenzene	ND	ug/L	100	30.0	100		07/03/17 01:58	100-41-4	
2-Hexanone	ND	ug/L	500	46.0	100		07/03/17 01:58	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	100	40.0	100		07/03/17 01:58	98-82-8	
Methyl acetate	ND	ug/L	1000	82.0	100		07/03/17 01:58	79-20-9	
Methylcyclohexane	ND	ug/L	1000	187	100		07/03/17 01:58	108-87-2	
Methylene Chloride	ND	ug/L	200	97.0	100		07/03/17 01:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	500	33.0	100		07/03/17 01:58	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	100	21.0	100		07/03/17 01:58	1634-04-4	
Styrene	ND	ug/L	100	26.0	100		07/03/17 01:58	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	100	40.0	100		07/03/17 01:58	79-34-5	
Tetrachloroethene	ND	ug/L	100	46.0	100		07/03/17 01:58	127-18-4	
Toluene	ND	ug/L	100	26.0	100		07/03/17 01:58	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	100	33.0	100		07/03/17 01:58	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	100	35.0	100		07/03/17 01:58	120-82-1	
1,1,1-Trichloroethane	58.2J	ug/L	100	48.0	100		07/03/17 01:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	100	29.0	100		07/03/17 01:58	79-00-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: FD-10	Lab ID: 92346162002	Collected: 06/26/17 00:00	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	18300	ug/L	100	47.0	100		07/03/17 01:58	79-01-6	
Trichlorofluoromethane	ND	ug/L	100	20.0	100		07/03/17 01:58	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	100	19.0	100		07/03/17 01:58	76-13-1	
Vinyl chloride	ND	ug/L	100	62.0	100		07/03/17 01:58	75-01-4	
m&p-Xylene	ND	ug/L	200	66.0	100		07/03/17 01:58	179601-23-1	
o-Xylene	30.1J	ug/L	100	23.0	100		07/03/17 01:58	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		100		07/03/17 01:58	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130		100		07/03/17 01:58	17060-07-0	
Toluene-d8 (S)	108	%	70-130		100		07/03/17 01:58	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-75-26	Lab ID: 92346162003	Collected: 06/26/17 17:45	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	500	200	20		07/03/17 02:51	67-64-1	
Benzene	ND	ug/L	20.0	5.0	20		07/03/17 02:51	71-43-2	
Bromochloromethane	ND	ug/L	20.0	3.4	20		07/03/17 02:51	74-97-5	
Bromodichloromethane	ND	ug/L	20.0	3.6	20		07/03/17 02:51	75-27-4	
Bromoform	ND	ug/L	20.0	5.2	20		07/03/17 02:51	75-25-2	
Bromomethane	ND	ug/L	40.0	5.8	20		07/03/17 02:51	74-83-9	
2-Butanone (MEK)	182	ug/L	100	19.2	20		07/03/17 02:51	78-93-3	
Carbon disulfide	ND	ug/L	40.0	23.0	20		07/03/17 02:51	75-15-0	
Carbon tetrachloride	ND	ug/L	20.0	5.0	20		07/03/17 02:51	56-23-5	
Chlorobenzene	ND	ug/L	20.0	4.6	20		07/03/17 02:51	108-90-7	
Chloroethane	ND	ug/L	20.0	10.8	20		07/03/17 02:51	75-00-3	
Chloroform	12.4J	ug/L	20.0	2.8	20		07/03/17 02:51	67-66-3	
Chloromethane	ND	ug/L	20.0	2.2	20		07/03/17 02:51	74-87-3	
Cyclohexane	ND	ug/L	20.0	7.2	20		07/03/17 02:51	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	40.0	40.0	20		07/03/17 02:51	96-12-8	
Dibromochloromethane	ND	ug/L	20.0	4.2	20		07/03/17 02:51	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	20.0	5.4	20		07/03/17 02:51	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	20.0	6.0	20		07/03/17 02:51	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	20.0	4.8	20		07/03/17 02:51	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	20.0	6.6	20		07/03/17 02:51	106-46-7	
Dichlorodifluoromethane	ND	ug/L	20.0	4.2	20		07/03/17 02:51	75-71-8	
1,1-Dichloroethane	ND	ug/L	20.0	6.4	20		07/03/17 02:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	20.0	4.8	20		07/03/17 02:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	20.0	11.2	20		07/03/17 02:51	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	20.0	3.8	20		07/03/17 02:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	20.0	9.8	20		07/03/17 02:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	20.0	5.4	20		07/03/17 02:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	20.0	2.6	20		07/03/17 02:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	20.0	5.2	20		07/03/17 02:51	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	3000	1570	20		07/03/17 02:51	123-91-1	L1
Ethylbenzene	ND	ug/L	20.0	6.0	20		07/03/17 02:51	100-41-4	
2-Hexanone	ND	ug/L	100	9.2	20		07/03/17 02:51	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	20.0	8.0	20		07/03/17 02:51	98-82-8	
Methyl acetate	ND	ug/L	200	16.4	20		07/03/17 02:51	79-20-9	
Methylcyclohexane	ND	ug/L	200	37.4	20		07/03/17 02:51	108-87-2	
Methylene Chloride	ND	ug/L	40.0	19.4	20		07/03/17 02:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	6.6	20		07/03/17 02:51	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	20.0	4.2	20		07/03/17 02:51	1634-04-4	
Styrene	ND	ug/L	20.0	5.2	20		07/03/17 02:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	20.0	8.0	20		07/03/17 02:51	79-34-5	
Tetrachloroethene	ND	ug/L	20.0	9.2	20		07/03/17 02:51	127-18-4	
Toluene	ND	ug/L	20.0	5.2	20		07/03/17 02:51	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	20.0	6.6	20		07/03/17 02:51	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	20.0	7.0	20		07/03/17 02:51	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	20.0	9.6	20		07/03/17 02:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	20.0	5.8	20		07/03/17 02:51	79-00-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-75-26	Lab ID: 92346162003	Collected: 06/26/17 17:45	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	2410	ug/L	20.0	9.4	20		07/03/17 02:51	79-01-6	
Trichlorofluoromethane	ND	ug/L	20.0	4.0	20		07/03/17 02:51	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	20.0	3.8	20		07/03/17 02:51	76-13-1	
Vinyl chloride	ND	ug/L	20.0	12.4	20		07/03/17 02:51	75-01-4	
m&p-Xylene	ND	ug/L	40.0	13.2	20		07/03/17 02:51	179601-23-1	
o-Xylene	ND	ug/L	20.0	4.6	20		07/03/17 02:51	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		20		07/03/17 02:51	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		20		07/03/17 02:51	17060-07-0	
Toluene-d8 (S)	106	%	70-130		20		07/03/17 02:51	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-80-40	Lab ID: 92346162004	Collected: 06/27/17 11:11	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	2500	1000	100		07/03/17 03:26	67-64-1	
Benzene	ND	ug/L	100	25.0	100		07/03/17 03:26	71-43-2	
Bromochloromethane	ND	ug/L	100	17.0	100		07/03/17 03:26	74-97-5	
Bromodichloromethane	ND	ug/L	100	18.0	100		07/03/17 03:26	75-27-4	
Bromoform	ND	ug/L	100	26.0	100		07/03/17 03:26	75-25-2	
Bromomethane	ND	ug/L	200	29.0	100		07/03/17 03:26	74-83-9	
2-Butanone (MEK)	865	ug/L	500	96.0	100		07/03/17 03:26	78-93-3	
Carbon disulfide	ND	ug/L	200	115	100		07/03/17 03:26	75-15-0	
Carbon tetrachloride	ND	ug/L	100	25.0	100		07/03/17 03:26	56-23-5	
Chlorobenzene	ND	ug/L	100	23.0	100		07/03/17 03:26	108-90-7	
Chloroethane	ND	ug/L	100	54.0	100		07/03/17 03:26	75-00-3	
Chloroform	ND	ug/L	100	14.0	100		07/03/17 03:26	67-66-3	
Chloromethane	ND	ug/L	100	11.0	100		07/03/17 03:26	74-87-3	
Cyclohexane	ND	ug/L	100	36.0	100		07/03/17 03:26	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	200	200	100		07/03/17 03:26	96-12-8	
Dibromochloromethane	ND	ug/L	100	21.0	100		07/03/17 03:26	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	100	27.0	100		07/03/17 03:26	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	100	30.0	100		07/03/17 03:26	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	100	24.0	100		07/03/17 03:26	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	100	33.0	100		07/03/17 03:26	106-46-7	
Dichlorodifluoromethane	ND	ug/L	100	21.0	100		07/03/17 03:26	75-71-8	
1,1-Dichloroethane	ND	ug/L	100	32.0	100		07/03/17 03:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	100	24.0	100		07/03/17 03:26	107-06-2	
1,1-Dichloroethene	ND	ug/L	100	56.0	100		07/03/17 03:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	100	19.0	100		07/03/17 03:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	100	49.0	100		07/03/17 03:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	100	27.0	100		07/03/17 03:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	100	13.0	100		07/03/17 03:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	100	26.0	100		07/03/17 03:26	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	15000	7840	100		07/03/17 03:26	123-91-1	L1
Ethylbenzene	ND	ug/L	100	30.0	100		07/03/17 03:26	100-41-4	
2-Hexanone	ND	ug/L	500	46.0	100		07/03/17 03:26	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	100	40.0	100		07/03/17 03:26	98-82-8	
Methyl acetate	ND	ug/L	1000	82.0	100		07/03/17 03:26	79-20-9	
Methylcyclohexane	ND	ug/L	1000	187	100		07/03/17 03:26	108-87-2	
Methylene Chloride	ND	ug/L	200	97.0	100		07/03/17 03:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	500	33.0	100		07/03/17 03:26	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	100	21.0	100		07/03/17 03:26	1634-04-4	
Styrene	ND	ug/L	100	26.0	100		07/03/17 03:26	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	100	40.0	100		07/03/17 03:26	79-34-5	
Tetrachloroethene	ND	ug/L	100	46.0	100		07/03/17 03:26	127-18-4	
Toluene	ND	ug/L	100	26.0	100		07/03/17 03:26	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	100	33.0	100		07/03/17 03:26	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	100	35.0	100		07/03/17 03:26	120-82-1	
1,1,1-Trichloroethane	54.7J	ug/L	100	48.0	100		07/03/17 03:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	100	29.0	100		07/03/17 03:26	79-00-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-80-40	Lab ID: 92346162004	Collected: 06/27/17 11:11	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	17200	ug/L	100	47.0	100		07/03/17 03:26	79-01-6	
Trichlorofluoromethane	ND	ug/L	100	20.0	100		07/03/17 03:26	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	100	19.0	100		07/03/17 03:26	76-13-1	
Vinyl chloride	ND	ug/L	100	62.0	100		07/03/17 03:26	75-01-4	
m&p-Xylene	ND	ug/L	200	66.0	100		07/03/17 03:26	179601-23-1	
o-Xylene	27.8J	ug/L	100	23.0	100		07/03/17 03:26	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		100		07/03/17 03:26	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		100		07/03/17 03:26	17060-07-0	
Toluene-d8 (S)	110	%	70-130		100		07/03/17 03:26	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-81-36	Lab ID: 92346162005	Collected: 06/27/17 13:15	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	1250	500	50		07/03/17 04:20	67-64-1	
Benzene	ND	ug/L	50.0	12.5	50		07/03/17 04:20	71-43-2	
Bromochloromethane	ND	ug/L	50.0	8.5	50		07/03/17 04:20	74-97-5	
Bromodichloromethane	ND	ug/L	50.0	9.0	50		07/03/17 04:20	75-27-4	
Bromoform	ND	ug/L	50.0	13.0	50		07/03/17 04:20	75-25-2	
Bromomethane	ND	ug/L	100	14.5	50		07/03/17 04:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	250	48.0	50		07/03/17 04:20	78-93-3	
Carbon disulfide	ND	ug/L	100	57.5	50		07/03/17 04:20	75-15-0	
Carbon tetrachloride	ND	ug/L	50.0	12.5	50		07/03/17 04:20	56-23-5	
Chlorobenzene	ND	ug/L	50.0	11.5	50		07/03/17 04:20	108-90-7	
Chloroethane	ND	ug/L	50.0	27.0	50		07/03/17 04:20	75-00-3	
Chloroform	18.9J	ug/L	50.0	7.0	50		07/03/17 04:20	67-66-3	
Chloromethane	ND	ug/L	50.0	5.5	50		07/03/17 04:20	74-87-3	
Cyclohexane	ND	ug/L	50.0	18.0	50		07/03/17 04:20	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	100	100	50		07/03/17 04:20	96-12-8	
Dibromochloromethane	ND	ug/L	50.0	10.5	50		07/03/17 04:20	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	50.0	13.5	50		07/03/17 04:20	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	50.0	15.0	50		07/03/17 04:20	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	50.0	12.0	50		07/03/17 04:20	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	50.0	16.5	50		07/03/17 04:20	106-46-7	
Dichlorodifluoromethane	ND	ug/L	50.0	10.5	50		07/03/17 04:20	75-71-8	
1,1-Dichloroethane	ND	ug/L	50.0	16.0	50		07/03/17 04:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	50.0	12.0	50		07/03/17 04:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	50.0	28.0	50		07/03/17 04:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	50.0	9.5	50		07/03/17 04:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	50.0	24.5	50		07/03/17 04:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	50.0	13.5	50		07/03/17 04:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	50.0	6.5	50		07/03/17 04:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	50.0	13.0	50		07/03/17 04:20	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	7500	3920	50		07/03/17 04:20	123-91-1	L1
Ethylbenzene	ND	ug/L	50.0	15.0	50		07/03/17 04:20	100-41-4	
2-Hexanone	ND	ug/L	250	23.0	50		07/03/17 04:20	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	50.0	20.0	50		07/03/17 04:20	98-82-8	
Methyl acetate	ND	ug/L	500	41.0	50		07/03/17 04:20	79-20-9	
Methylcyclohexane	ND	ug/L	500	93.5	50		07/03/17 04:20	108-87-2	
Methylene Chloride	ND	ug/L	100	48.5	50		07/03/17 04:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	250	16.5	50		07/03/17 04:20	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	50.0	10.5	50		07/03/17 04:20	1634-04-4	
Styrene	ND	ug/L	50.0	13.0	50		07/03/17 04:20	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	50.0	20.0	50		07/03/17 04:20	79-34-5	
Tetrachloroethene	ND	ug/L	50.0	23.0	50		07/03/17 04:20	127-18-4	
Toluene	ND	ug/L	50.0	13.0	50		07/03/17 04:20	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	50.0	16.5	50		07/03/17 04:20	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	50.0	17.5	50		07/03/17 04:20	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	50.0	24.0	50		07/03/17 04:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	50.0	14.5	50		07/03/17 04:20	79-00-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-81-36	Lab ID: 92346162005	Collected: 06/27/17 13:15	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	5200	ug/L	50.0	23.5	50		07/03/17 04:20	79-01-6	
Trichlorofluoromethane	ND	ug/L	50.0	10.0	50		07/03/17 04:20	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	50.0	9.5	50		07/03/17 04:20	76-13-1	
Vinyl chloride	ND	ug/L	50.0	31.0	50		07/03/17 04:20	75-01-4	
m&p-Xylene	ND	ug/L	100	33.0	50		07/03/17 04:20	179601-23-1	
o-Xylene	ND	ug/L	50.0	11.5	50		07/03/17 04:20	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		50		07/03/17 04:20	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		50		07/03/17 04:20	17060-07-0	
Toluene-d8 (S)	105	%	70-130		50		07/03/17 04:20	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: EB-03	Lab ID: 92346162006	Collected: 06/27/17 14:50	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	10.2J	ug/L	25.0	10.0	1		07/02/17 23:37	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		07/02/17 23:37	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		07/02/17 23:37	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		07/02/17 23:37	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		07/02/17 23:37	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		07/02/17 23:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		07/02/17 23:37	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		07/02/17 23:37	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		07/02/17 23:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		07/02/17 23:37	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		07/02/17 23:37	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		07/02/17 23:37	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		07/02/17 23:37	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		07/02/17 23:37	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		07/02/17 23:37	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		07/02/17 23:37	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		07/02/17 23:37	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		07/02/17 23:37	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		07/02/17 23:37	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		07/02/17 23:37	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		07/02/17 23:37	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		07/02/17 23:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		07/02/17 23:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		07/02/17 23:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		07/02/17 23:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		07/02/17 23:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		07/02/17 23:37	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		07/02/17 23:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		07/02/17 23:37	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		07/02/17 23:37	123-91-1	L1
Ethylbenzene	ND	ug/L	1.0	0.30	1		07/02/17 23:37	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		07/02/17 23:37	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		07/02/17 23:37	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		07/02/17 23:37	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		07/02/17 23:37	108-87-2	
Methylene Chloride	1.5J	ug/L	2.0	0.97	1		07/02/17 23:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		07/02/17 23:37	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		07/02/17 23:37	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		07/02/17 23:37	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		07/02/17 23:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		07/02/17 23:37	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		07/02/17 23:37	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		07/02/17 23:37	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		07/02/17 23:37	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		07/02/17 23:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		07/02/17 23:37	79-00-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: EB-03	Lab ID: 92346162006	Collected: 06/27/17 14:50	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	ND	ug/L	1.0	0.47	1		07/02/17 23:37	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		07/02/17 23:37	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		07/02/17 23:37	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		07/02/17 23:37	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		07/02/17 23:37	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		07/02/17 23:37	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		07/02/17 23:37	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-130		1		07/02/17 23:37	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		07/02/17 23:37	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-78-46	Lab ID: 92346162007	Collected: 06/27/17 16:30	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	6250	2500	250		07/03/17 04:37	67-64-1	
Benzene	70.6J	ug/L	250	62.5	250		07/03/17 04:37	71-43-2	
Bromochloromethane	ND	ug/L	250	42.5	250		07/03/17 04:37	74-97-5	
Bromodichloromethane	ND	ug/L	250	45.0	250		07/03/17 04:37	75-27-4	
Bromoform	ND	ug/L	250	65.0	250		07/03/17 04:37	75-25-2	
Bromomethane	ND	ug/L	500	72.5	250		07/03/17 04:37	74-83-9	
2-Butanone (MEK)	3220	ug/L	1250	240	250		07/03/17 04:37	78-93-3	
Carbon disulfide	ND	ug/L	500	288	250		07/03/17 04:37	75-15-0	
Carbon tetrachloride	ND	ug/L	250	62.5	250		07/03/17 04:37	56-23-5	
Chlorobenzene	ND	ug/L	250	57.5	250		07/03/17 04:37	108-90-7	
Chloroethane	ND	ug/L	250	135	250		07/03/17 04:37	75-00-3	
Chloroform	ND	ug/L	250	35.0	250		07/03/17 04:37	67-66-3	
Chloromethane	ND	ug/L	250	27.5	250		07/03/17 04:37	74-87-3	
Cyclohexane	ND	ug/L	250	90.0	250		07/03/17 04:37	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	500	500	250		07/03/17 04:37	96-12-8	
Dibromochloromethane	ND	ug/L	250	52.5	250		07/03/17 04:37	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	250	67.5	250		07/03/17 04:37	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	250	75.0	250		07/03/17 04:37	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	250	60.0	250		07/03/17 04:37	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	250	82.5	250		07/03/17 04:37	106-46-7	
Dichlorodifluoromethane	ND	ug/L	250	52.5	250		07/03/17 04:37	75-71-8	
1,1-Dichloroethane	ND	ug/L	250	80.0	250		07/03/17 04:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	250	60.0	250		07/03/17 04:37	107-06-2	
1,1-Dichloroethene	183J	ug/L	250	140	250		07/03/17 04:37	75-35-4	
cis-1,2-Dichloroethene	726	ug/L	250	47.5	250		07/03/17 04:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	250	122	250		07/03/17 04:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	250	67.5	250		07/03/17 04:37	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	250	32.5	250		07/03/17 04:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	250	65.0	250		07/03/17 04:37	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	37500	19600	250		07/03/17 04:37	123-91-1	L1
Ethylbenzene	ND	ug/L	250	75.0	250		07/03/17 04:37	100-41-4	
2-Hexanone	ND	ug/L	1250	115	250		07/03/17 04:37	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	250	100	250		07/03/17 04:37	98-82-8	
Methyl acetate	ND	ug/L	2500	205	250		07/03/17 04:37	79-20-9	
Methylcyclohexane	ND	ug/L	2500	468	250		07/03/17 04:37	108-87-2	
Methylene Chloride	ND	ug/L	500	242	250		07/03/17 04:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	1250	82.5	250		07/03/17 04:37	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	250	52.5	250		07/03/17 04:37	1634-04-4	
Styrene	ND	ug/L	250	65.0	250		07/03/17 04:37	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	250	100	250		07/03/17 04:37	79-34-5	
Tetrachloroethene	ND	ug/L	250	115	250		07/03/17 04:37	127-18-4	
Toluene	ND	ug/L	250	65.0	250		07/03/17 04:37	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	250	82.5	250		07/03/17 04:37	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	250	87.5	250		07/03/17 04:37	120-82-1	
1,1,1-Trichloroethane	1110	ug/L	250	120	250		07/03/17 04:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	72.5	250		07/03/17 04:37	79-00-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-78-46	Lab ID: 92346162007	Collected: 06/27/17 16:30	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	48500	ug/L	250	118	250		07/03/17 04:37	79-01-6	
Trichlorofluoromethane	ND	ug/L	250	50.0	250		07/03/17 04:37	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	250	47.5	250		07/03/17 04:37	76-13-1	
Vinyl chloride	ND	ug/L	250	155	250		07/03/17 04:37	75-01-4	
m&p-Xylene	ND	ug/L	500	165	250		07/03/17 04:37	179601-23-1	
o-Xylene	118J	ug/L	250	57.5	250		07/03/17 04:37	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		250		07/03/17 04:37	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		250		07/03/17 04:37	17060-07-0	
Toluene-d8 (S)	107	%	70-130		250		07/03/17 04:37	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: EB-04	Lab ID: 92346162008	Collected: 06/27/17 17:00	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	12.8J	ug/L	25.0	10.0	1		07/01/17 07:28	67-64-1	
Benzene	ND	ug/L	1.0	0.25	1		07/01/17 07:28	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		07/01/17 07:28	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		07/01/17 07:28	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		07/01/17 07:28	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		07/01/17 07:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		07/01/17 07:28	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		07/01/17 07:28	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		07/01/17 07:28	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		07/01/17 07:28	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		07/01/17 07:28	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		07/01/17 07:28	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		07/01/17 07:28	74-87-3	
Cyclohexane	ND	ug/L	1.0	0.36	1		07/01/17 07:28	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		07/01/17 07:28	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		07/01/17 07:28	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		07/01/17 07:28	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		07/01/17 07:28	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		07/01/17 07:28	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		07/01/17 07:28	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		07/01/17 07:28	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		07/01/17 07:28	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		07/01/17 07:28	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		07/01/17 07:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		07/01/17 07:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		07/01/17 07:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		07/01/17 07:28	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		07/01/17 07:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		07/01/17 07:28	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	78.4	1		07/01/17 07:28	123-91-1	L1
Ethylbenzene	ND	ug/L	1.0	0.30	1		07/01/17 07:28	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		07/01/17 07:28	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.40	1		07/01/17 07:28	98-82-8	
Methyl acetate	ND	ug/L	10.0	0.82	1		07/01/17 07:28	79-20-9	
Methylcyclohexane	ND	ug/L	10.0	1.9	1		07/01/17 07:28	108-87-2	
Methylene Chloride	1.4J	ug/L	2.0	0.97	1		07/01/17 07:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		07/01/17 07:28	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		07/01/17 07:28	1634-04-4	
Styrene	ND	ug/L	1.0	0.26	1		07/01/17 07:28	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		07/01/17 07:28	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		07/01/17 07:28	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		07/01/17 07:28	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.33	1		07/01/17 07:28	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.35	1		07/01/17 07:28	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		07/01/17 07:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		07/01/17 07:28	79-00-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: EB-04	Lab ID: 92346162008	Collected: 06/27/17 17:00	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	ND	ug/L	1.0	0.47	1		07/01/17 07:28	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		07/01/17 07:28	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.19	1		07/01/17 07:28	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.62	1		07/01/17 07:28	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.66	1		07/01/17 07:28	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		07/01/17 07:28	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		07/01/17 07:28	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		07/01/17 07:28	17060-07-0	
Toluene-d8 (S)	106	%	70-130		1		07/01/17 07:28	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-95-46	Lab ID: 92346162009	Collected: 06/27/17 18:45	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	1000	400	40		07/03/17 04:55	67-64-1	
Benzene	ND	ug/L	40.0	10.0	40		07/03/17 04:55	71-43-2	
Bromochloromethane	ND	ug/L	40.0	6.8	40		07/03/17 04:55	74-97-5	
Bromodichloromethane	ND	ug/L	40.0	7.2	40		07/03/17 04:55	75-27-4	
Bromoform	ND	ug/L	40.0	10.4	40		07/03/17 04:55	75-25-2	
Bromomethane	ND	ug/L	80.0	11.6	40		07/03/17 04:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	200	38.4	40		07/03/17 04:55	78-93-3	
Carbon disulfide	ND	ug/L	80.0	46.0	40		07/03/17 04:55	75-15-0	
Carbon tetrachloride	ND	ug/L	40.0	10.0	40		07/03/17 04:55	56-23-5	
Chlorobenzene	ND	ug/L	40.0	9.2	40		07/03/17 04:55	108-90-7	
Chloroethane	ND	ug/L	40.0	21.6	40		07/03/17 04:55	75-00-3	
Chloroform	ND	ug/L	40.0	5.6	40		07/03/17 04:55	67-66-3	
Chloromethane	ND	ug/L	40.0	4.4	40		07/03/17 04:55	74-87-3	
Cyclohexane	ND	ug/L	40.0	14.4	40		07/03/17 04:55	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	80.0	80.0	40		07/03/17 04:55	96-12-8	
Dibromochloromethane	ND	ug/L	40.0	8.4	40		07/03/17 04:55	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	40.0	10.8	40		07/03/17 04:55	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	40.0	12.0	40		07/03/17 04:55	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	40.0	9.6	40		07/03/17 04:55	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	40.0	13.2	40		07/03/17 04:55	106-46-7	
Dichlorodifluoromethane	ND	ug/L	40.0	8.4	40		07/03/17 04:55	75-71-8	
1,1-Dichloroethane	ND	ug/L	40.0	12.8	40		07/03/17 04:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	40.0	9.6	40		07/03/17 04:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	40.0	22.4	40		07/03/17 04:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	40.0	7.6	40		07/03/17 04:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	40.0	19.6	40		07/03/17 04:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	40.0	10.8	40		07/03/17 04:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	40.0	5.2	40		07/03/17 04:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	40.0	10.4	40		07/03/17 04:55	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	6000	3130	40		07/03/17 04:55	123-91-1	L1
Ethylbenzene	ND	ug/L	40.0	12.0	40		07/03/17 04:55	100-41-4	
2-Hexanone	ND	ug/L	200	18.4	40		07/03/17 04:55	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	40.0	16.0	40		07/03/17 04:55	98-82-8	
Methyl acetate	ND	ug/L	400	32.8	40		07/03/17 04:55	79-20-9	
Methylcyclohexane	ND	ug/L	400	74.8	40		07/03/17 04:55	108-87-2	
Methylene Chloride	ND	ug/L	80.0	38.8	40		07/03/17 04:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	200	13.2	40		07/03/17 04:55	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	40.0	8.4	40		07/03/17 04:55	1634-04-4	
Styrene	ND	ug/L	40.0	10.4	40		07/03/17 04:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	40.0	16.0	40		07/03/17 04:55	79-34-5	
Tetrachloroethene	ND	ug/L	40.0	18.4	40		07/03/17 04:55	127-18-4	
Toluene	ND	ug/L	40.0	10.4	40		07/03/17 04:55	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	40.0	13.2	40		07/03/17 04:55	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	40.0	14.0	40		07/03/17 04:55	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	40.0	19.2	40		07/03/17 04:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	40.0	11.6	40		07/03/17 04:55	79-00-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-95-46	Lab ID: 92346162009	Collected: 06/27/17 18:45	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	5170	ug/L	40.0	18.8	40		07/03/17 04:55	79-01-6	
Trichlorofluoromethane	ND	ug/L	40.0	8.0	40		07/03/17 04:55	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	40.0	7.6	40		07/03/17 04:55	76-13-1	
Vinyl chloride	ND	ug/L	40.0	24.8	40		07/03/17 04:55	75-01-4	
m&p-Xylene	ND	ug/L	80.0	26.4	40		07/03/17 04:55	179601-23-1	
o-Xylene	ND	ug/L	40.0	9.2	40		07/03/17 04:55	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		40		07/03/17 04:55	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		40		07/03/17 04:55	17060-07-0	
Toluene-d8 (S)	104	%	70-130		40		07/03/17 04:55	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-93-46	Lab ID: 92346162010	Collected: 06/28/17 09:50	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	3120	1250	125		07/03/17 05:13	67-64-1	
Benzene	ND	ug/L	125	31.2	125		07/03/17 05:13	71-43-2	
Bromochloromethane	ND	ug/L	125	21.2	125		07/03/17 05:13	74-97-5	
Bromodichloromethane	ND	ug/L	125	22.5	125		07/03/17 05:13	75-27-4	
Bromoform	ND	ug/L	125	32.5	125		07/03/17 05:13	75-25-2	
Bromomethane	ND	ug/L	250	36.2	125		07/03/17 05:13	74-83-9	
2-Butanone (MEK)	ND	ug/L	625	120	125		07/03/17 05:13	78-93-3	
Carbon disulfide	ND	ug/L	250	144	125		07/03/17 05:13	75-15-0	
Carbon tetrachloride	ND	ug/L	125	31.2	125		07/03/17 05:13	56-23-5	
Chlorobenzene	ND	ug/L	125	28.8	125		07/03/17 05:13	108-90-7	
Chloroethane	ND	ug/L	125	67.5	125		07/03/17 05:13	75-00-3	
Chloroform	ND	ug/L	125	17.5	125		07/03/17 05:13	67-66-3	
Chloromethane	ND	ug/L	125	13.8	125		07/03/17 05:13	74-87-3	
Cyclohexane	ND	ug/L	125	45.0	125		07/03/17 05:13	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	250	250	125		07/03/17 05:13	96-12-8	
Dibromochloromethane	ND	ug/L	125	26.2	125		07/03/17 05:13	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	125	33.8	125		07/03/17 05:13	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	125	37.5	125		07/03/17 05:13	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	125	30.0	125		07/03/17 05:13	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	125	41.2	125		07/03/17 05:13	106-46-7	
Dichlorodifluoromethane	ND	ug/L	125	26.2	125		07/03/17 05:13	75-71-8	
1,1-Dichloroethane	ND	ug/L	125	40.0	125		07/03/17 05:13	75-34-3	
1,2-Dichloroethane	ND	ug/L	125	30.0	125		07/03/17 05:13	107-06-2	
1,1-Dichloroethene	ND	ug/L	125	70.0	125		07/03/17 05:13	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	125	23.8	125		07/03/17 05:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	125	61.2	125		07/03/17 05:13	156-60-5	
1,2-Dichloropropane	ND	ug/L	125	33.8	125		07/03/17 05:13	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	125	16.2	125		07/03/17 05:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	125	32.5	125		07/03/17 05:13	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	18800	9800	125		07/03/17 05:13	123-91-1	L1
Ethylbenzene	ND	ug/L	125	37.5	125		07/03/17 05:13	100-41-4	
2-Hexanone	ND	ug/L	625	57.5	125		07/03/17 05:13	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	125	50.0	125		07/03/17 05:13	98-82-8	
Methyl acetate	ND	ug/L	1250	102	125		07/03/17 05:13	79-20-9	
Methylcyclohexane	ND	ug/L	1250	234	125		07/03/17 05:13	108-87-2	
Methylene Chloride	ND	ug/L	250	121	125		07/03/17 05:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	625	41.2	125		07/03/17 05:13	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	125	26.2	125		07/03/17 05:13	1634-04-4	
Styrene	ND	ug/L	125	32.5	125		07/03/17 05:13	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	125	50.0	125		07/03/17 05:13	79-34-5	
Tetrachloroethene	ND	ug/L	125	57.5	125		07/03/17 05:13	127-18-4	
Toluene	ND	ug/L	125	32.5	125		07/03/17 05:13	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	125	41.2	125		07/03/17 05:13	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	125	43.8	125		07/03/17 05:13	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	125	60.0	125		07/03/17 05:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	125	36.2	125		07/03/17 05:13	79-00-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-93-46	Lab ID: 92346162010	Collected: 06/28/17 09:50	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	16700	ug/L	125	58.8	125		07/03/17 05:13	79-01-6	
Trichlorofluoromethane	ND	ug/L	125	25.0	125		07/03/17 05:13	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	125	23.8	125		07/03/17 05:13	76-13-1	
Vinyl chloride	ND	ug/L	125	77.5	125		07/03/17 05:13	75-01-4	
m&p-Xylene	ND	ug/L	250	82.5	125		07/03/17 05:13	179601-23-1	
o-Xylene	ND	ug/L	125	28.8	125		07/03/17 05:13	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		125		07/03/17 05:13	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130		125		07/03/17 05:13	17060-07-0	
Toluene-d8 (S)	110	%	70-130		125		07/03/17 05:13	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-87-35	Lab ID: 92346162011	Collected: 06/28/17 12:40	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	2500	1000	100		07/03/17 06:06	67-64-1	
Benzene	ND	ug/L	100	25.0	100		07/03/17 06:06	71-43-2	
Bromochloromethane	ND	ug/L	100	17.0	100		07/03/17 06:06	74-97-5	
Bromodichloromethane	ND	ug/L	100	18.0	100		07/03/17 06:06	75-27-4	
Bromoform	ND	ug/L	100	26.0	100		07/03/17 06:06	75-25-2	
Bromomethane	ND	ug/L	200	29.0	100		07/03/17 06:06	74-83-9	
2-Butanone (MEK)	2610	ug/L	500	96.0	100		07/03/17 06:06	78-93-3	
Carbon disulfide	ND	ug/L	200	115	100		07/03/17 06:06	75-15-0	
Carbon tetrachloride	ND	ug/L	100	25.0	100		07/03/17 06:06	56-23-5	
Chlorobenzene	ND	ug/L	100	23.0	100		07/03/17 06:06	108-90-7	
Chloroethane	ND	ug/L	100	54.0	100		07/03/17 06:06	75-00-3	
Chloroform	ND	ug/L	100	14.0	100		07/03/17 06:06	67-66-3	
Chloromethane	ND	ug/L	100	11.0	100		07/03/17 06:06	74-87-3	
Cyclohexane	ND	ug/L	100	36.0	100		07/03/17 06:06	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	200	200	100		07/03/17 06:06	96-12-8	
Dibromochloromethane	ND	ug/L	100	21.0	100		07/03/17 06:06	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	100	27.0	100		07/03/17 06:06	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	100	30.0	100		07/03/17 06:06	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	100	24.0	100		07/03/17 06:06	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	100	33.0	100		07/03/17 06:06	106-46-7	
Dichlorodifluoromethane	ND	ug/L	100	21.0	100		07/03/17 06:06	75-71-8	
1,1-Dichloroethane	ND	ug/L	100	32.0	100		07/03/17 06:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	100	24.0	100		07/03/17 06:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	100	56.0	100		07/03/17 06:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	100	19.0	100		07/03/17 06:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	100	49.0	100		07/03/17 06:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	100	27.0	100		07/03/17 06:06	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	100	13.0	100		07/03/17 06:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	100	26.0	100		07/03/17 06:06	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	15000	7840	100		07/03/17 06:06	123-91-1	L1
Ethylbenzene	ND	ug/L	100	30.0	100		07/03/17 06:06	100-41-4	
2-Hexanone	ND	ug/L	500	46.0	100		07/03/17 06:06	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	100	40.0	100		07/03/17 06:06	98-82-8	
Methyl acetate	ND	ug/L	1000	82.0	100		07/03/17 06:06	79-20-9	
Methylcyclohexane	ND	ug/L	1000	187	100		07/03/17 06:06	108-87-2	
Methylene Chloride	ND	ug/L	200	97.0	100		07/03/17 06:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	500	33.0	100		07/03/17 06:06	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	100	21.0	100		07/03/17 06:06	1634-04-4	
Styrene	ND	ug/L	100	26.0	100		07/03/17 06:06	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	100	40.0	100		07/03/17 06:06	79-34-5	
Tetrachloroethene	ND	ug/L	100	46.0	100		07/03/17 06:06	127-18-4	
Toluene	ND	ug/L	100	26.0	100		07/03/17 06:06	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	100	33.0	100		07/03/17 06:06	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	100	35.0	100		07/03/17 06:06	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	100	48.0	100		07/03/17 06:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	100	29.0	100		07/03/17 06:06	79-00-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-87-35	Lab ID: 92346162011	Collected: 06/28/17 12:40	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	14600	ug/L	100	47.0	100		07/03/17 06:06	79-01-6	
Trichlorofluoromethane	ND	ug/L	100	20.0	100		07/03/17 06:06	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	100	19.0	100		07/03/17 06:06	76-13-1	
Vinyl chloride	ND	ug/L	100	62.0	100		07/03/17 06:06	75-01-4	
m&p-Xylene	ND	ug/L	200	66.0	100		07/03/17 06:06	179601-23-1	
o-Xylene	ND	ug/L	100	23.0	100		07/03/17 06:06	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		100		07/03/17 06:06	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		100		07/03/17 06:06	17060-07-0	
Toluene-d8 (S)	102	%	70-130		100		07/03/17 06:06	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-87-53	Lab ID: 92346162012	Collected: 06/28/17 15:00	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	2500	1000	100		07/03/17 15:37	67-64-1	
Benzene	ND	ug/L	100	25.0	100		07/03/17 15:37	71-43-2	
Bromochloromethane	ND	ug/L	100	17.0	100		07/03/17 15:37	74-97-5	
Bromodichloromethane	ND	ug/L	100	18.0	100		07/03/17 15:37	75-27-4	
Bromoform	ND	ug/L	100	26.0	100		07/03/17 15:37	75-25-2	
Bromomethane	ND	ug/L	200	29.0	100		07/03/17 15:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	500	96.0	100		07/03/17 15:37	78-93-3	
Carbon disulfide	ND	ug/L	200	115	100		07/03/17 15:37	75-15-0	
Carbon tetrachloride	ND	ug/L	100	25.0	100		07/03/17 15:37	56-23-5	
Chlorobenzene	ND	ug/L	100	23.0	100		07/03/17 15:37	108-90-7	
Chloroethane	ND	ug/L	100	54.0	100		07/03/17 15:37	75-00-3	
Chloroform	ND	ug/L	100	14.0	100		07/03/17 15:37	67-66-3	
Chloromethane	ND	ug/L	100	11.0	100		07/03/17 15:37	74-87-3	
Cyclohexane	ND	ug/L	100	36.0	100		07/03/17 15:37	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	200	200	100		07/03/17 15:37	96-12-8	
Dibromochloromethane	ND	ug/L	100	21.0	100		07/03/17 15:37	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	100	27.0	100		07/03/17 15:37	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	100	30.0	100		07/03/17 15:37	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	100	24.0	100		07/03/17 15:37	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	100	33.0	100		07/03/17 15:37	106-46-7	
Dichlorodifluoromethane	ND	ug/L	100	21.0	100		07/03/17 15:37	75-71-8	
1,1-Dichloroethane	ND	ug/L	100	32.0	100		07/03/17 15:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	100	24.0	100		07/03/17 15:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	100	56.0	100		07/03/17 15:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	100	19.0	100		07/03/17 15:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	100	49.0	100		07/03/17 15:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	100	27.0	100		07/03/17 15:37	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	100	13.0	100		07/03/17 15:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	100	26.0	100		07/03/17 15:37	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	15000	7840	100		07/03/17 15:37	123-91-1	
Ethylbenzene	ND	ug/L	100	30.0	100		07/03/17 15:37	100-41-4	
2-Hexanone	ND	ug/L	500	46.0	100		07/03/17 15:37	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	100	40.0	100		07/03/17 15:37	98-82-8	
Methyl acetate	ND	ug/L	1000	82.0	100		07/03/17 15:37	79-20-9	
Methylcyclohexane	ND	ug/L	1000	187	100		07/03/17 15:37	108-87-2	
Methylene Chloride	135J	ug/L	200	97.0	100		07/03/17 15:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	500	33.0	100		07/03/17 15:37	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	100	21.0	100		07/03/17 15:37	1634-04-4	
Styrene	ND	ug/L	100	26.0	100		07/03/17 15:37	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	100	40.0	100		07/03/17 15:37	79-34-5	
Tetrachloroethene	ND	ug/L	100	46.0	100		07/03/17 15:37	127-18-4	
Toluene	ND	ug/L	100	26.0	100		07/03/17 15:37	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	100	33.0	100		07/03/17 15:37	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	100	35.0	100		07/03/17 15:37	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	100	48.0	100		07/03/17 15:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	100	29.0	100		07/03/17 15:37	79-00-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-87-53	Lab ID: 92346162012	Collected: 06/28/17 15:00	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	13900	ug/L	100	47.0	100		07/03/17 15:37	79-01-6	
Trichlorofluoromethane	ND	ug/L	100	20.0	100		07/03/17 15:37	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	100	19.0	100		07/03/17 15:37	76-13-1	
Vinyl chloride	ND	ug/L	100	62.0	100		07/03/17 15:37	75-01-4	
m&p-Xylene	ND	ug/L	200	66.0	100		07/03/17 15:37	179601-23-1	
o-Xylene	ND	ug/L	100	23.0	100		07/03/17 15:37	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		100		07/03/17 15:37	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		100		07/03/17 15:37	17060-07-0	
Toluene-d8 (S)	103	%	70-130		100		07/03/17 15:37	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-90-42	Lab ID: 92346162013	Collected: 06/28/17 17:50	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	5000	2000	200		07/05/17 23:20	67-64-1	
Benzene	83.3J	ug/L	200	50.0	200		07/05/17 23:20	71-43-2	
Bromochloromethane	ND	ug/L	200	34.0	200		07/05/17 23:20	74-97-5	
Bromodichloromethane	ND	ug/L	200	36.0	200		07/05/17 23:20	75-27-4	
Bromoform	ND	ug/L	200	52.0	200		07/05/17 23:20	75-25-2	
Bromomethane	ND	ug/L	400	58.0	200		07/05/17 23:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	1000	192	200		07/05/17 23:20	78-93-3	
Carbon disulfide	ND	ug/L	400	230	200		07/05/17 23:20	75-15-0	
Carbon tetrachloride	ND	ug/L	200	50.0	200		07/05/17 23:20	56-23-5	
Chlorobenzene	ND	ug/L	200	46.0	200		07/05/17 23:20	108-90-7	
Chloroethane	ND	ug/L	200	108	200		07/05/17 23:20	75-00-3	
Chloroform	ND	ug/L	200	28.0	200		07/05/17 23:20	67-66-3	
Chloromethane	ND	ug/L	200	22.0	200		07/05/17 23:20	74-87-3	
Cyclohexane	ND	ug/L	200	72.0	200		07/05/17 23:20	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	400	400	200		07/05/17 23:20	96-12-8	
Dibromochloromethane	ND	ug/L	200	42.0	200		07/05/17 23:20	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	200	54.0	200		07/05/17 23:20	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	200	60.0	200		07/05/17 23:20	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	200	48.0	200		07/05/17 23:20	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	200	66.0	200		07/05/17 23:20	106-46-7	
Dichlorodifluoromethane	ND	ug/L	200	42.0	200		07/05/17 23:20	75-71-8	
1,1-Dichloroethane	ND	ug/L	200	64.0	200		07/05/17 23:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	200	48.0	200		07/05/17 23:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	200	112	200		07/05/17 23:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	200	38.0	200		07/05/17 23:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	200	98.0	200		07/05/17 23:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	200	54.0	200		07/05/17 23:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	200	26.0	200		07/05/17 23:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	200	52.0	200		07/05/17 23:20	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	30000	15700	200		07/05/17 23:20	123-91-1	L1
Ethylbenzene	ND	ug/L	200	60.0	200		07/05/17 23:20	100-41-4	
2-Hexanone	ND	ug/L	1000	92.0	200		07/05/17 23:20	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	200	80.0	200		07/05/17 23:20	98-82-8	
Methyl acetate	ND	ug/L	2000	164	200		07/05/17 23:20	79-20-9	
Methylcyclohexane	ND	ug/L	2000	374	200		07/05/17 23:20	108-87-2	
Methylene Chloride	ND	ug/L	400	194	200		07/05/17 23:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	1000	66.0	200		07/05/17 23:20	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	200	42.0	200		07/05/17 23:20	1634-04-4	
Styrene	ND	ug/L	200	52.0	200		07/05/17 23:20	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	200	80.0	200		07/05/17 23:20	79-34-5	
Tetrachloroethene	ND	ug/L	200	92.0	200		07/05/17 23:20	127-18-4	
Toluene	55.1J	ug/L	200	52.0	200		07/05/17 23:20	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	200	66.0	200		07/05/17 23:20	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	200	70.0	200		07/05/17 23:20	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	200	96.0	200		07/05/17 23:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	200	58.0	200		07/05/17 23:20	79-00-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-90-42	Lab ID: 92346162013	Collected: 06/28/17 17:50	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	25700	ug/L	200	94.0	200		07/05/17 23:20	79-01-6	
Trichlorofluoromethane	ND	ug/L	200	40.0	200		07/05/17 23:20	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	200	38.0	200		07/05/17 23:20	76-13-1	
Vinyl chloride	ND	ug/L	200	124	200		07/05/17 23:20	75-01-4	
m&p-Xylene	ND	ug/L	400	132	200		07/05/17 23:20	179601-23-1	
o-Xylene	ND	ug/L	200	46.0	200		07/05/17 23:20	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		200		07/05/17 23:20	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		200		07/05/17 23:20	17060-07-0	
Toluene-d8 (S)	103	%	70-130		200		07/05/17 23:20	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-102-52	Lab ID: 92346162014	Collected: 06/29/17 10:35	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	2500	1000	100		07/03/17 16:29	67-64-1	
Benzene	167	ug/L	100	25.0	100		07/03/17 16:29	71-43-2	
Bromochloromethane	ND	ug/L	100	17.0	100		07/03/17 16:29	74-97-5	
Bromodichloromethane	ND	ug/L	100	18.0	100		07/03/17 16:29	75-27-4	
Bromoform	ND	ug/L	100	26.0	100		07/03/17 16:29	75-25-2	
Bromomethane	ND	ug/L	200	29.0	100		07/03/17 16:29	74-83-9	
2-Butanone (MEK)	544	ug/L	500	96.0	100		07/03/17 16:29	78-93-3	
Carbon disulfide	ND	ug/L	200	115	100		07/03/17 16:29	75-15-0	
Carbon tetrachloride	ND	ug/L	100	25.0	100		07/03/17 16:29	56-23-5	
Chlorobenzene	ND	ug/L	100	23.0	100		07/03/17 16:29	108-90-7	
Chloroethane	ND	ug/L	100	54.0	100		07/03/17 16:29	75-00-3	
Chloroform	ND	ug/L	100	14.0	100		07/03/17 16:29	67-66-3	
Chloromethane	ND	ug/L	100	11.0	100		07/03/17 16:29	74-87-3	
Cyclohexane	ND	ug/L	100	36.0	100		07/03/17 16:29	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	200	200	100		07/03/17 16:29	96-12-8	
Dibromochloromethane	ND	ug/L	100	21.0	100		07/03/17 16:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	100	27.0	100		07/03/17 16:29	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	100	30.0	100		07/03/17 16:29	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	100	24.0	100		07/03/17 16:29	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	100	33.0	100		07/03/17 16:29	106-46-7	
Dichlorodifluoromethane	ND	ug/L	100	21.0	100		07/03/17 16:29	75-71-8	
1,1-Dichloroethane	ND	ug/L	100	32.0	100		07/03/17 16:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	100	24.0	100		07/03/17 16:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	100	56.0	100		07/03/17 16:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	100	19.0	100		07/03/17 16:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	100	49.0	100		07/03/17 16:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	100	27.0	100		07/03/17 16:29	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	100	13.0	100		07/03/17 16:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	100	26.0	100		07/03/17 16:29	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/L	15000	7840	100		07/03/17 16:29	123-91-1	
Ethylbenzene	41.7J	ug/L	100	30.0	100		07/03/17 16:29	100-41-4	
2-Hexanone	ND	ug/L	500	46.0	100		07/03/17 16:29	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	100	40.0	100		07/03/17 16:29	98-82-8	
Methyl acetate	ND	ug/L	1000	82.0	100		07/03/17 16:29	79-20-9	
Methylcyclohexane	ND	ug/L	1000	187	100		07/03/17 16:29	108-87-2	
Methylene Chloride	ND	ug/L	200	97.0	100		07/03/17 16:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	500	33.0	100		07/03/17 16:29	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	100	21.0	100		07/03/17 16:29	1634-04-4	
Styrene	ND	ug/L	100	26.0	100		07/03/17 16:29	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	100	40.0	100		07/03/17 16:29	79-34-5	
Tetrachloroethene	ND	ug/L	100	46.0	100		07/03/17 16:29	127-18-4	
Toluene	84.2J	ug/L	100	26.0	100		07/03/17 16:29	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	100	33.0	100		07/03/17 16:29	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	100	35.0	100		07/03/17 16:29	120-82-1	
1,1,1-Trichloroethane	138	ug/L	100	48.0	100		07/03/17 16:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	100	29.0	100		07/03/17 16:29	79-00-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: GW-102-52	Lab ID: 92346162014	Collected: 06/29/17 10:35	Received: 06/29/17 15:05	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Trichloroethene	17800	ug/L	100	47.0	100		07/03/17 16:29	79-01-6	
Trichlorofluoromethane	ND	ug/L	100	20.0	100		07/03/17 16:29	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	100	19.0	100		07/03/17 16:29	76-13-1	
Vinyl chloride	ND	ug/L	100	62.0	100		07/03/17 16:29	75-01-4	
m&p-Xylene	191J	ug/L	200	66.0	100		07/03/17 16:29	179601-23-1	
o-Xylene	139	ug/L	100	23.0	100		07/03/17 16:29	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		100		07/03/17 16:29	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		100		07/03/17 16:29	17060-07-0	
Toluene-d8 (S)	103	%	70-130		100		07/03/17 16:29	2037-26-5	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: TB-09 Lab ID: 92346162015 Collected: 06/26/17 00:00 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260							
Acetone	88.7J	ug/kg	100	10.0	1		06/30/17 16:29	67-64-1	
Benzene	ND	ug/kg	5.0	1.6	1		06/30/17 16:29	71-43-2	
Bromochloromethane	ND	ug/kg	5.0	1.7	1		06/30/17 16:29	74-97-5	
Bromodichloromethane	ND	ug/kg	5.0	1.9	1		06/30/17 16:29	75-27-4	
Bromoform	ND	ug/kg	5.0	2.3	1		06/30/17 16:29	75-25-2	
Bromomethane	ND	ug/kg	10.0	2.5	1		06/30/17 16:29	74-83-9	
2-Butanone (MEK)	ND	ug/kg	100	2.9	1		06/30/17 16:29	78-93-3	
Carbon disulfide	ND	ug/kg	10.0	3.0	1		06/30/17 16:29	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.0	2.6	1		06/30/17 16:29	56-23-5	
Chlorobenzene	ND	ug/kg	5.0	1.9	1		06/30/17 16:29	108-90-7	
Chloroethane	ND	ug/kg	10.0	2.4	1		06/30/17 16:29	75-00-3	
Chloroform	ND	ug/kg	5.0	1.6	1		06/30/17 16:29	67-66-3	
Chloromethane	ND	ug/kg	10.0	2.4	1		06/30/17 16:29	74-87-3	
Cyclohexane	ND	ug/kg	5.0	1.6	1		06/30/17 16:29	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.0	3.6	1		06/30/17 16:29	96-12-8	
Dibromochloromethane	ND	ug/kg	5.0	1.8	1		06/30/17 16:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	1.8	1		06/30/17 16:29	106-93-4	
1,2-Dichlorobenzene	ND	ug/kg	5.0	1.9	1		06/30/17 16:29	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.0	2.0	1		06/30/17 16:29	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.0	1.7	1		06/30/17 16:29	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	10.0	3.6	1		06/30/17 16:29	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.0	1.5	1		06/30/17 16:29	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.0	2.2	1		06/30/17 16:29	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.0	1.8	1		06/30/17 16:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.0	1.4	1		06/30/17 16:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.0	1.9	1		06/30/17 16:29	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.0	1.7	1		06/30/17 16:29	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	5.0	1.8	1		06/30/17 16:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.0	1.5	1		06/30/17 16:29	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	150	120	1		06/30/17 16:29	123-91-1	
Ethylbenzene	ND	ug/kg	5.0	1.8	1		06/30/17 16:29	100-41-4	
2-Hexanone	ND	ug/kg	50.0	3.9	1		06/30/17 16:29	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	1.9	1		06/30/17 16:29	98-82-8	
Methyl acetate	10.3	ug/kg	10.0	1.4	1		06/30/17 16:29	79-20-9	
Methylcyclohexane	ND	ug/kg	10.0	1.5	1		06/30/17 16:29	108-87-2	
Methylene Chloride	ND	ug/kg	20.0	3.0	1		06/30/17 16:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	50.0	3.7	1		06/30/17 16:29	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.0	1.5	1		06/30/17 16:29	1634-04-4	
Styrene	ND	ug/kg	5.0	1.8	1		06/30/17 16:29	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	1.9	1		06/30/17 16:29	79-34-5	
Tetrachloroethene	ND	ug/kg	5.0	1.7	1		06/30/17 16:29	127-18-4	
Toluene	ND	ug/kg	5.0	1.8	1		06/30/17 16:29	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.0	2.2	1		06/30/17 16:29	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.0	1.6	1		06/30/17 16:29	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.0	1.8	1		06/30/17 16:29	71-55-6	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: TB-09 Lab ID: 92346162015 Collected: 06/26/17 00:00 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260							
1,1,2-Trichloroethane	ND	ug/kg	5.0	2.1	1		06/30/17 16:29	79-00-5	
Trichloroethene	ND	ug/kg	5.0	2.1	1		06/30/17 16:29	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.0	2.2	1		06/30/17 16:29	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	5.0	1.9	1		06/30/17 16:29	76-13-1	
Vinyl chloride	ND	ug/kg	10.0	1.8	1		06/30/17 16:29	75-01-4	
m&p-Xylene	4.6J	ug/kg	10.0	3.6	1		06/30/17 16:29	179601-23-1	
o-Xylene	ND	ug/kg	5.0	1.9	1		06/30/17 16:29	95-47-6	
Surrogates									
Toluene-d8 (S)	104	%	70-130		1		06/30/17 16:29	2037-26-5	
4-Bromofluorobenzene (S)	101	%	70-130		1		06/30/17 16:29	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-132		1		06/30/17 16:29	17060-07-0	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: FD-09 Lab ID: 92346162016 Collected: 06/26/17 00:00 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260							
Acetone	76.6J	ug/kg	105	10.5	1		06/30/17 16:49	67-64-1	
Benzene	ND	ug/kg	5.3	1.7	1		06/30/17 16:49	71-43-2	
Bromochloromethane	ND	ug/kg	5.3	1.8	1		06/30/17 16:49	74-97-5	
Bromodichloromethane	ND	ug/kg	5.3	2.0	1		06/30/17 16:49	75-27-4	
Bromoform	ND	ug/kg	5.3	2.4	1		06/30/17 16:49	75-25-2	
Bromomethane	ND	ug/kg	10.5	2.6	1		06/30/17 16:49	74-83-9	
2-Butanone (MEK)	ND	ug/kg	105	3.1	1		06/30/17 16:49	78-93-3	
Carbon disulfide	ND	ug/kg	10.5	3.2	1		06/30/17 16:49	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.3	2.7	1		06/30/17 16:49	56-23-5	
Chlorobenzene	ND	ug/kg	5.3	2.0	1		06/30/17 16:49	108-90-7	
Chloroethane	ND	ug/kg	10.5	2.5	1		06/30/17 16:49	75-00-3	
Chloroform	ND	ug/kg	5.3	1.7	1		06/30/17 16:49	67-66-3	
Chloromethane	ND	ug/kg	10.5	2.5	1		06/30/17 16:49	74-87-3	
Cyclohexane	ND	ug/kg	5.3	1.7	1		06/30/17 16:49	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.3	3.8	1		06/30/17 16:49	96-12-8	
Dibromochloromethane	ND	ug/kg	5.3	1.9	1		06/30/17 16:49	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.3	1.9	1		06/30/17 16:49	106-93-4	
1,2-Dichlorobenzene	ND	ug/kg	5.3	2.0	1		06/30/17 16:49	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.3	2.1	1		06/30/17 16:49	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.3	1.8	1		06/30/17 16:49	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	10.5	3.8	1		06/30/17 16:49	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.3	1.6	1		06/30/17 16:49	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.3	2.3	1		06/30/17 16:49	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.3	1.9	1		06/30/17 16:49	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.3	1.5	1		06/30/17 16:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.3	2.0	1		06/30/17 16:49	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.3	1.8	1		06/30/17 16:49	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	5.3	1.9	1		06/30/17 16:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.3	1.6	1		06/30/17 16:49	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	158	126	1		06/30/17 16:49	123-91-1	
Ethylbenzene	ND	ug/kg	5.3	1.9	1		06/30/17 16:49	100-41-4	
2-Hexanone	ND	ug/kg	52.6	4.1	1		06/30/17 16:49	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.3	2.0	1		06/30/17 16:49	98-82-8	
Methyl acetate	7.0J	ug/kg	10.5	1.5	1		06/30/17 16:49	79-20-9	
Methylcyclohexane	ND	ug/kg	10.5	1.6	1		06/30/17 16:49	108-87-2	
Methylene Chloride	ND	ug/kg	21.1	3.2	1		06/30/17 16:49	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	52.6	3.9	1		06/30/17 16:49	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.3	1.6	1		06/30/17 16:49	1634-04-4	
Styrene	ND	ug/kg	5.3	1.9	1		06/30/17 16:49	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.3	2.0	1		06/30/17 16:49	79-34-5	
Tetrachloroethene	2.1J	ug/kg	5.3	1.8	1		06/30/17 16:49	127-18-4	
Toluene	ND	ug/kg	5.3	1.9	1		06/30/17 16:49	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.3	2.3	1		06/30/17 16:49	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.3	1.7	1		06/30/17 16:49	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.3	1.9	1		06/30/17 16:49	71-55-6	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: FD-09 Lab ID: 92346162016 Collected: 06/26/17 00:00 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit			Prepared	Analyzed	CAS No.	Qual
			MDL	DF					
8260/5035A Volatile Organics Analytical Method: EPA 8260									
1,1,2-Trichloroethane	ND	ug/kg	5.3	2.2	1		06/30/17 16:49	79-00-5	
Trichloroethylene	3160	ug/kg	1430	600	250		07/02/17 16:35	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.3	2.3	1		06/30/17 16:49	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	5.3	2.0	1		06/30/17 16:49	76-13-1	
Vinyl chloride	ND	ug/kg	10.5	1.9	1		06/30/17 16:49	75-01-4	
m&p-Xylene	ND	ug/kg	10.5	3.8	1		06/30/17 16:49	179601-23-1	
o-Xylene	ND	ug/kg	5.3	2.0	1		06/30/17 16:49	95-47-6	
Surrogates									
Toluene-d8 (S)	103	%	70-130		1		06/30/17 16:49	2037-26-5	
4-Bromofluorobenzene (S)	103	%	70-130		1		06/30/17 16:49	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-132		1		06/30/17 16:49	17060-07-0	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	24.1	%	0.10	0.10	1		07/03/17 12:06		

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-75-23 Lab ID: 92346162017 Collected: 06/26/17 15:20 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report	MDL	DF	Prepared	Analyzed	CAS No.	Qual
			Limit						
8260/5035A Volatile Organics Analytical Method: EPA 8260									
Acetone	57.8J	ug/kg	108	10.8	1		06/30/17 17:09	67-64-1	
Benzene	ND	ug/kg	5.4	1.7	1		06/30/17 17:09	71-43-2	
Bromochloromethane	ND	ug/kg	5.4	1.8	1		06/30/17 17:09	74-97-5	
Bromodichloromethane	ND	ug/kg	5.4	2.1	1		06/30/17 17:09	75-27-4	
Bromoform	ND	ug/kg	5.4	2.5	1		06/30/17 17:09	75-25-2	
Bromomethane	ND	ug/kg	10.8	2.7	1		06/30/17 17:09	74-83-9	
2-Butanone (MEK)	ND	ug/kg	108	3.1	1		06/30/17 17:09	78-93-3	
Carbon disulfide	ND	ug/kg	10.8	3.2	1		06/30/17 17:09	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.4	2.8	1		06/30/17 17:09	56-23-5	
Chlorobenzene	ND	ug/kg	5.4	2.1	1		06/30/17 17:09	108-90-7	
Chloroethane	ND	ug/kg	10.8	2.6	1		06/30/17 17:09	75-00-3	
Chloroform	ND	ug/kg	5.4	1.7	1		06/30/17 17:09	67-66-3	
Chloromethane	ND	ug/kg	10.8	2.6	1		06/30/17 17:09	74-87-3	
Cyclohexane	ND	ug/kg	5.4	1.7	1		06/30/17 17:09	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.4	3.9	1		06/30/17 17:09	96-12-8	
Dibromochloromethane	ND	ug/kg	5.4	1.9	1		06/30/17 17:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.4	1.9	1		06/30/17 17:09	106-93-4	
1,2-Dichlorobenzene	ND	ug/kg	5.4	2.1	1		06/30/17 17:09	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.4	2.2	1		06/30/17 17:09	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.4	1.8	1		06/30/17 17:09	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	10.8	3.9	1		06/30/17 17:09	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.4	1.6	1		06/30/17 17:09	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.4	2.4	1		06/30/17 17:09	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.4	1.9	1		06/30/17 17:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.4	1.5	1		06/30/17 17:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.4	2.1	1		06/30/17 17:09	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.4	1.8	1		06/30/17 17:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	5.4	1.9	1		06/30/17 17:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.4	1.6	1		06/30/17 17:09	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	162	130	1		06/30/17 17:09	123-91-1	
Ethylbenzene	ND	ug/kg	5.4	1.9	1		06/30/17 17:09	100-41-4	
2-Hexanone	ND	ug/kg	54.0	4.2	1		06/30/17 17:09	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.4	2.1	1		06/30/17 17:09	98-82-8	
Methyl acetate	6.7J	ug/kg	10.8	1.5	1		06/30/17 17:09	79-20-9	
Methylcyclohexane	ND	ug/kg	10.8	1.6	1		06/30/17 17:09	108-87-2	
Methylene Chloride	ND	ug/kg	21.6	3.2	1		06/30/17 17:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	54.0	4.0	1		06/30/17 17:09	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.4	1.6	1		06/30/17 17:09	1634-04-4	
Styrene	ND	ug/kg	5.4	1.9	1		06/30/17 17:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.4	2.1	1		06/30/17 17:09	79-34-5	
Tetrachloroethene	ND	ug/kg	5.4	1.8	1		06/30/17 17:09	127-18-4	
Toluene	ND	ug/kg	5.4	1.9	1		06/30/17 17:09	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.4	2.4	1		06/30/17 17:09	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.4	1.7	1		06/30/17 17:09	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.4	1.9	1		06/30/17 17:09	71-55-6	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-75-23 Lab ID: 92346162017 Collected: 06/26/17 15:20 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report	MDL	DF	Prepared	Analyzed	CAS No.	Qual
			Limit						
8260/5035A Volatile Organics Analytical Method: EPA 8260									
1,1,2-Trichloroethane	ND	ug/kg	5.4	2.3	1		06/30/17 17:09	79-00-5	
Trichloroethylene	13.3	ug/kg	5.4	2.3	1		06/30/17 17:09	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.4	2.4	1		06/30/17 17:09	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	5.4	2.1	1		06/30/17 17:09	76-13-1	
Vinyl chloride	ND	ug/kg	10.8	1.9	1		06/30/17 17:09	75-01-4	
m&p-Xylene	ND	ug/kg	10.8	3.9	1		06/30/17 17:09	179601-23-1	
o-Xylene	ND	ug/kg	5.4	2.1	1		06/30/17 17:09	95-47-6	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		06/30/17 17:09	2037-26-5	
4-Bromofluorobenzene (S)	102	%	70-130		1		06/30/17 17:09	460-00-4	
1,2-Dichloroethane-d4 (S)	87	%	70-132		1		06/30/17 17:09	17060-07-0	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	17.0	%	0.10	0.10	1		07/03/17 12:06		

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-80-37 Lab ID: 92346162018 Collected: 06/27/17 09:40 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report	MDL	DF	Prepared	Analyzed	CAS No.	Qual
			Limit						
8260/5035A Volatile Organics Analytical Method: EPA 8260									
Acetone	43.8J	ug/kg	122	12.2	1		06/30/17 17:30	67-64-1	
Benzene	ND	ug/kg	6.1	1.9	1		06/30/17 17:30	71-43-2	
Bromochloromethane	ND	ug/kg	6.1	2.1	1		06/30/17 17:30	74-97-5	
Bromodichloromethane	ND	ug/kg	6.1	2.3	1		06/30/17 17:30	75-27-4	
Bromoform	ND	ug/kg	6.1	2.8	1		06/30/17 17:30	75-25-2	
Bromomethane	ND	ug/kg	12.2	3.0	1		06/30/17 17:30	74-83-9	
2-Butanone (MEK)	ND	ug/kg	122	3.5	1		06/30/17 17:30	78-93-3	
Carbon disulfide	ND	ug/kg	12.2	3.7	1		06/30/17 17:30	75-15-0	
Carbon tetrachloride	ND	ug/kg	6.1	3.2	1		06/30/17 17:30	56-23-5	
Chlorobenzene	ND	ug/kg	6.1	2.3	1		06/30/17 17:30	108-90-7	
Chloroethane	ND	ug/kg	12.2	2.9	1		06/30/17 17:30	75-00-3	
Chloroform	ND	ug/kg	6.1	1.9	1		06/30/17 17:30	67-66-3	
Chloromethane	ND	ug/kg	12.2	2.9	1		06/30/17 17:30	74-87-3	
Cyclohexane	ND	ug/kg	6.1	1.9	1		06/30/17 17:30	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/kg	6.1	4.4	1		06/30/17 17:30	96-12-8	
Dibromochloromethane	ND	ug/kg	6.1	2.2	1		06/30/17 17:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.1	2.2	1		06/30/17 17:30	106-93-4	
1,2-Dichlorobenzene	ND	ug/kg	6.1	2.3	1		06/30/17 17:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.1	2.4	1		06/30/17 17:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.1	2.1	1		06/30/17 17:30	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	12.2	4.4	1		06/30/17 17:30	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.1	1.8	1		06/30/17 17:30	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.1	2.7	1		06/30/17 17:30	107-06-2	
1,1-Dichloroethene	ND	ug/kg	6.1	2.2	1		06/30/17 17:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	6.1	1.7	1		06/30/17 17:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.1	2.3	1		06/30/17 17:30	156-60-5	
1,2-Dichloropropane	ND	ug/kg	6.1	2.1	1		06/30/17 17:30	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	6.1	2.2	1		06/30/17 17:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.1	1.8	1		06/30/17 17:30	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	183	146	1		06/30/17 17:30	123-91-1	
Ethylbenzene	ND	ug/kg	6.1	2.2	1		06/30/17 17:30	100-41-4	
2-Hexanone	ND	ug/kg	60.9	4.7	1		06/30/17 17:30	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.1	2.3	1		06/30/17 17:30	98-82-8	
Methyl acetate	10.2J	ug/kg	12.2	1.7	1		06/30/17 17:30	79-20-9	
Methylcyclohexane	ND	ug/kg	12.2	1.8	1		06/30/17 17:30	108-87-2	
Methylene Chloride	ND	ug/kg	24.4	3.7	1		06/30/17 17:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	60.9	4.5	1		06/30/17 17:30	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	6.1	1.8	1		06/30/17 17:30	1634-04-4	
Styrene	ND	ug/kg	6.1	2.2	1		06/30/17 17:30	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.1	2.3	1		06/30/17 17:30	79-34-5	
Tetrachloroethene	2.2J	ug/kg	6.1	2.1	1		06/30/17 17:30	127-18-4	
Toluene	ND	ug/kg	6.1	2.2	1		06/30/17 17:30	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.1	2.7	1		06/30/17 17:30	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.1	1.9	1		06/30/17 17:30	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.1	2.2	1		06/30/17 17:30	71-55-6	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-80-37 Lab ID: 92346162018 Collected: 06/27/17 09:40 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit			Prepared	Analyzed	CAS No.	Qual
			MDL	DF					
8260/5035A Volatile Organics Analytical Method: EPA 8260									
1,1,2-Trichloroethane	ND	ug/kg	6.1	2.6	1		06/30/17 17:30	79-00-5	
Trichloroethene	3310	ug/kg	1620	678	250		07/02/17 16:55	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.1	2.7	1		06/30/17 17:30	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	6.1	2.3	1		06/30/17 17:30	76-13-1	
Vinyl chloride	ND	ug/kg	12.2	2.2	1		06/30/17 17:30	75-01-4	
m&p-Xylene	ND	ug/kg	12.2	4.4	1		06/30/17 17:30	179601-23-1	
o-Xylene	ND	ug/kg	6.1	2.3	1		06/30/17 17:30	95-47-6	
Surrogates									
Toluene-d8 (S)	104	%	70-130		1		06/30/17 17:30	2037-26-5	
4-Bromofluorobenzene (S)	100	%	70-130		1		06/30/17 17:30	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-132		1		06/30/17 17:30	17060-07-0	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	30.4	%	0.10	0.10	1		07/03/17 12:06		

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-81-33 Lab ID: 92346162019 Collected: 06/27/17 12:00 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260							
Acetone	66.2J	ug/kg	110	11.0	1		06/30/17 17:50	67-64-1	
Benzene	ND	ug/kg	5.5	1.8	1		06/30/17 17:50	71-43-2	
Bromochloromethane	ND	ug/kg	5.5	1.9	1		06/30/17 17:50	74-97-5	
Bromodichloromethane	ND	ug/kg	5.5	2.1	1		06/30/17 17:50	75-27-4	
Bromoform	ND	ug/kg	5.5	2.5	1		06/30/17 17:50	75-25-2	
Bromomethane	ND	ug/kg	11.0	2.8	1		06/30/17 17:50	74-83-9	
2-Butanone (MEK)	ND	ug/kg	110	3.2	1		06/30/17 17:50	78-93-3	
Carbon disulfide	ND	ug/kg	11.0	3.3	1		06/30/17 17:50	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.5	2.9	1		06/30/17 17:50	56-23-5	
Chlorobenzene	ND	ug/kg	5.5	2.1	1		06/30/17 17:50	108-90-7	
Chloroethane	ND	ug/kg	11.0	2.6	1		06/30/17 17:50	75-00-3	
Chloroform	ND	ug/kg	5.5	1.8	1		06/30/17 17:50	67-66-3	
Chloromethane	ND	ug/kg	11.0	2.6	1		06/30/17 17:50	74-87-3	
Cyclohexane	ND	ug/kg	5.5	1.8	1		06/30/17 17:50	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.5	4.0	1		06/30/17 17:50	96-12-8	
Dibromochloromethane	ND	ug/kg	5.5	2.0	1		06/30/17 17:50	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.5	2.0	1		06/30/17 17:50	106-93-4	
1,2-Dichlorobenzene	ND	ug/kg	5.5	2.1	1		06/30/17 17:50	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.5	2.2	1		06/30/17 17:50	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.5	1.9	1		06/30/17 17:50	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	11.0	4.0	1		06/30/17 17:50	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.5	1.7	1		06/30/17 17:50	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.5	2.4	1		06/30/17 17:50	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.5	2.0	1		06/30/17 17:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.5	1.5	1		06/30/17 17:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.5	2.1	1		06/30/17 17:50	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.5	1.9	1		06/30/17 17:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	5.5	2.0	1		06/30/17 17:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.5	1.7	1		06/30/17 17:50	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	166	132	1		06/30/17 17:50	123-91-1	
Ethylbenzene	ND	ug/kg	5.5	2.0	1		06/30/17 17:50	100-41-4	
2-Hexanone	ND	ug/kg	55.2	4.3	1		06/30/17 17:50	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.5	2.1	1		06/30/17 17:50	98-82-8	
Methyl acetate	6.5J	ug/kg	11.0	1.5	1		06/30/17 17:50	79-20-9	
Methylcyclohexane	ND	ug/kg	11.0	1.7	1		06/30/17 17:50	108-87-2	
Methylene Chloride	ND	ug/kg	22.1	3.3	1		06/30/17 17:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	55.2	4.1	1		06/30/17 17:50	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.5	1.7	1		06/30/17 17:50	1634-04-4	
Styrene	ND	ug/kg	5.5	2.0	1		06/30/17 17:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.5	2.1	1		06/30/17 17:50	79-34-5	
Tetrachloroethene	ND	ug/kg	5.5	1.9	1		06/30/17 17:50	127-18-4	
Toluene	ND	ug/kg	5.5	2.0	1		06/30/17 17:50	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.5	2.4	1		06/30/17 17:50	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.5	1.8	1		06/30/17 17:50	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.5	2.0	1		06/30/17 17:50	71-55-6	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-81-33 Lab ID: 92346162019 Collected: 06/27/17 12:00 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report	MDL	DF	Prepared	Analyzed	CAS No.	Qual
			Limit						
8260/5035A Volatile Organics Analytical Method: EPA 8260									
1,1,2-Trichloroethane	ND	ug/kg	5.5	2.3	1		06/30/17 17:50	79-00-5	
Trichloroethylene	25.6	ug/kg	5.5	2.3	1		06/30/17 17:50	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.5	2.4	1		06/30/17 17:50	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	5.5	2.1	1		06/30/17 17:50	76-13-1	
Vinyl chloride	ND	ug/kg	11.0	2.0	1		06/30/17 17:50	75-01-4	
m&p-Xylene	ND	ug/kg	11.0	4.0	1		06/30/17 17:50	179601-23-1	
o-Xylene	ND	ug/kg	5.5	2.1	1		06/30/17 17:50	95-47-6	
Surrogates									
Toluene-d8 (S)	103	%	70-130		1		06/30/17 17:50	2037-26-5	
4-Bromofluorobenzene (S)	102	%	70-130		1		06/30/17 17:50	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-132		1		06/30/17 17:50	17060-07-0	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	18.5	%	0.10	0.10	1		07/03/17 12:06		

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-78-46 Lab ID: 92346162020 Collected: 06/27/17 15:20 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260							
Acetone	38.7J	ug/kg	97.8	9.8	1		06/30/17 18:11	67-64-1	
Benzene	18.0	ug/kg	4.9	1.6	1		06/30/17 18:11	71-43-2	
Bromochloromethane	ND	ug/kg	4.9	1.7	1		06/30/17 18:11	74-97-5	
Bromodichloromethane	ND	ug/kg	4.9	1.9	1		06/30/17 18:11	75-27-4	
Bromoform	ND	ug/kg	4.9	2.2	1		06/30/17 18:11	75-25-2	
Bromomethane	ND	ug/kg	9.8	2.4	1		06/30/17 18:11	74-83-9	
2-Butanone (MEK)	ND	ug/kg	97.8	2.8	1		06/30/17 18:11	78-93-3	
Carbon disulfide	ND	ug/kg	9.8	2.9	1		06/30/17 18:11	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.9	2.5	1		06/30/17 18:11	56-23-5	
Chlorobenzene	ND	ug/kg	4.9	1.9	1		06/30/17 18:11	108-90-7	
Chloroethane	ND	ug/kg	9.8	2.3	1		06/30/17 18:11	75-00-3	
Chloroform	ND	ug/kg	4.9	1.6	1		06/30/17 18:11	67-66-3	
Chloromethane	ND	ug/kg	9.8	2.3	1		06/30/17 18:11	74-87-3	
Cyclohexane	ND	ug/kg	4.9	1.6	1		06/30/17 18:11	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/kg	4.9	3.5	1		06/30/17 18:11	96-12-8	
Dibromochloromethane	ND	ug/kg	4.9	1.8	1		06/30/17 18:11	124-48-1	
1,2-Dibromethane (EDB)	ND	ug/kg	4.9	1.8	1		06/30/17 18:11	106-93-4	
1,2-Dichlorobenzene	ND	ug/kg	4.9	1.9	1		06/30/17 18:11	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.9	2.0	1		06/30/17 18:11	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.9	1.7	1		06/30/17 18:11	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	9.8	3.5	1		06/30/17 18:11	75-71-8	
1,1-Dichloroethane	2.2J	ug/kg	4.9	1.5	1		06/30/17 18:11	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.9	2.2	1		06/30/17 18:11	107-06-2	
1,1-Dichloroethene	11.3	ug/kg	4.9	1.8	1		06/30/17 18:11	75-35-4	
cis-1,2-Dichloroethene	82.1	ug/kg	4.9	1.4	1		06/30/17 18:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.9	1.9	1		06/30/17 18:11	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.9	1.7	1		06/30/17 18:11	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	4.9	1.8	1		06/30/17 18:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.9	1.5	1		06/30/17 18:11	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	147	117	1		06/30/17 18:11	123-91-1	
Ethylbenzene	3.3J	ug/kg	4.9	1.8	1		06/30/17 18:11	100-41-4	
2-Hexanone	ND	ug/kg	48.9	3.8	1		06/30/17 18:11	591-78-6	
Isopropylbenzene (Cumene)	2.1J	ug/kg	4.9	1.9	1		06/30/17 18:11	98-82-8	
Methyl acetate	ND	ug/kg	9.8	1.4	1		06/30/17 18:11	79-20-9	
Methylcyclohexane	ND	ug/kg	9.8	1.5	1		06/30/17 18:11	108-87-2	
Methylene Chloride	9.6J	ug/kg	19.6	2.9	1		06/30/17 18:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	48.9	3.6	1		06/30/17 18:11	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.9	1.5	1		06/30/17 18:11	1634-04-4	
Styrene	ND	ug/kg	4.9	1.8	1		06/30/17 18:11	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.9	1.9	1		06/30/17 18:11	79-34-5	
Tetrachloroethene	ND	ug/kg	4.9	1.7	1		06/30/17 18:11	127-18-4	
Toluene	3.3J	ug/kg	4.9	1.8	1		06/30/17 18:11	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.9	2.2	1		06/30/17 18:11	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.9	1.6	1		06/30/17 18:11	120-82-1	
1,1,1-Trichloroethane	75.9	ug/kg	4.9	1.8	1		06/30/17 18:11	71-55-6	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-78-46 Lab ID: 92346162020 Collected: 06/27/17 15:20 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit			Prepared	Analyzed	CAS No.	Qual
			MDL	DF					
8260/5035A Volatile Organics Analytical Method: EPA 8260									
1,1,2-Trichloroethane	ND	ug/kg	4.9	2.1	1		06/30/17 18:11	79-00-5	
Trichloroethene	2930	ug/kg	1550	649	250		07/02/17 17:16	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.9	2.2	1		06/30/17 18:11	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	4.9	1.9	1		06/30/17 18:11	76-13-1	
Vinyl chloride	ND	ug/kg	9.8	1.8	1		06/30/17 18:11	75-01-4	
m&p-Xylene	19.7	ug/kg	9.8	3.5	1		06/30/17 18:11	179601-23-1	
o-Xylene	25.4	ug/kg	4.9	1.9	1		06/30/17 18:11	95-47-6	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		06/30/17 18:11	2037-26-5	
4-Bromofluorobenzene (S)	102	%	70-130		1		06/30/17 18:11	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-132		1		06/30/17 18:11	17060-07-0	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	18.3	%	0.10	0.10	1		07/03/17 12:06		

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-95-42 Lab ID: 92346162021 Collected: 06/27/17 18:00 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260							
Acetone	97.4J	ug/kg	118	11.8	1		06/30/17 18:31	67-64-1	
Benzene	ND	ug/kg	5.9	1.9	1		06/30/17 18:31	71-43-2	
Bromochloromethane	ND	ug/kg	5.9	2.0	1		06/30/17 18:31	74-97-5	
Bromodichloromethane	ND	ug/kg	5.9	2.2	1		06/30/17 18:31	75-27-4	
Bromoform	ND	ug/kg	5.9	2.7	1		06/30/17 18:31	75-25-2	
Bromomethane	ND	ug/kg	11.8	3.0	1		06/30/17 18:31	74-83-9	
2-Butanone (MEK)	ND	ug/kg	118	3.4	1		06/30/17 18:31	78-93-3	
Carbon disulfide	ND	ug/kg	11.8	3.5	1		06/30/17 18:31	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.9	3.1	1		06/30/17 18:31	56-23-5	
Chlorobenzene	ND	ug/kg	5.9	2.2	1		06/30/17 18:31	108-90-7	
Chloroethane	ND	ug/kg	11.8	2.8	1		06/30/17 18:31	75-00-3	
Chloroform	ND	ug/kg	5.9	1.9	1		06/30/17 18:31	67-66-3	
Chloromethane	ND	ug/kg	11.8	2.8	1		06/30/17 18:31	74-87-3	
Cyclohexane	ND	ug/kg	5.9	1.9	1		06/30/17 18:31	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.9	4.3	1		06/30/17 18:31	96-12-8	
Dibromochloromethane	ND	ug/kg	5.9	2.1	1		06/30/17 18:31	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.9	2.1	1		06/30/17 18:31	106-93-4	
1,2-Dichlorobenzene	ND	ug/kg	5.9	2.2	1		06/30/17 18:31	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.9	2.4	1		06/30/17 18:31	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.9	2.0	1		06/30/17 18:31	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	11.8	4.3	1		06/30/17 18:31	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.9	1.8	1		06/30/17 18:31	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.9	2.6	1		06/30/17 18:31	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.9	2.1	1		06/30/17 18:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.9	1.7	1		06/30/17 18:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.9	2.2	1		06/30/17 18:31	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.9	2.0	1		06/30/17 18:31	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	5.9	2.1	1		06/30/17 18:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.9	1.8	1		06/30/17 18:31	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	177	142	1		06/30/17 18:31	123-91-1	
Ethylbenzene	ND	ug/kg	5.9	2.1	1		06/30/17 18:31	100-41-4	
2-Hexanone	ND	ug/kg	59.0	4.6	1		06/30/17 18:31	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.9	2.2	1		06/30/17 18:31	98-82-8	
Methyl acetate	9.5J	ug/kg	11.8	1.7	1		06/30/17 18:31	79-20-9	
Methylcyclohexane	ND	ug/kg	11.8	1.8	1		06/30/17 18:31	108-87-2	
Methylene Chloride	ND	ug/kg	23.6	3.5	1		06/30/17 18:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	59.0	4.4	1		06/30/17 18:31	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.9	1.8	1		06/30/17 18:31	1634-04-4	
Styrene	ND	ug/kg	5.9	2.1	1		06/30/17 18:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.9	2.2	1		06/30/17 18:31	79-34-5	
Tetrachloroethene	ND	ug/kg	5.9	2.0	1		06/30/17 18:31	127-18-4	
Toluene	ND	ug/kg	5.9	2.1	1		06/30/17 18:31	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.9	2.6	1		06/30/17 18:31	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.9	1.9	1		06/30/17 18:31	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.9	2.1	1		06/30/17 18:31	71-55-6	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-95-42 Lab ID: 92346162021 Collected: 06/27/17 18:00 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit			Prepared	Analyzed	CAS No.	Qual
			MDL	DF					
8260/5035A Volatile Organics Analytical Method: EPA 8260									
1,1,2-Trichloroethane	ND	ug/kg	5.9	2.5	1		06/30/17 18:31	79-00-5	
Trichloroethene	432	ug/kg	314	132	50		07/02/17 17:36	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.9	2.6	1		06/30/17 18:31	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	5.9	2.2	1		06/30/17 18:31	76-13-1	
Vinyl chloride	ND	ug/kg	11.8	2.1	1		06/30/17 18:31	75-01-4	
m&p-Xylene	ND	ug/kg	11.8	4.3	1		06/30/17 18:31	179601-23-1	
o-Xylene	ND	ug/kg	5.9	2.2	1		06/30/17 18:31	95-47-6	
Surrogates									
Toluene-d8 (S)	105	%	70-130		1		06/30/17 18:31	2037-26-5	
4-Bromofluorobenzene (S)	100	%	70-130		1		06/30/17 18:31	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-132		1		06/30/17 18:31	17060-07-0	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	19.7	%	0.10	0.10	1		07/03/17 12:06		

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-93-42 Lab ID: 92346162022 Collected: 06/28/17 09:00 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260							
Acetone	30.4J	ug/kg	97.3	9.7	1		06/30/17 18:52	67-64-1	
Benzene	ND	ug/kg	4.9	1.6	1		06/30/17 18:52	71-43-2	
Bromochloromethane	ND	ug/kg	4.9	1.7	1		06/30/17 18:52	74-97-5	
Bromodichloromethane	ND	ug/kg	4.9	1.8	1		06/30/17 18:52	75-27-4	
Bromoform	ND	ug/kg	4.9	2.2	1		06/30/17 18:52	75-25-2	
Bromomethane	ND	ug/kg	9.7	2.4	1		06/30/17 18:52	74-83-9	
2-Butanone (MEK)	ND	ug/kg	97.3	2.8	1		06/30/17 18:52	78-93-3	
Carbon disulfide	ND	ug/kg	9.7	2.9	1		06/30/17 18:52	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.9	2.5	1		06/30/17 18:52	56-23-5	
Chlorobenzene	ND	ug/kg	4.9	1.8	1		06/30/17 18:52	108-90-7	
Chloroethane	ND	ug/kg	9.7	2.3	1		06/30/17 18:52	75-00-3	
Chloroform	ND	ug/kg	4.9	1.6	1		06/30/17 18:52	67-66-3	
Chloromethane	ND	ug/kg	9.7	2.3	1		06/30/17 18:52	74-87-3	
Cyclohexane	ND	ug/kg	4.9	1.6	1		06/30/17 18:52	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/kg	4.9	3.5	1		06/30/17 18:52	96-12-8	
Dibromochloromethane	ND	ug/kg	4.9	1.8	1		06/30/17 18:52	124-48-1	
1,2-Dibromethane (EDB)	ND	ug/kg	4.9	1.8	1		06/30/17 18:52	106-93-4	
1,2-Dichlorobenzene	ND	ug/kg	4.9	1.8	1		06/30/17 18:52	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.9	1.9	1		06/30/17 18:52	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.9	1.7	1		06/30/17 18:52	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	9.7	3.5	1		06/30/17 18:52	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.9	1.5	1		06/30/17 18:52	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.9	2.1	1		06/30/17 18:52	107-06-2	
1,1-Dichloroethene	ND	ug/kg	4.9	1.8	1		06/30/17 18:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	4.9	1.4	1		06/30/17 18:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.9	1.8	1		06/30/17 18:52	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.9	1.7	1		06/30/17 18:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	4.9	1.8	1		06/30/17 18:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.9	1.5	1		06/30/17 18:52	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	146	117	1		06/30/17 18:52	123-91-1	
Ethylbenzene	ND	ug/kg	4.9	1.8	1		06/30/17 18:52	100-41-4	
2-Hexanone	ND	ug/kg	48.7	3.8	1		06/30/17 18:52	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.9	1.8	1		06/30/17 18:52	98-82-8	
Methyl acetate	8.1J	ug/kg	9.7	1.4	1		06/30/17 18:52	79-20-9	
Methylcyclohexane	ND	ug/kg	9.7	1.5	1		06/30/17 18:52	108-87-2	
Methylene Chloride	ND	ug/kg	19.5	2.9	1		06/30/17 18:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	48.7	3.6	1		06/30/17 18:52	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.9	1.5	1		06/30/17 18:52	1634-04-4	
Styrene	ND	ug/kg	4.9	1.8	1		06/30/17 18:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.9	1.8	1		06/30/17 18:52	79-34-5	
Tetrachloroethene	ND	ug/kg	4.9	1.7	1		06/30/17 18:52	127-18-4	
Toluene	ND	ug/kg	4.9	1.8	1		06/30/17 18:52	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.9	2.1	1		06/30/17 18:52	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.9	1.6	1		06/30/17 18:52	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.9	1.8	1		06/30/17 18:52	71-55-6	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-93-42 Lab ID: 92346162022 Collected: 06/28/17 09:00 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit			Prepared	Analyzed	CAS No.	Qual
			MDL	DF					
8260/5035A Volatile Organics Analytical Method: EPA 8260									
1,1,2-Trichloroethane	ND	ug/kg	4.9	2.0	1		06/30/17 18:52	79-00-5	
Trichloroethylene	1130	ug/kg	511	215	100		07/03/17 13:25	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.9	2.1	1		06/30/17 18:52	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	4.9	1.8	1		06/30/17 18:52	76-13-1	
Vinyl chloride	ND	ug/kg	9.7	1.8	1		06/30/17 18:52	75-01-4	
m&p-Xylene	ND	ug/kg	9.7	3.5	1		06/30/17 18:52	179601-23-1	
o-Xylene	ND	ug/kg	4.9	1.8	1		06/30/17 18:52	95-47-6	
Surrogates									
Toluene-d8 (S)	104	%	70-130		1		06/30/17 18:52	2037-26-5	
4-Bromofluorobenzene (S)	97	%	70-130		1		06/30/17 18:52	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-132		1		06/30/17 18:52	17060-07-0	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	27.0	%	0.10	0.10	1		07/03/17 12:06		

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-87-31 Lab ID: 92346162023 Collected: 06/28/17 10:40 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260							
Acetone	32.7J	ug/kg	96.5	9.6	1		06/30/17 19:12	67-64-1	
Benzene	ND	ug/kg	4.8	1.5	1		06/30/17 19:12	71-43-2	
Bromochloromethane	ND	ug/kg	4.8	1.6	1		06/30/17 19:12	74-97-5	
Bromodichloromethane	ND	ug/kg	4.8	1.8	1		06/30/17 19:12	75-27-4	
Bromoform	ND	ug/kg	4.8	2.2	1		06/30/17 19:12	75-25-2	
Bromomethane	ND	ug/kg	9.6	2.4	1		06/30/17 19:12	74-83-9	
2-Butanone (MEK)	ND	ug/kg	96.5	2.8	1		06/30/17 19:12	78-93-3	
Carbon disulfide	ND	ug/kg	9.6	2.9	1		06/30/17 19:12	75-15-0	
Carbon tetrachloride	ND	ug/kg	4.8	2.5	1		06/30/17 19:12	56-23-5	
Chlorobenzene	ND	ug/kg	4.8	1.8	1		06/30/17 19:12	108-90-7	
Chloroethane	ND	ug/kg	9.6	2.3	1		06/30/17 19:12	75-00-3	
Chloroform	ND	ug/kg	4.8	1.5	1		06/30/17 19:12	67-66-3	
Chloromethane	ND	ug/kg	9.6	2.3	1		06/30/17 19:12	74-87-3	
Cyclohexane	ND	ug/kg	4.8	1.5	1		06/30/17 19:12	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/kg	4.8	3.5	1		06/30/17 19:12	96-12-8	
Dibromochloromethane	ND	ug/kg	4.8	1.7	1		06/30/17 19:12	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.8	1.7	1		06/30/17 19:12	106-93-4	
1,2-Dichlorobenzene	ND	ug/kg	4.8	1.8	1		06/30/17 19:12	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.8	1.9	1		06/30/17 19:12	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.8	1.6	1		06/30/17 19:12	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	9.6	3.5	1		06/30/17 19:12	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.8	1.4	1		06/30/17 19:12	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.8	2.1	1		06/30/17 19:12	107-06-2	
1,1-Dichloroethene	4.7J	ug/kg	4.8	1.7	1		06/30/17 19:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	4.8	1.4	1		06/30/17 19:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.8	1.8	1		06/30/17 19:12	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.8	1.6	1		06/30/17 19:12	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	4.8	1.7	1		06/30/17 19:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.8	1.4	1		06/30/17 19:12	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	145	116	1		06/30/17 19:12	123-91-1	
Ethylbenzene	ND	ug/kg	4.8	1.7	1		06/30/17 19:12	100-41-4	
2-Hexanone	ND	ug/kg	48.2	3.8	1		06/30/17 19:12	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.8	1.8	1		06/30/17 19:12	98-82-8	
Methyl acetate	10.8	ug/kg	9.6	1.4	1		06/30/17 19:12	79-20-9	
Methylcyclohexane	ND	ug/kg	9.6	1.4	1		06/30/17 19:12	108-87-2	
Methylene Chloride	ND	ug/kg	19.3	2.9	1		06/30/17 19:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	48.2	3.6	1		06/30/17 19:12	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.8	1.4	1		06/30/17 19:12	1634-04-4	
Styrene	ND	ug/kg	4.8	1.7	1		06/30/17 19:12	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.8	1.8	1		06/30/17 19:12	79-34-5	
Tetrachloroethene	2.0J	ug/kg	4.8	1.6	1		06/30/17 19:12	127-18-4	
Toluene	ND	ug/kg	4.8	1.7	1		06/30/17 19:12	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.8	2.1	1		06/30/17 19:12	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.8	1.5	1		06/30/17 19:12	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.8	1.7	1		06/30/17 19:12	71-55-6	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-87-31 Lab ID: 92346162023 Collected: 06/28/17 10:40 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit			Prepared	Analyzed	CAS No.	Qual
			MDL	DF					
8260/5035A Volatile Organics Analytical Method: EPA 8260									
1,1,2-Trichloroethane	ND	ug/kg	4.8	2.0	1		06/30/17 19:12	79-00-5	
Trichloroethene	4630	ug/kg	3390	1420	500		07/02/17 18:17	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.8	2.1	1		06/30/17 19:12	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	4.8	1.8	1		06/30/17 19:12	76-13-1	
Vinyl chloride	ND	ug/kg	9.6	1.7	1		06/30/17 19:12	75-01-4	
m&p-Xylene	ND	ug/kg	9.6	3.5	1		06/30/17 19:12	179601-23-1	
o-Xylene	ND	ug/kg	4.8	1.8	1		06/30/17 19:12	95-47-6	
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		06/30/17 19:12	2037-26-5	
4-Bromofluorobenzene (S)	101	%	70-130		1		06/30/17 19:12	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-132		1		06/30/17 19:12	17060-07-0	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	24.7	%	0.10	0.10	1		07/03/17 12:06		

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-87-48 Lab ID: 92346162024 Collected: 06/28/17 13:40 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260							
Acetone	45.7J	ug/kg	114	11.4	1		06/30/17 20:14	67-64-1	
Benzene	ND	ug/kg	5.7	1.8	1		06/30/17 20:14	71-43-2	
Bromochloromethane	ND	ug/kg	5.7	1.9	1		06/30/17 20:14	74-97-5	
Bromodichloromethane	ND	ug/kg	5.7	2.2	1		06/30/17 20:14	75-27-4	
Bromoform	ND	ug/kg	5.7	2.6	1		06/30/17 20:14	75-25-2	
Bromomethane	ND	ug/kg	11.4	2.9	1		06/30/17 20:14	74-83-9	
2-Butanone (MEK)	ND	ug/kg	114	3.3	1		06/30/17 20:14	78-93-3	
Carbon disulfide	ND	ug/kg	11.4	3.4	1		06/30/17 20:14	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.7	3.0	1		06/30/17 20:14	56-23-5	
Chlorobenzene	ND	ug/kg	5.7	2.2	1		06/30/17 20:14	108-90-7	
Chloroethane	ND	ug/kg	11.4	2.7	1		06/30/17 20:14	75-00-3	
Chloroform	ND	ug/kg	5.7	1.8	1		06/30/17 20:14	67-66-3	
Chloromethane	ND	ug/kg	11.4	2.7	1		06/30/17 20:14	74-87-3	
Cyclohexane	ND	ug/kg	5.7	1.8	1		06/30/17 20:14	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.7	4.1	1		06/30/17 20:14	96-12-8	
Dibromochloromethane	ND	ug/kg	5.7	2.1	1		06/30/17 20:14	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.7	2.1	1		06/30/17 20:14	106-93-4	
1,2-Dichlorobenzene	ND	ug/kg	5.7	2.2	1		06/30/17 20:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.7	2.3	1		06/30/17 20:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.7	1.9	1		06/30/17 20:14	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	11.4	4.1	1		06/30/17 20:14	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.7	1.7	1		06/30/17 20:14	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.7	2.5	1		06/30/17 20:14	107-06-2	
1,1-Dichloroethene	6.2	ug/kg	5.7	2.1	1		06/30/17 20:14	75-35-4	
cis-1,2-Dichloroethene	4.2J	ug/kg	5.7	1.6	1		06/30/17 20:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.7	2.2	1		06/30/17 20:14	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.7	1.9	1		06/30/17 20:14	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	5.7	2.1	1		06/30/17 20:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.7	1.7	1		06/30/17 20:14	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	171	137	1		06/30/17 20:14	123-91-1	
Ethylbenzene	ND	ug/kg	5.7	2.1	1		06/30/17 20:14	100-41-4	
2-Hexanone	ND	ug/kg	57.1	4.5	1		06/30/17 20:14	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.7	2.2	1		06/30/17 20:14	98-82-8	
Methyl acetate	4.3J	ug/kg	11.4	1.6	1		06/30/17 20:14	79-20-9	
Methylcyclohexane	ND	ug/kg	11.4	1.7	1		06/30/17 20:14	108-87-2	
Methylene Chloride	ND	ug/kg	22.8	3.4	1		06/30/17 20:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	57.1	4.2	1		06/30/17 20:14	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.7	1.7	1		06/30/17 20:14	1634-04-4	
Styrene	ND	ug/kg	5.7	2.1	1		06/30/17 20:14	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.7	2.2	1		06/30/17 20:14	79-34-5	
Tetrachloroethene	4.1J	ug/kg	5.7	1.9	1		06/30/17 20:14	127-18-4	
Toluene	ND	ug/kg	5.7	2.1	1		06/30/17 20:14	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.7	2.5	1		06/30/17 20:14	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.7	1.8	1		06/30/17 20:14	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.7	2.1	1		06/30/17 20:14	71-55-6	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-87-48 Lab ID: 92346162024 Collected: 06/28/17 13:40 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit			Prepared	Analyzed	CAS No.	Qual
			MDL	DF					
8260/5035A Volatile Organics Analytical Method: EPA 8260									
1,1,2-Trichloroethane	ND	ug/kg	5.7	2.4	1		06/30/17 20:14	79-00-5	
Trichloroethene	5030	ug/kg	2540	1070	500		07/02/17 18:38	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.7	2.5	1		06/30/17 20:14	75-69-4	
1,1,2-Trichlorotrifluoroethane	2.2J	ug/kg	5.7	2.2	1		06/30/17 20:14	76-13-1	
Vinyl chloride	ND	ug/kg	11.4	2.1	1		06/30/17 20:14	75-01-4	
m&p-Xylene	ND	ug/kg	11.4	4.1	1		06/30/17 20:14	179601-23-1	
o-Xylene	ND	ug/kg	5.7	2.2	1		06/30/17 20:14	95-47-6	
Surrogates									
Toluene-d8 (S)	104	%	70-130		1		06/30/17 20:14	2037-26-5	
4-Bromofluorobenzene (S)	98	%	70-130		1		06/30/17 20:14	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-132		1		06/30/17 20:14	17060-07-0	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	18.1	%	0.10	0.10	1		07/03/17 12:07		

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-90-37 Lab ID: 92346162025 Collected: 06/28/17 17:00 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260							
Acetone	57.7J	ug/kg	113	11.3	1		06/30/17 20:34	67-64-1	
Benzene	6.9	ug/kg	5.7	1.8	1		06/30/17 20:34	71-43-2	
Bromochloromethane	ND	ug/kg	5.7	1.9	1		06/30/17 20:34	74-97-5	
Bromodichloromethane	ND	ug/kg	5.7	2.2	1		06/30/17 20:34	75-27-4	
Bromoform	ND	ug/kg	5.7	2.6	1		06/30/17 20:34	75-25-2	
Bromomethane	ND	ug/kg	11.3	2.8	1		06/30/17 20:34	74-83-9	
2-Butanone (MEK)	ND	ug/kg	113	3.3	1		06/30/17 20:34	78-93-3	
Carbon disulfide	ND	ug/kg	11.3	3.4	1		06/30/17 20:34	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.7	2.9	1		06/30/17 20:34	56-23-5	
Chlorobenzene	ND	ug/kg	5.7	2.2	1		06/30/17 20:34	108-90-7	
Chloroethane	ND	ug/kg	11.3	2.7	1		06/30/17 20:34	75-00-3	
Chloroform	3.5J	ug/kg	5.7	1.8	1		06/30/17 20:34	67-66-3	
Chloromethane	ND	ug/kg	11.3	2.7	1		06/30/17 20:34	74-87-3	
Cyclohexane	ND	ug/kg	5.7	1.8	1		06/30/17 20:34	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.7	4.1	1		06/30/17 20:34	96-12-8	
Dibromochloromethane	ND	ug/kg	5.7	2.0	1		06/30/17 20:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.7	2.0	1		06/30/17 20:34	106-93-4	
1,2-Dichlorobenzene	ND	ug/kg	5.7	2.2	1		06/30/17 20:34	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.7	2.3	1		06/30/17 20:34	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.7	1.9	1		06/30/17 20:34	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	11.3	4.1	1		06/30/17 20:34	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.7	1.7	1		06/30/17 20:34	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.7	2.5	1		06/30/17 20:34	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.7	2.0	1		06/30/17 20:34	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.7	1.6	1		06/30/17 20:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.7	2.2	1		06/30/17 20:34	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.7	1.9	1		06/30/17 20:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	5.7	2.0	1		06/30/17 20:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.7	1.7	1		06/30/17 20:34	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	170	136	1		06/30/17 20:34	123-91-1	
Ethylbenzene	4.2J	ug/kg	5.7	2.0	1		06/30/17 20:34	100-41-4	
2-Hexanone	ND	ug/kg	56.6	4.4	1		06/30/17 20:34	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.7	2.2	1		06/30/17 20:34	98-82-8	
Methyl acetate	4.9J	ug/kg	11.3	1.6	1		06/30/17 20:34	79-20-9	
Methylcyclohexane	ND	ug/kg	11.3	1.7	1		06/30/17 20:34	108-87-2	
Methylene Chloride	ND	ug/kg	22.6	3.4	1		06/30/17 20:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	56.6	4.2	1		06/30/17 20:34	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.7	1.7	1		06/30/17 20:34	1634-04-4	
Styrene	ND	ug/kg	5.7	2.0	1		06/30/17 20:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.7	2.2	1		06/30/17 20:34	79-34-5	
Tetrachloroethene	ND	ug/kg	5.7	1.9	1		06/30/17 20:34	127-18-4	
Toluene	2.3J	ug/kg	5.7	2.0	1		06/30/17 20:34	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.7	2.5	1		06/30/17 20:34	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.7	1.8	1		06/30/17 20:34	120-82-1	
1,1,1-Trichloroethane	4.3J	ug/kg	5.7	2.0	1		06/30/17 20:34	71-55-6	

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-90-37 Lab ID: 92346162025 Collected: 06/28/17 17:00 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit			Prepared	Analyzed	CAS No.	Qual
			MDL	DF					
8260/5035A Volatile Organics Analytical Method: EPA 8260									
1,1,2-Trichloroethane	ND	ug/kg	5.7	2.4	1		06/30/17 20:34	79-00-5	
Trichloroethene	1950	ug/kg	604	254	100		07/02/17 18:58	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.7	2.5	1		06/30/17 20:34	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	5.7	2.2	1		06/30/17 20:34	76-13-1	
Vinyl chloride	ND	ug/kg	11.3	2.0	1		06/30/17 20:34	75-01-4	
m&p-Xylene	10.9J	ug/kg	11.3	4.1	1		06/30/17 20:34	179601-23-1	
o-Xylene	9.0	ug/kg	5.7	2.2	1		06/30/17 20:34	95-47-6	
Surrogates									
Toluene-d8 (S)	103	%	70-130		1		06/30/17 20:34	2037-26-5	
4-Bromofluorobenzene (S)	99	%	70-130		1		06/30/17 20:34	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-132		1		06/30/17 20:34	17060-07-0	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	25.5	%	0.10	0.10	1		07/03/17 12:07		

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-102-53 Lab ID: 92346162026 Collected: 06/29/17 00:00 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics		Analytical Method: EPA 8260							
Acetone	49.9J	ug/kg	99.0	9.9	1		06/30/17 20:55	67-64-1	
Benzene	11.8	ug/kg	5.0	1.6	1		06/30/17 20:55	71-43-2	
Bromochloromethane	ND	ug/kg	5.0	1.7	1		06/30/17 20:55	74-97-5	
Bromodichloromethane	ND	ug/kg	5.0	1.9	1		06/30/17 20:55	75-27-4	
Bromoform	ND	ug/kg	5.0	2.3	1		06/30/17 20:55	75-25-2	
Bromomethane	ND	ug/kg	9.9	2.5	1		06/30/17 20:55	74-83-9	
2-Butanone (MEK)	ND	ug/kg	99.0	2.9	1		06/30/17 20:55	78-93-3	
Carbon disulfide	ND	ug/kg	9.9	3.0	1		06/30/17 20:55	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.0	2.6	1		06/30/17 20:55	56-23-5	
Chlorobenzene	ND	ug/kg	5.0	1.9	1		06/30/17 20:55	108-90-7	
Chloroethane	ND	ug/kg	9.9	2.4	1		06/30/17 20:55	75-00-3	
Chloroform	ND	ug/kg	5.0	1.6	1		06/30/17 20:55	67-66-3	
Chloromethane	ND	ug/kg	9.9	2.4	1		06/30/17 20:55	74-87-3	
Cyclohexane	ND	ug/kg	5.0	1.6	1		06/30/17 20:55	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.0	3.6	1		06/30/17 20:55	96-12-8	
Dibromochloromethane	ND	ug/kg	5.0	1.8	1		06/30/17 20:55	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	1.8	1		06/30/17 20:55	106-93-4	
1,2-Dichlorobenzene	ND	ug/kg	5.0	1.9	1		06/30/17 20:55	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.0	2.0	1		06/30/17 20:55	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.0	1.7	1		06/30/17 20:55	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	9.9	3.6	1		06/30/17 20:55	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.0	1.5	1		06/30/17 20:55	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.0	2.2	1		06/30/17 20:55	107-06-2	
1,1-Dichloroethene	2.0J	ug/kg	5.0	1.8	1		06/30/17 20:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.0	1.4	1		06/30/17 20:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.0	1.9	1		06/30/17 20:55	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.0	1.7	1		06/30/17 20:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/kg	5.0	1.8	1		06/30/17 20:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.0	1.5	1		06/30/17 20:55	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	149	119	1		06/30/17 20:55	123-91-1	
Ethylbenzene	3.5J	ug/kg	5.0	1.8	1		06/30/17 20:55	100-41-4	
2-Hexanone	ND	ug/kg	49.5	3.9	1		06/30/17 20:55	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	1.9	1		06/30/17 20:55	98-82-8	
Methyl acetate	5.7J	ug/kg	9.9	1.4	1		06/30/17 20:55	79-20-9	
Methylcyclohexane	ND	ug/kg	9.9	1.5	1		06/30/17 20:55	108-87-2	
Methylene Chloride	ND	ug/kg	19.8	3.0	1		06/30/17 20:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	49.5	3.7	1		06/30/17 20:55	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.0	1.5	1		06/30/17 20:55	1634-04-4	
Styrene	ND	ug/kg	5.0	1.8	1		06/30/17 20:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	1.9	1		06/30/17 20:55	79-34-5	
Tetrachloroethene	ND	ug/kg	5.0	1.7	1		06/30/17 20:55	127-18-4	
Toluene	6.5	ug/kg	5.0	1.8	1		06/30/17 20:55	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.0	2.2	1		06/30/17 20:55	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.0	1.6	1		06/30/17 20:55	120-82-1	
1,1,1-Trichloroethane	8.4	ug/kg	5.0	1.8	1		06/30/17 20:55	71-55-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Sample: SS-102-53 Lab ID: 92346162026 Collected: 06/29/17 00:00 Received: 06/29/17 15:05 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report	MDL	DF	Prepared	Analyzed	CAS No.	Qual
			Limit						
8260/5035A Volatile Organics Analytical Method: EPA 8260									
1,1,2-Trichloroethane	ND	ug/kg	5.0	2.1	1		06/30/17 20:55	79-00-5	
Trichloroethylene	438	ug/kg	259	109	50		07/02/17 19:19	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.0	2.2	1		06/30/17 20:55	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	5.0	1.9	1		06/30/17 20:55	76-13-1	
Vinyl chloride	ND	ug/kg	9.9	1.8	1		06/30/17 20:55	75-01-4	
m&p-Xylene	17.2	ug/kg	9.9	3.6	1		06/30/17 20:55	179601-23-1	
o-Xylene	13.0	ug/kg	5.0	1.9	1		06/30/17 20:55	95-47-6	
Surrogates									
Toluene-d8 (S)	103	%	70-130		1		06/30/17 20:55	2037-26-5	
4-Bromofluorobenzene (S)	101	%	70-130		1		06/30/17 20:55	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-132		1		06/30/17 20:55	17060-07-0	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	18.4	%	0.10	0.10	1		07/03/17 12:07		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE

Pace Project No.: 92346162

QC Batch:	367365	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV Low Level
Associated Lab Samples:	92346162001		

METHOD BLANK: 2036610 Matrix: Water

Associated Lab Samples: 92346162001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	06/30/17 22:12	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.40	06/30/17 22:12	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	06/30/17 22:12	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	0.19	06/30/17 22:12	
1,1-Dichloroethane	ug/L	ND	1.0	0.32	06/30/17 22:12	
1,1-Dichloroethene	ug/L	ND	1.0	0.56	06/30/17 22:12	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.33	06/30/17 22:12	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.35	06/30/17 22:12	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	2.0	06/30/17 22:12	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	06/30/17 22:12	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.30	06/30/17 22:12	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	06/30/17 22:12	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	06/30/17 22:12	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.24	06/30/17 22:12	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	06/30/17 22:12	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	78.4	06/30/17 22:12	
2-Butanone (MEK)	ug/L	ND	5.0	0.96	06/30/17 22:12	
2-Hexanone	ug/L	ND	5.0	0.46	06/30/17 22:12	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	0.33	06/30/17 22:12	
Acetone	ug/L	ND	25.0	10.0	06/30/17 22:12	
Benzene	ug/L	ND	1.0	0.25	06/30/17 22:12	
Bromochloromethane	ug/L	ND	1.0	0.17	06/30/17 22:12	
Bromodichloromethane	ug/L	ND	1.0	0.18	06/30/17 22:12	
Bromoform	ug/L	ND	1.0	0.26	06/30/17 22:12	
Bromomethane	ug/L	ND	2.0	0.29	06/30/17 22:12	
Carbon disulfide	ug/L	ND	2.0	1.2	06/30/17 22:12	
Carbon tetrachloride	ug/L	ND	1.0	0.25	06/30/17 22:12	
Chlorobenzene	ug/L	ND	1.0	0.23	06/30/17 22:12	
Chloroethane	ug/L	ND	1.0	0.54	06/30/17 22:12	
Chloroform	ug/L	ND	1.0	0.14	06/30/17 22:12	
Chloromethane	ug/L	ND	1.0	0.11	06/30/17 22:12	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.19	06/30/17 22:12	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	06/30/17 22:12	
Cyclohexane	ug/L	ND	1.0	0.36	06/30/17 22:12	
Dibromochloromethane	ug/L	ND	1.0	0.21	06/30/17 22:12	
Dichlorodifluoromethane	ug/L	ND	1.0	0.21	06/30/17 22:12	
Ethylbenzene	ug/L	ND	1.0	0.30	06/30/17 22:12	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.40	06/30/17 22:12	
m&p-Xylene	ug/L	ND	2.0	0.66	06/30/17 22:12	
Methyl acetate	ug/L	ND	10.0	0.82	06/30/17 22:12	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.21	06/30/17 22:12	

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REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

METHOD BLANK: 2036610 Matrix: Water
Associated Lab Samples: 92346162001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylcyclohexane	ug/L	ND	10.0	1.9	06/30/17 22:12	
Methylene Chloride	ug/L	ND	2.0	0.97	06/30/17 22:12	
o-Xylene	ug/L	ND	1.0	0.23	06/30/17 22:12	
Styrene	ug/L	ND	1.0	0.26	06/30/17 22:12	
Tetrachloroethene	ug/L	ND	1.0	0.46	06/30/17 22:12	
Toluene	ug/L	ND	1.0	0.26	06/30/17 22:12	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.49	06/30/17 22:12	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	06/30/17 22:12	
Trichloroethene	ug/L	ND	1.0	0.47	06/30/17 22:12	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	06/30/17 22:12	
Vinyl chloride	ug/L	ND	1.0	0.62	06/30/17 22:12	
1,2-Dichloroethane-d4 (S)	%	99	70-130		06/30/17 22:12	
4-Bromofluorobenzene (S)	%	106	70-130		06/30/17 22:12	
Toluene-d8 (S)	%	107	70-130		06/30/17 22:12	

LABORATORY CONTROL SAMPLE: 2036611

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	45.7	91	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	48.9	98	70-130	
1,1,2-Trichloroethane	ug/L	50	50.1	100	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	47.8	96	70-130	
1,1-Dichloroethane	ug/L	50	45.5	91	70-130	
1,1-Dichloroethene	ug/L	50	43.5	87	70-132	
1,2,3-Trichlorobenzene	ug/L	50	52.4	105	70-135	
1,2,4-Trichlorobenzene	ug/L	50	50.8	102	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	50.8	102	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	52.0	104	70-130	
1,2-Dichlorobenzene	ug/L	50	49.5	99	70-130	
1,2-Dichloroethane	ug/L	50	43.1	86	70-130	
1,2-Dichloropropane	ug/L	50	48.9	98	70-130	
1,3-Dichlorobenzene	ug/L	50	49.4	99	70-130	
1,4-Dichlorobenzene	ug/L	50	49.2	98	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	1560	156	71-125 L1	
2-Butanone (MEK)	ug/L	100	98.3	98	70-145	
2-Hexanone	ug/L	100	105	105	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	99.9	100	70-140	
Acetone	ug/L	100	111	111	50-175	
Benzene	ug/L	50	49.9	100	70-130	
Bromochloromethane	ug/L	50	47.0	94	70-130	
Bromodichloromethane	ug/L	50	46.5	93	70-130	
Bromoform	ug/L	50	46.5	93	70-130	
Bromomethane	ug/L	50	47.1	94	54-130	
Carbon disulfide	ug/L	50	49.6	99	70-131	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE

Pace Project No.: 92346162

LABORATORY CONTROL SAMPLE: 2036611

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	46.1	92	70-132	
Chlorobenzene	ug/L	50	47.2	94	70-130	
Chloroethane	ug/L	50	41.2	82	64-134	
Chloroform	ug/L	50	43.5	87	70-130	
Chloromethane	ug/L	50	50.5	101	64-130	
cis-1,2-Dichloroethene	ug/L	50	45.5	91	70-131	
cis-1,3-Dichloropropene	ug/L	50	52.7	105	70-130	
Cyclohexane	ug/L	50	50.9	102	70-130	
Dibromochloromethane	ug/L	50	52.4	105	70-130	
Dichlorodifluoromethane	ug/L	50	38.3	77	56-130	
Ethylbenzene	ug/L	50	47.9	96	70-130	
Isopropylbenzene (Cumene)	ug/L	50	46.7	93	70-130	
m&p-Xylene	ug/L	100	93.0	93	70-130	
Methyl acetate	ug/L	50	48.1	96	70-130	
Methyl-tert-butyl ether	ug/L	50	51.2	102	70-130	
Methylcyclohexane	ug/L	50	49.0	98	70-130	
Methylene Chloride	ug/L	50	49.4	99	63-130	
o-Xylene	ug/L	50	48.5	97	70-130	
Styrene	ug/L	50	48.1	96	70-130	
Tetrachloroethene	ug/L	50	45.4	91	70-130	
Toluene	ug/L	50	46.8	94	70-130	
trans-1,2-Dichloroethene	ug/L	50	44.8	90	70-130	
trans-1,3-Dichloropropene	ug/L	50	52.2	104	70-132	
Trichloroethene	ug/L	50	49.8	100	70-130	
Trichlorofluoromethane	ug/L	50	43.8	88	62-133	
Vinyl chloride	ug/L	50	40.7	81	50-150	
1,2-Dichloroethane-d4 (S)	%			95	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2036612 2036613

Parameter	Units	MS Spike		MSD Spike		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits		Max	
		92346121005	Result	Conc.	Conc.					RPD	RPD	Qual	
1,1,1-Trichloroethane	ug/L	ND	20	20	20.2	18.3	101	91	70-130	10	30		
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	18.8	17.1	94	85	70-130	10	30		
1,1,2-Trichloroethane	ug/L	ND	20	20	18.2	16.5	91	83	70-130	10	30		
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	20	23.6	20.3	118	102	70-130	15	30		
1,1-Dichloroethane	ug/L	ND	20	20	20.7	18.3	104	92	70-130	12	30		
1,1-Dichloroethene	ug/L	ND	20	20	22.3	20.2	111	101	70-166	10	30		
1,2,3-Trichlorobenzene	ug/L	ND	20	20	23.4	19.3	117	97	70-130	19	30		
1,2,4-Trichlorobenzene	ug/L	ND	20	20	25.4	18.9	127	94	70-130	30	30		
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20	20.6	16.4	103	82	70-130	23	30		
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	18.0	17.9	90	90	70-130	0	30		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Parameter	Units	92346121005		MS		MSD		2036613		% Rec	Limits	RPD	Max RPD	Max Qual
		Result	Spike Conc.	Spike	Conc.	MS Result	MSD	MS % Rec	MSD % Rec					
1,2-Dichlorobenzene	ug/L	ND	20	20	20.5	17.8	102	89	70-130	14	30			
1,2-Dichloroethane	ug/L	ND	20	20	19.1	17.6	95	88	70-130	8	30			
1,2-Dichloropropane	ug/L	ND	20	20	20.5	17.8	102	89	70-130	14	30			
1,3-Dichlorobenzene	ug/L	ND	20	20	20.4	17.5	102	88	70-130	15	30			
1,4-Dichlorobenzene	ug/L	ND	20	20	19.6	17.2	98	86	70-130	13	30			
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	400	1420	946	355	236	70-130	40	30	M0,R1		
2-Butanone (MEK)	ug/L	ND	40	40	39.0	36.2	98	90	70-130	8	30			
2-Hexanone	ug/L	ND	40	40	43.2	35.9	108	90	70-130	18	30			
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	40	38.1	34.0	95	85	70-130	12	30			
Acetone	ug/L	25.5	40	40	76.1	55.4	126	75	70-130	31	30	R1		
Benzene	ug/L	ND	20	20	20.2	18.5	101	93	70-148	9	30			
Bromochloromethane	ug/L	ND	20	20	20.6	18.8	103	94	70-130	9	30			
Bromodichloromethane	ug/L	ND	20	20	19.3	16.6	96	83	70-130	15	30			
Bromoform	ug/L	ND	20	20	16.9	15.5	84	77	70-130	9	30			
Bromomethane	ug/L	ND	20	20	23.5	20.6	118	103	70-130	13	30			
Carbon disulfide	ug/L	ND	20	20	21.1	18.7	106	93	70-130	12	30			
Carbon tetrachloride	ug/L	ND	20	20	20.9	18.9	104	94	70-130	10	30			
Chlorobenzene	ug/L	ND	20	20	18.9	17.8	95	89	70-146	6	30			
Chloroethane	ug/L	ND	20	20	18.5	17.6	92	88	70-130	5	30			
Chloroform	ug/L	ND	20	20	20.5	18.7	103	93	70-130	9	30			
Chloromethane	ug/L	ND	20	20	23.5	19.9	117	100	70-130	16	30			
cis-1,2-Dichloroethene	ug/L	ND	20	20	20.3	18.1	101	90	70-130	12	30			
cis-1,3-Dichloropropene	ug/L	ND	20	20	20.1	17.9	100	90	70-130	12	30			
Cyclohexane	ug/L	ND	20	20	23.1	20.7	116	104	70-130	11	30			
Dibromochloromethane	ug/L	ND	20	20	17.6	15.8	88	79	70-130	11	30			
Dichlorodifluoromethane	ug/L	ND	20	20	18.6	17.0	93	85	70-130	9	30			
Ethylbenzene	ug/L	ND	20	20	20.2	18.5	101	93	70-130	9	30			
Isopropylbenzene (Cumene)	ug/L	ND	20	20	20.3	18.2	102	91	70-130	11	30			
m&p-Xylene	ug/L	ND	40	40	39.6	35.9	99	90	70-130	10	30			
Methyl acetate	ug/L	ND	20	20	19.3	18.4	96	92	70-130	4	30			
Methyl-tert-butyl ether	ug/L	ND	20	20	18.8	16.7	94	83	70-130	12	30			
Methylcyclohexane	ug/L	ND	20	20	21.1	18.9	105	95	70-130	11	30			
Methylene Chloride	ug/L	ND	20	20	20.0	17.8	100	89	70-130	12	30			
o-Xylene	ug/L	ND	20	20	19.4	17.9	97	89	70-130	8	30			
Styrene	ug/L	ND	20	20	19.3	18.4	97	92	70-130	5	30			
Tetrachloroethene	ug/L	1.9	20	20	21.7	20.0	99	90	70-130	8	30			
Toluene	ug/L	ND	20	20	19.7	17.7	98	89	70-155	10	30			
trans-1,2-Dichloroethene	ug/L	ND	20	20	20.8	18.4	104	92	70-130	12	30			
trans-1,3-Dichloropropene	ug/L	ND	20	20	18.3	17.0	92	85	70-130	8	30			
Trichloroethene	ug/L	ND	20	20	19.5	19.0	98	95	69-151	3	30			
Trichlorofluoromethane	ug/L	ND	20	20	19.9	19.3	99	97	70-130	3	30			
Vinyl chloride	ug/L	ND	20	20	20.7	19.1	103	95	70-130	8	30			
1,2-Dichloroethane-d4 (S)	%						99	102	70-130					
4-Bromofluorobenzene (S)	%						103	103	70-130					
Toluene-d8 (S)	%						98	97	70-130					

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE

Pace Project No.: 92346162

QC Batch:	367368	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV Low Level
Associated Lab Samples:	92346162008		

METHOD BLANK: 2036633 Matrix: Water

Associated Lab Samples: 92346162008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	07/01/17 07:11	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.40	07/01/17 07:11	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	07/01/17 07:11	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	0.19	07/01/17 07:11	
1,1-Dichloroethane	ug/L	ND	1.0	0.32	07/01/17 07:11	
1,1-Dichloroethene	ug/L	ND	1.0	0.56	07/01/17 07:11	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.33	07/01/17 07:11	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.35	07/01/17 07:11	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	2.0	07/01/17 07:11	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	07/01/17 07:11	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.30	07/01/17 07:11	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	07/01/17 07:11	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	07/01/17 07:11	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.24	07/01/17 07:11	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	07/01/17 07:11	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	78.4	07/01/17 07:11	
2-Butanone (MEK)	ug/L	ND	5.0	0.96	07/01/17 07:11	
2-Hexanone	ug/L	ND	5.0	0.46	07/01/17 07:11	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	0.33	07/01/17 07:11	
Acetone	ug/L	ND	25.0	10.0	07/01/17 07:11	
Benzene	ug/L	ND	1.0	0.25	07/01/17 07:11	
Bromochloromethane	ug/L	ND	1.0	0.17	07/01/17 07:11	
Bromodichloromethane	ug/L	ND	1.0	0.18	07/01/17 07:11	
Bromoform	ug/L	ND	1.0	0.26	07/01/17 07:11	
Bromomethane	ug/L	ND	2.0	0.29	07/01/17 07:11	
Carbon disulfide	ug/L	ND	2.0	1.2	07/01/17 07:11	
Carbon tetrachloride	ug/L	ND	1.0	0.25	07/01/17 07:11	
Chlorobenzene	ug/L	ND	1.0	0.23	07/01/17 07:11	
Chloroethane	ug/L	ND	1.0	0.54	07/01/17 07:11	
Chloroform	ug/L	ND	1.0	0.14	07/01/17 07:11	
Chloromethane	ug/L	ND	1.0	0.11	07/01/17 07:11	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.19	07/01/17 07:11	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	07/01/17 07:11	
Cyclohexane	ug/L	ND	1.0	0.36	07/01/17 07:11	
Dibromochloromethane	ug/L	ND	1.0	0.21	07/01/17 07:11	
Dichlorodifluoromethane	ug/L	ND	1.0	0.21	07/01/17 07:11	
Ethylbenzene	ug/L	ND	1.0	0.30	07/01/17 07:11	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.40	07/01/17 07:11	
m&p-Xylene	ug/L	ND	2.0	0.66	07/01/17 07:11	
Methyl acetate	ug/L	ND	10.0	0.82	07/01/17 07:11	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.21	07/01/17 07:11	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE

Pace Project No.: 92346162

METHOD BLANK: 2036633

Matrix: Water

Associated Lab Samples: 92346162008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylcyclohexane	ug/L	ND	10.0	1.9	07/01/17 07:11	
Methylene Chloride	ug/L	ND	2.0	0.97	07/01/17 07:11	
o-Xylene	ug/L	ND	1.0	0.23	07/01/17 07:11	
Styrene	ug/L	ND	1.0	0.26	07/01/17 07:11	
Tetrachloroethene	ug/L	ND	1.0	0.46	07/01/17 07:11	
Toluene	ug/L	ND	1.0	0.26	07/01/17 07:11	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.49	07/01/17 07:11	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	07/01/17 07:11	
Trichloroethene	ug/L	ND	1.0	0.47	07/01/17 07:11	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	07/01/17 07:11	
Vinyl chloride	ug/L	ND	1.0	0.62	07/01/17 07:11	
1,2-Dichloroethane-d4 (S)	%	102	70-130		07/01/17 07:11	
4-Bromofluorobenzene (S)	%	104	70-130		07/01/17 07:11	
Toluene-d8 (S)	%	104	70-130		07/01/17 07:11	

LABORATORY CONTROL SAMPLE: 2036634

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	48.3	97	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	49.7	99	70-130	
1,1,2-Trichloroethane	ug/L	50	49.3	99	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	47.9	96	70-130	
1,1-Dichloroethane	ug/L	50	46.5	93	70-130	
1,1-Dichloroethene	ug/L	50	45.4	91	70-132	
1,2,3-Trichlorobenzene	ug/L	50	48.5	97	70-135	
1,2,4-Trichlorobenzene	ug/L	50	49.2	98	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	54.1	108	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	52.1	104	70-130	
1,2-Dichlorobenzene	ug/L	50	47.7	95	70-130	
1,2-Dichloroethane	ug/L	50	44.8	90	70-130	
1,2-Dichloropropane	ug/L	50	48.3	97	70-130	
1,3-Dichlorobenzene	ug/L	50	48.3	97	70-130	
1,4-Dichlorobenzene	ug/L	50	47.9	96	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	1450	145	71-125 L1	
2-Butanone (MEK)	ug/L	100	108	108	70-145	
2-Hexanone	ug/L	100	112	112	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	105	105	70-140	
Acetone	ug/L	100	113	113	50-175	
Benzene	ug/L	50	48.4	97	70-130	
Bromochloromethane	ug/L	50	49.1	98	70-130	
Bromodichloromethane	ug/L	50	47.9	96	70-130	
Bromoform	ug/L	50	49.0	98	70-130	
Bromomethane	ug/L	50	45.4	91	54-130	
Carbon disulfide	ug/L	50	50.4	101	70-131	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

LABORATORY CONTROL SAMPLE: 2036634

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	48.2	96	70-132	
Chlorobenzene	ug/L	50	47.1	94	70-130	
Chloroethane	ug/L	50	45.9	92	64-134	
Chloroform	ug/L	50	44.9	90	70-130	
Chloromethane	ug/L	50	51.5	103	64-130	
cis-1,2-Dichloroethene	ug/L	50	46.3	93	70-131	
cis-1,3-Dichloropropene	ug/L	50	52.7	105	70-130	
Cyclohexane	ug/L	50	52.9	106	70-130	
Dibromochloromethane	ug/L	50	52.4	105	70-130	
Dichlorodifluoromethane	ug/L	50	40.1	80	56-130	
Ethylbenzene	ug/L	50	48.3	97	70-130	
Isopropylbenzene (Cumene)	ug/L	50	47.5	95	70-130	
m&p-Xylene	ug/L	100	94.3	94	70-130	
Methyl acetate	ug/L	50	52.7	105	70-130	
Methyl-tert-butyl ether	ug/L	50	51.6	103	70-130	
Methylcyclohexane	ug/L	50	47.4	95	70-130	
Methylene Chloride	ug/L	50	50.5	101	63-130	
o-Xylene	ug/L	50	49.5	99	70-130	
Styrene	ug/L	50	49.8	100	70-130	
Tetrachloroethene	ug/L	50	44.8	90	70-130	
Toluene	ug/L	50	46.3	93	70-130	
trans-1,2-Dichloroethene	ug/L	50	46.1	92	70-130	
trans-1,3-Dichloropropene	ug/L	50	50.9	102	70-132	
Trichloroethene	ug/L	50	49.7	99	70-130	
Trichlorofluoromethane	ug/L	50	45.3	91	62-133	
Vinyl chloride	ug/L	50	43.0	86	50-150	
1,2-Dichloroethane-d4 (S)	%			92	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2036635 2036636

Parameter	Units	MS Spike		MSD Spike		MS Result	MS % Rec	MSD Result	MSD % Rec	% Rec Limits		Max	
		92346112003	Conc.	Conc.	Result					RPD	RPD	Qual	
1,1,1-Trichloroethane	ug/L	ND	20	20	17.9	16.5	90	82	70-130	8	30		
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	17.3	15.3	87	77	70-130	12	30		
1,1,2-Trichloroethane	ug/L	ND	20	20	17.3	16.3	86	81	70-130	6	30		
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	20	21.5	16.9	108	85	70-130	24	30		
1,1-Dichloroethane	ug/L	ND	20	20	18.4	16.3	92	82	70-130	12	30		
1,1-Dichloroethene	ug/L	ND	20	20	18.5	17.0	92	85	70-166	8	30		
1,2,3-Trichlorobenzene	ug/L	ND	20	20	18.8	18.3	94	91	70-130	3	30		
1,2,4-Trichlorobenzene	ug/L	ND	20	20	19.6	16.5	98	82	70-130	17	30		
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20	19.2	16.4	96	82	70-130	15	30		
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	17.5	15.8	88	79	70-130	11	30		

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Parameter	Units	92346112003		MS		MSD		2036636				
		Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Max Qual
1,2-Dichlorobenzene	ug/L	ND	20	20	18.0	16.4	90	82	70-130	9	30	
1,2-Dichloroethane	ug/L	ND	20	20	17.5	15.5	88	78	70-130	12	30	
1,2-Dichloropropane	ug/L	ND	20	20	18.8	16.2	94	81	70-130	15	30	
1,3-Dichlorobenzene	ug/L	ND	20	20	18.0	15.5	90	78	70-130	15	30	
1,4-Dichlorobenzene	ug/L	ND	20	20	17.9	15.9	90	79	70-130	12	30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	400	814	657	203	164	70-130	21	30	M0
2-Butanone (MEK)	ug/L	ND	40	40	36.4	32.0	91	80	70-130	13	30	
2-Hexanone	ug/L	ND	40	40	36.9	31.8	92	80	70-130	15	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	40	34.6	32.6	87	82	70-130	6	30	
Acetone	ug/L	ND	40	40	57.6	40.3	97	54	70-130	35	30	M1,R1
Benzene	ug/L	ND	20	20	18.4	16.8	92	84	70-148	9	30	
Bromochloromethane	ug/L	ND	20	20	18.9	17.4	95	87	70-130	8	30	
Bromodichloromethane	ug/L	ND	20	20	17.9	16.7	89	84	70-130	7	30	
Bromoform	ug/L	ND	20	20	14.6	13.3	73	66	70-130	9	30	M1
Bromomethane	ug/L	ND	20	20	21.4	20.0	107	100	70-130	7	30	
Carbon disulfide	ug/L	ND	20	20	18.7	16.3	94	81	70-130	14	30	
Carbon tetrachloride	ug/L	ND	20	20	19.9	18.1	100	90	70-130	10	30	
Chlorobenzene	ug/L	ND	20	20	17.5	16.4	88	82	70-146	7	30	
Chloroethane	ug/L	ND	20	20	17.8	15.4	89	77	70-130	15	30	
Chloroform	ug/L	ND	20	20	18.4	16.4	92	82	70-130	11	30	
Chloromethane	ug/L	ND	20	20	21.1	17.9	105	89	70-130	16	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	18.6	16.6	93	83	70-130	11	30	
cis-1,3-Dichloropropene	ug/L	ND	20	20	18.3	16.7	92	83	70-130	10	30	
Cyclohexane	ug/L	ND	20	20	21.0	18.0	105	90	70-130	16	30	
Dibromochloromethane	ug/L	ND	20	20	16.5	14.9	83	75	70-130	10	30	
Dichlorodifluoromethane	ug/L	ND	20	20	16.9	14.2	85	71	70-130	18	30	
Ethylbenzene	ug/L	ND	20	20	18.4	16.6	92	83	70-130	10	30	
Isopropylbenzene (Cumene)	ug/L	ND	20	20	18.2	16.0	91	80	70-130	12	30	
m&p-Xylene	ug/L	ND	40	40	36.1	32.6	90	81	70-130	10	30	
Methyl acetate	ug/L	ND	20	20	17.6	13.7	88	69	70-130	25	30	M1
Methyl-tert-butyl ether	ug/L	ND	20	20	17.2	14.7	86	73	70-130	16	30	
Methylcyclohexane	ug/L	ND	20	20	19.3	17.6	97	88	70-130	9	30	
Methylene Chloride	ug/L	ND	20	20	16.7	15.4	84	77	70-130	8	30	
o-Xylene	ug/L	ND	20	20	18.4	16.3	92	82	70-130	12	30	
Styrene	ug/L	ND	20	20	18.3	16.2	91	81	70-130	12	30	
Tetrachloroethene	ug/L	13.5	20	20	33.3	28.9	99	77	70-130	14	30	
Toluene	ug/L	ND	20	20	18.0	16.4	90	82	70-155	9	30	
trans-1,2-Dichloroethene	ug/L	ND	20	20	18.3	16.2	91	81	70-130	12	30	
trans-1,3-Dichloropropene	ug/L	ND	20	20	17.2	15.3	86	76	70-130	12	30	
Trichloroethene	ug/L	ND	20	20	18.0	16.8	90	84	69-151	7	30	
Trichlorofluoromethane	ug/L	ND	20	20	17.6	16.9	88	85	70-130	4	30	
Vinyl chloride	ug/L	ND	20	20	18.7	16.4	93	82	70-130	13	30	
1,2-Dichloroethane-d4 (S)	%						98	96	70-130			
4-Bromofluorobenzene (S)	%						101	101	70-130			
Toluene-d8 (S)	%						97	100	70-130			

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE

Pace Project No.: 92346162

QC Batch:	367463	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV Low Level
Associated Lab Samples:	92346162002, 92346162003, 92346162004, 92346162005, 92346162006, 92346162007, 92346162009, 92346162010, 92346162011		

METHOD BLANK:	2037002	Matrix:	Water
Associated Lab Samples:	92346162002, 92346162003, 92346162004, 92346162005, 92346162006, 92346162007, 92346162009, 92346162010, 92346162011		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	07/02/17 23:19	
1,1,2-Tetrachloroethane	ug/L	ND	1.0	0.40	07/02/17 23:19	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	07/02/17 23:19	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	0.19	07/02/17 23:19	
1,1-Dichloroethane	ug/L	ND	1.0	0.32	07/02/17 23:19	
1,1-Dichloroethene	ug/L	ND	1.0	0.56	07/02/17 23:19	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.33	07/02/17 23:19	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.35	07/02/17 23:19	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	2.0	07/02/17 23:19	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	07/02/17 23:19	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.30	07/02/17 23:19	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	07/02/17 23:19	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	07/02/17 23:19	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.24	07/02/17 23:19	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	07/02/17 23:19	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	78.4	07/02/17 23:19	
2-Butanone (MEK)	ug/L	ND	5.0	0.96	07/02/17 23:19	
2-Hexanone	ug/L	ND	5.0	0.46	07/02/17 23:19	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	0.33	07/02/17 23:19	
Acetone	ug/L	ND	25.0	10.0	07/02/17 23:19	
Benzene	ug/L	ND	1.0	0.25	07/02/17 23:19	
Bromochloromethane	ug/L	ND	1.0	0.17	07/02/17 23:19	
Bromodichloromethane	ug/L	ND	1.0	0.18	07/02/17 23:19	
Bromoform	ug/L	ND	1.0	0.26	07/02/17 23:19	
Bromomethane	ug/L	ND	2.0	0.29	07/02/17 23:19	
Carbon disulfide	ug/L	ND	2.0	1.2	07/02/17 23:19	
Carbon tetrachloride	ug/L	ND	1.0	0.25	07/02/17 23:19	
Chlorobenzene	ug/L	ND	1.0	0.23	07/02/17 23:19	
Chloroethane	ug/L	ND	1.0	0.54	07/02/17 23:19	
Chloroform	ug/L	ND	1.0	0.14	07/02/17 23:19	
Chloromethane	ug/L	ND	1.0	0.11	07/02/17 23:19	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.19	07/02/17 23:19	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	07/02/17 23:19	
Cyclohexane	ug/L	ND	1.0	0.36	07/02/17 23:19	
Dibromochloromethane	ug/L	ND	1.0	0.21	07/02/17 23:19	
Dichlorodifluoromethane	ug/L	ND	1.0	0.21	07/02/17 23:19	
Ethylbenzene	ug/L	ND	1.0	0.30	07/02/17 23:19	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.40	07/02/17 23:19	
m&p-Xylene	ug/L	ND	2.0	0.66	07/02/17 23:19	
Methyl acetate	ug/L	ND	10.0	0.82	07/02/17 23:19	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

METHOD BLANK: 2037002 Matrix: Water
Associated Lab Samples: 92346162002, 92346162003, 92346162004, 92346162005, 92346162006, 92346162007, 92346162009,
92346162010, 92346162011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methyl-tert-butyl ether	ug/L	ND	1.0	0.21	07/02/17 23:19	
Methylcyclohexane	ug/L	ND	10.0	1.9	07/02/17 23:19	
Methylene Chloride	ug/L	ND	2.0	0.97	07/02/17 23:19	
o-Xylene	ug/L	ND	1.0	0.23	07/02/17 23:19	
Styrene	ug/L	ND	1.0	0.26	07/02/17 23:19	
Tetrachloroethene	ug/L	ND	1.0	0.46	07/02/17 23:19	
Toluene	ug/L	ND	1.0	0.26	07/02/17 23:19	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.49	07/02/17 23:19	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	07/02/17 23:19	
Trichloroethene	ug/L	ND	1.0	0.47	07/02/17 23:19	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	07/02/17 23:19	
Vinyl chloride	ug/L	ND	1.0	0.62	07/02/17 23:19	
1,2-Dichloroethane-d4 (S)	%	86	70-130		07/02/17 23:19	
4-Bromofluorobenzene (S)	%	99	70-130		07/02/17 23:19	
Toluene-d8 (S)	%	115	70-130		07/02/17 23:19	

LABORATORY CONTROL SAMPLE: 2037003

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	48.8	98	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	53.5	107	70-130	
1,1,2-Trichloroethane	ug/L	50	52.7	105	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	54.0	108	70-130	
1,1-Dichloroethane	ug/L	50	47.8	96	70-130	
1,1-Dichloroethene	ug/L	50	50.4	101	70-132	
1,2,3-Trichlorobenzene	ug/L	50	53.6	107	70-135	
1,2,4-Trichlorobenzene	ug/L	50	52.3	105	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	46.4	93	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	56.9	114	70-130	
1,2-Dichlorobenzene	ug/L	50	49.3	99	70-130	
1,2-Dichloroethane	ug/L	50	50.3	101	70-130	
1,2-Dichloropropane	ug/L	50	54.1	108	70-130	
1,3-Dichlorobenzene	ug/L	50	47.8	96	70-130	
1,4-Dichlorobenzene	ug/L	50	48.9	98	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	1690	169	71-125 L1	
2-Butanone (MEK)	ug/L	100	109	109	70-145	
2-Hexanone	ug/L	100	110	110	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	107	107	70-140	
Acetone	ug/L	100	117	117	50-175	
Benzene	ug/L	50	51.9	104	70-130	
Bromochloromethane	ug/L	50	53.7	107	70-130	
Bromodichloromethane	ug/L	50	51.0	102	70-130	
Bromoform	ug/L	50	55.6	111	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

LABORATORY CONTROL SAMPLE: 2037003

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/L	50	48.6	97	54-130	
Carbon disulfide	ug/L	50	48.9	98	70-131	
Carbon tetrachloride	ug/L	50	50.3	101	70-132	
Chlorobenzene	ug/L	50	50.3	101	70-130	
Chloroethane	ug/L	50	44.0	88	64-134	
Chloroform	ug/L	50	49.4	99	70-130	
Chloromethane	ug/L	50	48.6	97	64-130	
cis-1,2-Dichloroethene	ug/L	50	49.0	98	70-131	
cis-1,3-Dichloropropene	ug/L	50	57.6	115	70-130	
Cyclohexane	ug/L	50	54.9	110	70-130	
Dibromochloromethane	ug/L	50	51.5	103	70-130	
Dichlorodifluoromethane	ug/L	50	43.8	88	56-130	
Ethylbenzene	ug/L	50	50.3	101	70-130	
Isopropylbenzene (Cumene)	ug/L	50	50.2	100	70-130	
m&p-Xylene	ug/L	100	98.6	99	70-130	
Methyl acetate	ug/L	50	54.9	110	70-130	
Methyl-tert-butyl ether	ug/L	50	51.8	104	70-130	
Methylcyclohexane	ug/L	50	54.8	110	70-130	
Methylene Chloride	ug/L	50	51.6	103	63-130	
o-Xylene	ug/L	50	50.9	102	70-130	
Styrene	ug/L	50	51.8	104	70-130	
Tetrachloroethene	ug/L	50	50.9	102	70-130	
Toluene	ug/L	50	48.2	96	70-130	
trans-1,2-Dichloroethene	ug/L	50	49.7	99	70-130	
trans-1,3-Dichloropropene	ug/L	50	53.8	108	70-132	
Trichloroethene	ug/L	50	51.9	104	70-130	
Trichlorofluoromethane	ug/L	50	48.4	97	62-133	
Vinyl chloride	ug/L	50	46.0	92	50-150	
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE SAMPLE: 2037004

Parameter	Units	92346005007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	200	217	108	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	200	232	116	70-130	
1,1,2-Trichloroethane	ug/L	ND	200	202	101	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	200	220	110	70-130	
1,1-Dichloroethane	ug/L	ND	200	209	105	70-130	
1,1-Dichloroethene	ug/L	ND	200	222	111	70-166	
1,2,3-Trichlorobenzene	ug/L	ND	200	210	105	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	200	215	107	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	200	191	95	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	200	223	112	70-130	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

MATRIX SPIKE SAMPLE:	2037004						
Parameter	Units	92346005007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichlorobenzene	ug/L	ND	200	209	105	70-130	
1,2-Dichloroethane	ug/L	ND	200	205	102	70-130	
1,2-Dichloropropane	ug/L	ND	200	221	111	70-130	
1,3-Dichlorobenzene	ug/L	ND	200	210	105	70-130	
1,4-Dichlorobenzene	ug/L	ND	200	205	103	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	ND	4000	2820	71	70-130	
2-Butanone (MEK)	ug/L	107	400	437	83	70-130	
2-Hexanone	ug/L	ND	400	424	106	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	400	464	108	70-130	
Acetone	ug/L	ND	400	400	100	70-130	
Benzene	ug/L	ND	200	223	112	70-148	
Bromochloromethane	ug/L	ND	200	220	110	70-130	
Bromodichloromethane	ug/L	ND	200	209	104	70-130	
Bromoform	ug/L	ND	200	189	95	70-130	
Bromomethane	ug/L	ND	200	194	97	70-130	
Carbon disulfide	ug/L	ND	200	200	100	70-130	
Carbon tetrachloride	ug/L	ND	200	218	109	70-130	
Chlorobenzene	ug/L	ND	200	224	112	70-146	
Chloroethane	ug/L	ND	200	195	97	70-130	
Chloroform	ug/L	ND	200	216	108	70-130	
Chloromethane	ug/L	ND	200	207	104	70-130	
cis-1,2-Dichloroethene	ug/L	ND	200	213	107	70-130	
cis-1,3-Dichloropropene	ug/L	ND	200	211	106	70-130	
Cyclohexane	ug/L	28.2	200	269	121	70-130	
Dibromochloromethane	ug/L	ND	200	200	100	70-130	
Dichlorodifluoromethane	ug/L	ND	200	144	72	70-130	
Ethylbenzene	ug/L	565	200	785	110	70-130	
Isopropylbenzene (Cumene)	ug/L	78.7	200	308	115	70-130	
m&p-Xylene	ug/L	2150	400	2600	112	70-130	
Methyl acetate	ug/L	ND	200	199	100	70-130	
Methyl-tert-butyl ether	ug/L	ND	200	203	101	70-130	
Methylcyclohexane	ug/L	199	200	441	121	70-130	
Methylene Chloride	ug/L	ND	200	216	108	70-130	
o-Xylene	ug/L	44.6	200	264	109	70-130	
Styrene	ug/L	ND	200	225	112	70-130	
Tetrachloroethene	ug/L	ND	200	218	109	70-130	
Toluene	ug/L	17.9	200	229	105	70-155	
trans-1,2-Dichloroethene	ug/L	ND	200	217	108	70-130	
trans-1,3-Dichloropropene	ug/L	ND	200	199	99	70-130	
Trichloroethene	ug/L	ND	200	222	111	69-151	
Trichlorofluoromethane	ug/L	ND	200	211	106	70-130	
Vinyl chloride	ug/L	ND	200	189	94	70-130	
1,2-Dichloroethane-d4 (S)	%				97	70-130	
4-Bromofluorobenzene (S)	%				103	70-130	
Toluene-d8 (S)	%				98	70-130	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE

Pace Project No.: 92346162

SAMPLE DUPLICATE: 2037005

Parameter	Units	92346162003 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	182	164	11	30	
2-Hexanone	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon disulfide	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	12.4J	11.7J		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Cyclohexane	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	13.8J		30	
Methyl acetate	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylcyclohexane	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

SAMPLE DUPLICATE: 2037005

Parameter	Units	92346162003 Result	Dup Result	RPD	Max RPD	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	2410	2430	1	30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	102	94	8		
4-Bromofluorobenzene (S)	%	101	98	3		
Toluene-d8 (S)	%	106	113	7		

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE

Pace Project No.: 92346162

QC Batch:	367585	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV Low Level
Associated Lab Samples:	92346162012, 92346162014		

METHOD BLANK: 2037547 Matrix: Water

Associated Lab Samples: 92346162012, 92346162014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	07/03/17 15:19	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.40	07/03/17 15:19	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	07/03/17 15:19	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	0.19	07/03/17 15:19	
1,1-Dichloroethane	ug/L	ND	1.0	0.32	07/03/17 15:19	
1,1-Dichloroethene	ug/L	ND	1.0	0.56	07/03/17 15:19	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.33	07/03/17 15:19	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.35	07/03/17 15:19	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	2.0	07/03/17 15:19	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	07/03/17 15:19	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.30	07/03/17 15:19	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	07/03/17 15:19	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	07/03/17 15:19	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.24	07/03/17 15:19	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	07/03/17 15:19	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	78.4	07/03/17 15:19	
2-Butanone (MEK)	ug/L	ND	5.0	0.96	07/03/17 15:19	
2-Hexanone	ug/L	ND	5.0	0.46	07/03/17 15:19	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	0.33	07/03/17 15:19	
Acetone	ug/L	ND	25.0	10.0	07/03/17 15:19	
Benzene	ug/L	ND	1.0	0.25	07/03/17 15:19	
Bromochloromethane	ug/L	ND	1.0	0.17	07/03/17 15:19	
Bromodichloromethane	ug/L	ND	1.0	0.18	07/03/17 15:19	
Bromoform	ug/L	ND	1.0	0.26	07/03/17 15:19	
Bromomethane	ug/L	ND	2.0	0.29	07/03/17 15:19	
Carbon disulfide	ug/L	ND	2.0	1.2	07/03/17 15:19	
Carbon tetrachloride	ug/L	ND	1.0	0.25	07/03/17 15:19	
Chlorobenzene	ug/L	ND	1.0	0.23	07/03/17 15:19	
Chloroethane	ug/L	ND	1.0	0.54	07/03/17 15:19	
Chloroform	ug/L	ND	1.0	0.14	07/03/17 15:19	
Chloromethane	ug/L	ND	1.0	0.11	07/03/17 15:19	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.19	07/03/17 15:19	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	07/03/17 15:19	
Cyclohexane	ug/L	ND	1.0	0.36	07/03/17 15:19	
Dibromochloromethane	ug/L	ND	1.0	0.21	07/03/17 15:19	
Dichlorodifluoromethane	ug/L	ND	1.0	0.21	07/03/17 15:19	
Ethylbenzene	ug/L	ND	1.0	0.30	07/03/17 15:19	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.40	07/03/17 15:19	
m&p-Xylene	ug/L	ND	2.0	0.66	07/03/17 15:19	
Methyl acetate	ug/L	ND	10.0	0.82	07/03/17 15:19	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.21	07/03/17 15:19	

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REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE

Pace Project No.: 92346162

METHOD BLANK: 2037547

Matrix: Water

Associated Lab Samples: 92346162012, 92346162014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylcyclohexane	ug/L	ND	10.0	1.9	07/03/17 15:19	
Methylene Chloride	ug/L	ND	2.0	0.97	07/03/17 15:19	
o-Xylene	ug/L	ND	1.0	0.23	07/03/17 15:19	
Styrene	ug/L	ND	1.0	0.26	07/03/17 15:19	
Tetrachloroethene	ug/L	ND	1.0	0.46	07/03/17 15:19	
Toluene	ug/L	ND	1.0	0.26	07/03/17 15:19	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.49	07/03/17 15:19	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	07/03/17 15:19	
Trichloroethene	ug/L	0.49J	1.0	0.47	07/03/17 15:19	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	07/03/17 15:19	
Vinyl chloride	ug/L	ND	1.0	0.62	07/03/17 15:19	
1,2-Dichloroethane-d4 (S)	%	104	70-130		07/03/17 15:19	
4-Bromofluorobenzene (S)	%	101	70-130		07/03/17 15:19	
Toluene-d8 (S)	%	105	70-130		07/03/17 15:19	

LABORATORY CONTROL SAMPLE: 2037548

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	49.8	100	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	49.9	100	70-130	
1,1,2-Trichloroethane	ug/L	50	50.7	101	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	50.3	101	70-130	
1,1-Dichloroethane	ug/L	50	48.1	96	70-130	
1,1-Dichloroethene	ug/L	50	48.8	98	70-132	
1,2,3-Trichlorobenzene	ug/L	50	51.9	104	70-135	
1,2,4-Trichlorobenzene	ug/L	50	51.5	103	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	48.1	96	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	51.8	104	70-130	
1,2-Dichlorobenzene	ug/L	50	50.5	101	70-130	
1,2-Dichloroethane	ug/L	50	46.6	93	70-130	
1,2-Dichloropropane	ug/L	50	53.1	106	70-130	
1,3-Dichlorobenzene	ug/L	50	51.5	103	70-130	
1,4-Dichlorobenzene	ug/L	50	50.2	100	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	975	97	71-125	
2-Butanone (MEK)	ug/L	100	105	105	70-145	
2-Hexanone	ug/L	100	106	106	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	104	104	70-140	
Acetone	ug/L	100	124	124	50-175	
Benzene	ug/L	50	51.8	104	70-130	
Bromochloromethane	ug/L	50	49.5	99	70-130	
Bromodichloromethane	ug/L	50	50.2	100	70-130	
Bromoform	ug/L	50	51.5	103	70-130	
Bromomethane	ug/L	50	46.3	93	54-130	
Carbon disulfide	ug/L	50	52.0	104	70-131	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

LABORATORY CONTROL SAMPLE: 2037548

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	47.6	95	70-132	
Chlorobenzene	ug/L	50	50.3	101	70-130	
Chloroethane	ug/L	50	41.6	83	64-134	
Chloroform	ug/L	50	49.3	99	70-130	
Chloromethane	ug/L	50	48.1	96	64-130	
cis-1,2-Dichloroethene	ug/L	50	49.6	99	70-131	
cis-1,3-Dichloropropene	ug/L	50	53.6	107	70-130	
Cyclohexane	ug/L	50	56.0	112	70-130	
Dibromochloromethane	ug/L	50	53.1	106	70-130	
Dichlorodifluoromethane	ug/L	50	41.5	83	56-130	
Ethylbenzene	ug/L	50	50.0	100	70-130	
Isopropylbenzene (Cumene)	ug/L	50	49.3	99	70-130	
m&p-Xylene	ug/L	100	97.3	97	70-130	
Methyl acetate	ug/L	50	52.0	104	70-130	
Methyl-tert-butyl ether	ug/L	50	55.0	110	70-130	
Methylcyclohexane	ug/L	50	52.4	105	70-130	
Methylene Chloride	ug/L	50	51.6	103	63-130	
o-Xylene	ug/L	50	49.4	99	70-130	
Styrene	ug/L	50	50.5	101	70-130	
Tetrachloroethene	ug/L	50	47.2	94	70-130	
Toluene	ug/L	50	50.7	101	70-130	
trans-1,2-Dichloroethene	ug/L	50	48.2	96	70-130	
trans-1,3-Dichloropropene	ug/L	50	55.1	110	70-132	
Trichloroethene	ug/L	50	47.4	95	70-130	
Trichlorofluoromethane	ug/L	50	46.9	94	62-133	
Vinyl chloride	ug/L	50	44.3	89	50-150	
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			97	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE SAMPLE: 2037989

Parameter	Units	92346222003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	20	4.7	23	70-130	M1
1,1,2,2-Tetrachloroethane	ug/L	ND	20	4.3	21	70-130	M1
1,1,2-Trichloroethane	ug/L	ND	20	4.6	23	70-130	M1
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	5.1	25	70-130	M1
1,1-Dichloroethane	ug/L	ND	20	5.0	25	70-130	M1
1,1-Dichloroethene	ug/L	ND	20	5.3	27	70-166	M1
1,2,3-Trichlorobenzene	ug/L	ND	20	5.2	26	70-130	M1
1,2,4-Trichlorobenzene	ug/L	ND	20	5.3	26	70-130	M1
1,2-Dibromo-3-chloropropane	ug/L	ND	20	6.9	34	70-130	M1
1,2-Dibromoethane (EDB)	ug/L	ND	20	4.4	22	70-130	M1
1,2-Dichlorobenzene	ug/L	ND	20	4.9	24	70-130	M1
1,2-Dichloroethane	ug/L	ND	20	4.4	22	70-130	M1

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REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

MATRIX SPIKE SAMPLE:	2037989							
Parameter	Units	92346222003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits		Qualifiers
1,2-Dichloropropane	ug/L	ND	20	4.8	24	70-130	M1	
1,3-Dichlorobenzene	ug/L	ND	20	4.9	24	70-130	M1	
1,4-Dichlorobenzene	ug/L	ND	20	4.9	25	70-130	M1	
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	589	147	70-130	M1	
2-Butanone (MEK)	ug/L	ND	40	9.2	23	70-130	M1	
2-Hexanone	ug/L	ND	40	9.7	24	70-130	M1	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	9.3	23	70-130	M1	
Acetone	ug/L	ND	40	12.6J	32	70-130	M1	
Benzene	ug/L	ND	20	5.3	25	70-148	M1	
Bromochloromethane	ug/L	ND	20	4.8	24	70-130	M1	
Bromodichloromethane	ug/L	ND	20	4.9	25	70-130	M1	
Bromoform	ug/L	ND	20	4.4	22	70-130	M1	
Bromomethane	ug/L	ND	20	5.1	25	70-130	M1	
Carbon disulfide	ug/L	ND	20	6.3	31	70-130	M1	
Carbon tetrachloride	ug/L	ND	20	5.0	25	70-130	M1	
Chlorobenzene	ug/L	ND	20	4.8	24	70-146	M1	
Chloroethane	ug/L	ND	20	4.3	21	70-130	M1	
Chloroform	ug/L	ND	20	5.2	26	70-130	M1	
Chloromethane	ug/L	ND	20	5.3	27	70-130	M1	
cis-1,2-Dichloroethene	ug/L	ND	20	4.9	25	70-130	M1	
cis-1,3-Dichloropropene	ug/L	ND	20	4.5	22	70-130	M1	
Cyclohexane	ug/L	ND	20	5.6	28	70-130	M1	
Dibromochloromethane	ug/L	ND	20	4.6	23	70-130	M1	
Dichlorodifluoromethane	ug/L	ND	20	3.6	18	70-130	M1	
Ethylbenzene	ug/L	ND	20	5.7	23	70-130	M1	
Isopropylbenzene (Cumene)	ug/L	ND	20	4.7	23	70-130	M1	
m&p-Xylene	ug/L	2.5	40	9.7	18	70-130	M1	
Methyl acetate	ug/L	ND	20	5.1J	25	70-130	M1	
Methyl-tert-butyl ether	ug/L	ND	20	4.3	22	70-130	M1	
Methylcyclohexane	ug/L	ND	20	5.8J	29	70-130	M1	
Methylene Chloride	ug/L	ND	20	3.7	19	70-130	M1	
o-Xylene	ug/L	2.1	20	6.5	22	70-130	M1	
Styrene	ug/L	ND	20	4.4	22	70-130	M1	
Tetrachloroethene	ug/L	ND	20	4.5	23	70-130	M1	
Toluene	ug/L	5.5	20	7.8	11	70-155	M1	
trans-1,2-Dichloroethene	ug/L	ND	20	5.2	26	70-130	M1	
trans-1,3-Dichloropropene	ug/L	ND	20	4.6	23	70-130	M1	
Trichloroethene	ug/L	ND	20	4.6	23	69-151	M1	
Trichlorofluoromethane	ug/L	ND	20	4.7	23	70-130	M1	
Vinyl chloride	ug/L	ND	20	4.6	23	70-130	M1	
1,2-Dichloroethane-d4 (S)	%				102	70-130		
4-Bromofluorobenzene (S)	%				100	70-130		
Toluene-d8 (S)	%				103	70-130		

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE

Pace Project No.: 92346162

SAMPLE DUPLICATE: 2037990

Parameter	Units	92346222004 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Hexanone	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon disulfide	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Cyclohexane	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl acetate	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylcyclohexane	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

SAMPLE DUPLICATE: 2037990

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	105	101	4		
4-Bromofluorobenzene (S)	%	100	100	0		
Toluene-d8 (S)	%	104	104	0		

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE

Pace Project No.: 92346162

QC Batch:	367752	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV Low Level
Associated Lab Samples:	92346162013		

METHOD BLANK: 2038172 Matrix: Water

Associated Lab Samples: 92346162013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	07/05/17 14:38	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.40	07/05/17 14:38	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	07/05/17 14:38	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	0.19	07/05/17 14:38	
1,1-Dichloroethane	ug/L	ND	1.0	0.32	07/05/17 14:38	
1,1-Dichloroethene	ug/L	ND	1.0	0.56	07/05/17 14:38	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.33	07/05/17 14:38	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.35	07/05/17 14:38	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	2.0	07/05/17 14:38	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	07/05/17 14:38	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.30	07/05/17 14:38	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	07/05/17 14:38	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	07/05/17 14:38	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.24	07/05/17 14:38	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	07/05/17 14:38	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	78.4	07/05/17 14:38	
2-Butanone (MEK)	ug/L	ND	5.0	0.96	07/05/17 14:38	
2-Hexanone	ug/L	ND	5.0	0.46	07/05/17 14:38	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	0.33	07/05/17 14:38	
Acetone	ug/L	ND	25.0	10.0	07/05/17 14:38	
Benzene	ug/L	ND	1.0	0.25	07/05/17 14:38	
Bromochloromethane	ug/L	ND	1.0	0.17	07/05/17 14:38	
Bromodichloromethane	ug/L	ND	1.0	0.18	07/05/17 14:38	
Bromoform	ug/L	ND	1.0	0.26	07/05/17 14:38	
Bromomethane	ug/L	ND	2.0	0.29	07/05/17 14:38	
Carbon disulfide	ug/L	ND	2.0	1.2	07/05/17 14:38	
Carbon tetrachloride	ug/L	ND	1.0	0.25	07/05/17 14:38	
Chlorobenzene	ug/L	ND	1.0	0.23	07/05/17 14:38	
Chloroethane	ug/L	ND	1.0	0.54	07/05/17 14:38	
Chloroform	ug/L	ND	1.0	0.14	07/05/17 14:38	
Chloromethane	ug/L	ND	1.0	0.11	07/05/17 14:38	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.19	07/05/17 14:38	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	07/05/17 14:38	
Cyclohexane	ug/L	ND	1.0	0.36	07/05/17 14:38	
Dibromochloromethane	ug/L	ND	1.0	0.21	07/05/17 14:38	
Dichlorodifluoromethane	ug/L	ND	1.0	0.21	07/05/17 14:38	
Ethylbenzene	ug/L	ND	1.0	0.30	07/05/17 14:38	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.40	07/05/17 14:38	
m&p-Xylene	ug/L	ND	2.0	0.66	07/05/17 14:38	
Methyl acetate	ug/L	ND	10.0	0.82	07/05/17 14:38	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.21	07/05/17 14:38	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

METHOD BLANK: 2038172 Matrix: Water

Associated Lab Samples: 92346162013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylcyclohexane	ug/L	ND	10.0	1.9	07/05/17 14:38	
Methylene Chloride	ug/L	ND	2.0	0.97	07/05/17 14:38	
o-Xylene	ug/L	ND	1.0	0.23	07/05/17 14:38	
Styrene	ug/L	ND	1.0	0.26	07/05/17 14:38	
Tetrachloroethene	ug/L	ND	1.0	0.46	07/05/17 14:38	
Toluene	ug/L	ND	1.0	0.26	07/05/17 14:38	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.49	07/05/17 14:38	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	07/05/17 14:38	
Trichloroethene	ug/L	ND	1.0	0.47	07/05/17 14:38	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	07/05/17 14:38	
Vinyl chloride	ug/L	ND	1.0	0.62	07/05/17 14:38	
1,2-Dichloroethane-d4 (S)	%	102	70-130		07/05/17 14:38	
4-Bromofluorobenzene (S)	%	101	70-130		07/05/17 14:38	
Toluene-d8 (S)	%	104	70-130		07/05/17 14:38	

LABORATORY CONTROL SAMPLE: 2038173

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	50.7	101	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	52.5	105	70-130	
1,1,2-Trichloroethane	ug/L	50	54.1	108	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	50	52.4	105	70-130	
1,1-Dichloroethane	ug/L	50	50.4	101	70-130	
1,1-Dichloroethene	ug/L	50	49.3	99	70-132	
1,2,3-Trichlorobenzene	ug/L	50	55.5	111	70-135	
1,2,4-Trichlorobenzene	ug/L	50	55.7	111	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	53.1	106	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	56.4	113	70-130	
1,2-Dichlorobenzene	ug/L	50	52.1	104	70-130	
1,2-Dichloroethane	ug/L	50	47.0	94	70-130	
1,2-Dichloropropane	ug/L	50	54.7	109	70-130	
1,3-Dichlorobenzene	ug/L	50	53.0	106	70-130	
1,4-Dichlorobenzene	ug/L	50	53.1	106	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	1720	172	71-125 L1	
2-Butanone (MEK)	ug/L	100	111	111	70-145	
2-Hexanone	ug/L	100	114	114	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	108	108	70-140	
Acetone	ug/L	100	139	139	50-175	
Benzene	ug/L	50	55.2	110	70-130	
Bromochloromethane	ug/L	50	53.0	106	70-130	
Bromodichloromethane	ug/L	50	53.8	108	70-130	
Bromoform	ug/L	50	57.9	116	70-130	
Bromomethane	ug/L	50	41.9	84	54-130	
Carbon disulfide	ug/L	50	53.7	107	70-131	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE

Pace Project No.: 92346162

LABORATORY CONTROL SAMPLE: 2038173

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	55.4	111	70-132	
Chlorobenzene	ug/L	50	52.5	105	70-130	
Chloroethane	ug/L	50	40.1	80	64-134	
Chloroform	ug/L	50	50.4	101	70-130	
Chloromethane	ug/L	50	49.4	99	64-130	
cis-1,2-Dichloroethene	ug/L	50	51.9	104	70-131	
cis-1,3-Dichloropropene	ug/L	50	57.5	115	70-130	
Cyclohexane	ug/L	50	58.3	117	70-130	
Dibromochloromethane	ug/L	50	59.9	120	70-130	
Dichlorodifluoromethane	ug/L	50	39.8	80	56-130	
Ethylbenzene	ug/L	50	52.8	106	70-130	
Isopropylbenzene (Cumene)	ug/L	50	52.5	105	70-130	
m&p-Xylene	ug/L	100	102	102	70-130	
Methyl acetate	ug/L	50	53.6	107	70-130	
Methyl-tert-butyl ether	ug/L	50	54.4	109	70-130	
Methylcyclohexane	ug/L	50	57.2	114	70-130	
Methylene Chloride	ug/L	50	53.1	106	63-130	
o-Xylene	ug/L	50	53.4	107	70-130	
Styrene	ug/L	50	53.8	108	70-130	
Tetrachloroethene	ug/L	50	52.8	106	70-130	
Toluene	ug/L	50	52.7	105	70-130	
trans-1,2-Dichloroethene	ug/L	50	49.2	98	70-130	
trans-1,3-Dichloropropene	ug/L	50	58.5	117	70-132	
Trichloroethene	ug/L	50	50.1	100	70-130	
Trichlorofluoromethane	ug/L	50	49.1	98	62-133	
Vinyl chloride	ug/L	50	44.6	89	50-150	
1,2-Dichloroethane-d4 (S)	%			90	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE SAMPLE: 2039127

Parameter	Units	92346268003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	20	23.4	117	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	21.1	106	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	22.4	112	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	24.6	123	70-130	
1,1-Dichloroethane	ug/L	ND	20	22.4	112	70-130	
1,1-Dichloroethene	ug/L	ND	20	23.5	118	70-166	
1,2,3-Trichlorobenzene	ug/L	ND	20	25.1	126	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	20	25.6	128	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	22.2	111	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	22.0	110	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	22.8	114	70-130	
1,2-Dichloroethane	ug/L	ND	20	20.0	100	70-130	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

MATRIX SPIKE SAMPLE:	2039127						
Parameter	Units	92346268003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloropropane	ug/L	ND	20	22.9	115	70-130	
1,3-Dichlorobenzene	ug/L	ND	20	24.0	120	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	23.3	117	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	1610	401	70-130 M0	
2-Butanone (MEK)	ug/L	ND	40	40.2	101	70-130	
2-Hexanone	ug/L	ND	40	47.7	119	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	41.6	104	70-130	
Acetone	ug/L	ND	40	47.7	119	70-130	
Benzene	ug/L	ND	20	23.7	119	70-148	
Bromochloromethane	ug/L	ND	20	24.1	120	70-130	
Bromodichloromethane	ug/L	ND	20	22.2	111	70-130	
Bromoform	ug/L	ND	20	20.5	103	70-130	
Bromomethane	ug/L	ND	20	18.7	94	70-130	
Carbon disulfide	ug/L	ND	20	26.0	130	70-130	
Carbon tetrachloride	ug/L	ND	20	22.9	114	70-130	
Chlorobenzene	ug/L	ND	20	22.7	113	70-146	
Chloroethane	ug/L	ND	20	17.7	88	70-130	
Chloroform	ug/L	ND	20	23.4	117	70-130	
Chloromethane	ug/L	0.33J	20	21.9	108	70-130	
cis-1,2-Dichloroethene	ug/L	ND	20	23.0	115	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	22.2	111	70-130	
Cyclohexane	ug/L	ND	20	26.5	132	70-130 M1	
Dibromochloromethane	ug/L	ND	20	22.9	114	70-130	
Dichlorodifluoromethane	ug/L	ND	20	19.3	96	70-130	
Ethylbenzene	ug/L	ND	20	23.5	117	70-130	
Isopropylbenzene (Cumene)	ug/L	ND	20	22.8	114	70-130	
m&p-Xylene	ug/L	ND	40	45.1	113	70-130	
Methyl acetate	ug/L	ND	20	21.0	105	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	22.8	114	70-130	
Methylcyclohexane	ug/L	ND	20	24.6	123	70-130	
Methylene Chloride	ug/L	ND	20	22.7	114	70-130	
o-Xylene	ug/L	ND	20	23.0	115	70-130	
Styrene	ug/L	ND	20	22.9	114	70-130	
Tetrachloroethene	ug/L	6.8	20	30.9	120	70-130	
Toluene	ug/L	ND	20	23.3	116	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	23.3	116	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	22.0	110	70-130	
Trichloroethene	ug/L	0.63J	20	22.2	108	69-151	
Trichlorofluoromethane	ug/L	ND	20	21.0	105	70-130	
Vinyl chloride	ug/L	ND	20	21.6	108	70-130	
1,2-Dichloroethane-d4 (S)	%				92	70-130	
4-Bromofluorobenzene (S)	%				98	70-130	
Toluene-d8 (S)	%				98	70-130	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE

Pace Project No.: 92346162

SAMPLE DUPLICATE: 2039128

Parameter	Units	92346268005 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	0.65J	0.59J		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Hexanone	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon disulfide	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	0.34J	ND		30	
cis-1,2-Dichloroethene	ug/L	1.9	2.0	7	30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Cyclohexane	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl acetate	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylcyclohexane	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE

Pace Project No.: 92346162

SAMPLE DUPLICATE: 2039128

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	0.76J	0.95J		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	98	97	1		
4-Bromofluorobenzene (S)	%	98	98	0		
Toluene-d8 (S)	%	107	101	5		

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE

Pace Project No.: 92346162

QC Batch:	367297	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples:	92346162015, 92346162016, 92346162017, 92346162018, 92346162019, 92346162020, 92346162021, 92346162022, 92346162023, 92346162024, 92346162025, 92346162026		

METHOD BLANK: 2036057 Matrix: Solid

Associated Lab Samples: 92346162015, 92346162016, 92346162017, 92346162018, 92346162019, 92346162020, 92346162021,
92346162022, 92346162023, 92346162024, 92346162025, 92346162026

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	5.9	2.1	06/30/17 14:26	
1,1,2-Tetrachloroethane	ug/kg	ND	5.9	2.2	06/30/17 14:26	
1,1,2-Trichloroethane	ug/kg	ND	5.9	2.5	06/30/17 14:26	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	5.9	2.2	06/30/17 14:26	
1,1-Dichloroethane	ug/kg	ND	5.9	1.8	06/30/17 14:26	
1,1-Dichloroethene	ug/kg	ND	5.9	2.1	06/30/17 14:26	
1,2,3-Trichlorobenzene	ug/kg	ND	5.9	2.6	06/30/17 14:26	
1,2,4-Trichlorobenzene	ug/kg	ND	5.9	1.9	06/30/17 14:26	
1,2-Dibromo-3-chloropropane	ug/kg	ND	5.9	4.2	06/30/17 14:26	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.9	2.1	06/30/17 14:26	
1,2-Dichlorobenzene	ug/kg	ND	5.9	2.2	06/30/17 14:26	
1,2-Dichloroethane	ug/kg	ND	5.9	2.6	06/30/17 14:26	
1,2-Dichloropropane	ug/kg	ND	5.9	2.0	06/30/17 14:26	
1,3-Dichlorobenzene	ug/kg	ND	5.9	2.4	06/30/17 14:26	
1,4-Dichlorobenzene	ug/kg	ND	5.9	2.0	06/30/17 14:26	
1,4-Dioxane (p-Dioxane)	ug/kg	ND	177	142	06/30/17 14:26	
2-Butanone (MEK)	ug/kg	ND	118	3.4	06/30/17 14:26	
2-Hexanone	ug/kg	ND	59.0	4.6	06/30/17 14:26	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	59.0	4.4	06/30/17 14:26	
Acetone	ug/kg	ND	118	11.8	06/30/17 14:26	
Benzene	ug/kg	ND	5.9	1.9	06/30/17 14:26	
Bromochloromethane	ug/kg	ND	5.9	2.0	06/30/17 14:26	
Bromodichloromethane	ug/kg	ND	5.9	2.2	06/30/17 14:26	
Bromoform	ug/kg	ND	5.9	2.7	06/30/17 14:26	
Bromomethane	ug/kg	ND	11.8	2.9	06/30/17 14:26	
Carbon disulfide	ug/kg	ND	11.8	3.5	06/30/17 14:26	
Carbon tetrachloride	ug/kg	ND	5.9	3.1	06/30/17 14:26	
Chlorobenzene	ug/kg	ND	5.9	2.2	06/30/17 14:26	
Chloroethane	ug/kg	ND	11.8	2.8	06/30/17 14:26	
Chloroform	ug/kg	ND	5.9	1.9	06/30/17 14:26	
Chloromethane	ug/kg	ND	11.8	2.8	06/30/17 14:26	
cis-1,2-Dichloroethene	ug/kg	ND	5.9	1.7	06/30/17 14:26	
cis-1,3-Dichloropropene	ug/kg	ND	5.9	2.1	06/30/17 14:26	
Cyclohexane	ug/kg	ND	5.9	1.9	06/30/17 14:26	
Dibromochloromethane	ug/kg	ND	5.9	2.1	06/30/17 14:26	
Dichlorodifluoromethane	ug/kg	ND	11.8	4.2	06/30/17 14:26	
Ethylbenzene	ug/kg	ND	5.9	2.1	06/30/17 14:26	
Isopropylbenzene (Cumene)	ug/kg	ND	5.9	2.2	06/30/17 14:26	
m&p-Xylene	ug/kg	ND	11.8	4.2	06/30/17 14:26	
Methyl acetate	ug/kg	ND	11.8	1.7	06/30/17 14:26	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

METHOD BLANK: 2036057 Matrix: Solid
Associated Lab Samples: 92346162015, 92346162016, 92346162017, 92346162018, 92346162019, 92346162020, 92346162021,
92346162022, 92346162023, 92346162024, 92346162025, 92346162026

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methyl-tert-butyl ether	ug/kg	ND	5.9	1.8	06/30/17 14:26	
Methylcyclohexane	ug/kg	ND	11.8	1.8	06/30/17 14:26	
Methylene Chloride	ug/kg	ND	23.6	3.5	06/30/17 14:26	
o-Xylene	ug/kg	ND	5.9	2.2	06/30/17 14:26	
Styrene	ug/kg	ND	5.9	2.1	06/30/17 14:26	
Tetrachloroethene	ug/kg	ND	5.9	2.0	06/30/17 14:26	
Toluene	ug/kg	ND	5.9	2.1	06/30/17 14:26	
trans-1,2-Dichloroethene	ug/kg	ND	5.9	2.2	06/30/17 14:26	
trans-1,3-Dichloropropene	ug/kg	ND	5.9	1.8	06/30/17 14:26	
Trichloroethene	ug/kg	ND	5.9	2.5	06/30/17 14:26	
Trichlorofluoromethane	ug/kg	ND	5.9	2.6	06/30/17 14:26	
Vinyl chloride	ug/kg	ND	11.8	2.1	06/30/17 14:26	
1,2-Dichloroethane-d4 (S)	%	92	70-132		06/30/17 14:26	
4-Bromofluorobenzene (S)	%	98	70-130		06/30/17 14:26	
Toluene-d8 (S)	%	103	70-130		06/30/17 14:26	

LABORATORY CONTROL SAMPLE: 2036058

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	53.2	47.2	89	67-140	
1,1,2,2-Tetrachloroethane	ug/kg	53.2	46.9	88	72-141	
1,1,2-Trichloroethane	ug/kg	53.2	48.8	92	78-138	
1,1,2-Trichlorotrifluoroethane	ug/kg	53.2	46.8	88	82-143	
1,1-Dichloroethane	ug/kg	53.2	46.9	88	69-134	
1,1-Dichloroethene	ug/kg	53.2	50.4	95	67-138	
1,2,3-Trichlorobenzene	ug/kg	53.2	52.7	99	70-146	
1,2,4-Trichlorobenzene	ug/kg	53.2	52.5	99	68-148	
1,2-Dibromo-3-chloropropane	ug/kg	53.2	51.2	96	65-140	
1,2-Dibromoethane (EDB)	ug/kg	53.2	55.1	104	77-135	
1,2-Dichlorobenzene	ug/kg	53.2	52.4	99	77-141	
1,2-Dichloroethane	ug/kg	53.2	45.5	85	65-137	
1,2-Dichloropropane	ug/kg	53.2	51.4	97	72-136	
1,3-Dichlorobenzene	ug/kg	53.2	53.0	100	74-138	
1,4-Dichlorobenzene	ug/kg	53.2	52.8	99	76-138	
1,4-Dioxane (p-Dioxane)	ug/kg	1060	994	93	54-154	
2-Butanone (MEK)	ug/kg	106	107	100	58-147	
2-Hexanone	ug/kg	106	109	102	62-145	
4-Methyl-2-pentanone (MIBK)	ug/kg	106	104	98	64-149	
Acetone	ug/kg	106	100J	94	53-153	
Benzene	ug/kg	53.2	49.1	92	73-135	
Bromochloromethane	ug/kg	53.2	48.5	91	73-134	
Bromodichloromethane	ug/kg	53.2	51.1	96	71-135	
Bromoform	ug/kg	53.2	50.8	96	66-141	

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE

Pace Project No.: 92346162

LABORATORY CONTROL SAMPLE: 2036058

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/kg	53.2	42.4	80	53-160	
Carbon disulfide	ug/kg	53.2	44.9	84	63-140	
Carbon tetrachloride	ug/kg	53.2	47.4	89	60-145	
Chlorobenzene	ug/kg	53.2	51.2	96	78-130	
Chloroethane	ug/kg	53.2	46.4	87	64-149	
Chloroform	ug/kg	53.2	48.0	90	70-134	
Chloromethane	ug/kg	53.2	49.2	93	52-150	
cis-1,2-Dichloroethene	ug/kg	53.2	48.5	91	70-133	
cis-1,3-Dichloropropene	ug/kg	53.2	52.6	99	68-134	
Cyclohexane	ug/kg	53.2	47.2	89	79-146	
Dibromochloromethane	ug/kg	53.2	52.8	99	71-138	
Dichlorodifluoromethane	ug/kg	53.2	42.6	80	40-160	
Ethylbenzene	ug/kg	53.2	50.3	95	75-133	
Isopropylbenzene (Cumene)	ug/kg	53.2	48.3	91	76-143	
m&p-Xylene	ug/kg	106	97.9	92	75-136	
Methyl acetate	ug/kg	53.2	44.4	83	31-160	
Methyl-tert-butyl ether	ug/kg	53.2	51.5	97	68-144	
Methylcyclohexane	ug/kg	53.2	49.8	94	84-149	
Methylene Chloride	ug/kg	53.2	48.2	91	45-154	
o-Xylene	ug/kg	53.2	49.0	92	76-141	
Styrene	ug/kg	53.2	49.9	94	79-137	
Tetrachloroethene	ug/kg	53.2	46.2	87	71-138	
Toluene	ug/kg	53.2	49.3	93	74-131	
trans-1,2-Dichloroethene	ug/kg	53.2	47.3	89	67-135	
trans-1,3-Dichloropropene	ug/kg	53.2	53.2	100	65-146	
Trichloroethene	ug/kg	53.2	52.2	98	67-135	
Trichlorofluoromethane	ug/kg	53.2	48.6	91	59-144	
Vinyl chloride	ug/kg	53.2	44.8	84	56-141	
1,2-Dichloroethane-d4 (S)	%			98	70-132	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2036059 2036060

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	RPD	Max Qual
		92346162023	Result	Spike Conc.	Spike Conc.						
1,1,1-Trichloroethane	ug/kg	ND	24.4	24.8	20.8	21.8	85	88	70-130	5	30
1,1,2,2-Tetrachloroethane	ug/kg	ND	24.4	24.8	22.3	20.8	91	84	70-130	7	30
1,1,2-Trichloroethane	ug/kg	ND	24.4	24.8	24.4	23.2	100	93	70-130	5	30
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	24.4	24.8	23.4	25.4	96	102	70-130	8	30
1,1-Dichloroethane	ug/kg	ND	24.4	24.8	21.9	22.4	90	90	70-130	2	30
1,1-Dichloroethene	ug/kg	4.7J	24.4	24.8	24.6	31.3	81	107	49-180	24	30
1,2,3-Trichlorobenzene	ug/kg	ND	24.4	24.8	24.1	23.1	99	93	70-130	4	30
1,2,4-Trichlorobenzene	ug/kg	ND	24.4	24.8	23.8	23.3	97	94	70-130	2	30

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Parameter	Units	92346162023		MS		MSD		MS		MSD		% Rec		Max		
		Result	Conc.	Spike	Conc.	Spike	Result	MSD	Result	% Rec	MSD	% Rec	Limits	RPD	RPD	Qual
1,2-Dibromo-3-chloropropane	ug/kg	ND	24.4	24.8	21.3	19.8	87	80	70-130	7	30					
1,2-Dibromoethane (EDB)	ug/kg	ND	24.4	24.8	23.9	21.7	98	87	70-130	10	30					
1,2-Dichlorobenzene	ug/kg	ND	24.4	24.8	24.4	23.9	100	96	70-130	2	30					
1,2-Dichloroethane	ug/kg	ND	24.4	24.8	21.8	19.7	89	79	70-130	10	30					
1,2-Dichloropropane	ug/kg	ND	24.4	24.8	23.4	24.2	96	97	70-130	3	30					
1,3-Dichlorobenzene	ug/kg	ND	24.4	24.8	23.4	23.8	96	96	70-130	2	30					
1,4-Dichlorobenzene	ug/kg	ND	24.4	24.8	24.2	23.6	99	95	70-130	3	30					
1,4-Dioxane (p-Dioxane)	ug/kg	ND	488	498	555	447	114	90	70-130	22	30					
2-Butanone (MEK)	ug/kg	ND	48.8	49.8	42.7J	40.3J	87	81	70-130		30					
2-Hexanone	ug/kg	ND	48.8	49.8	43.7J	39.0J	89	79	70-130		30					
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	48.8	49.8	44.9J	40.8J	92	82	70-130		30					
Acetone	ug/kg	32.7J	48.8	49.8	97.5J	63.3J	133	62	70-130		30 M1					
Benzene	ug/kg	ND	24.4	24.8	24.2	24.3	99	98	50-166	0	30					
Bromochloromethane	ug/kg	ND	24.4	24.8	21.5	20.6	88	83	70-130	4	30					
Bromodichloromethane	ug/kg	ND	24.4	24.8	24.4	24.0	100	97	70-130	2	30					
Bromoform	ug/kg	ND	24.4	24.8	21.5	19.6	88	79	70-130	9	30					
Bromomethane	ug/kg	ND	24.4	24.8	17.7	19.8	72	79	70-130	11	30					
Carbon disulfide	ug/kg	ND	24.4	24.8	20.1	21.0	82	85	70-130	4	30					
Carbon tetrachloride	ug/kg	ND	24.4	24.8	22.7	23.6	93	95	70-130	4	30					
Chlorobenzene	ug/kg	ND	24.4	24.8	23.7	23.5	97	95	43-169	1	30					
Chloroethane	ug/kg	ND	24.4	24.8	22.0	22.5	90	91	70-130	2	30					
Chloroform	ug/kg	ND	24.4	24.8	23.1	23.7	95	95	70-130	3	30					
Chloromethane	ug/kg	ND	24.4	24.8	26.6	24.5	109	98	70-130	8	30					
cis-1,2-Dichloroethene	ug/kg	ND	24.4	24.8	23.4	23.1	96	93	70-130	1	30					
cis-1,3-Dichloropropene	ug/kg	ND	24.4	24.8	23.2	22.8	95	92	70-130	2	30					
Cyclohexane	ug/kg	ND	24.4	24.8	21.0	21.8	86	88	70-130	4	30					
Dibromochloromethane	ug/kg	ND	24.4	24.8	22.2	22.4	91	90	70-130	1	30					
Dichlorodifluoromethane	ug/kg	ND	24.4	24.8	18.3	18.8	75	76	70-130	3	30					
Ethylbenzene	ug/kg	ND	24.4	24.8	23.2	24.1	95	97	70-130	4	30					
Isopropylbenzene (Cumene)	ug/kg	ND	24.4	24.8	22.5	22.9	92	92	70-130	1	30					
m&p-Xylene	ug/kg	ND	48.8	49.8	46.8	47.0	96	95	70-130	0	30					
Methyl acetate	ug/kg	10.8	24.4	24.8	23.4	22.5	51	47	70-130	4	30 M1					
Methyl-tert-butyl ether	ug/kg	ND	24.4	24.8	22.8	21.7	93	87	70-130	5	30					
Methylcyclohexane	ug/kg	ND	24.4	24.8	23.8	24.4	97	98	70-130	3	30					
Methylene Chloride	ug/kg	ND	24.4	24.8	29.4	19.4J	120	78	70-130		30					
o-Xylene	ug/kg	ND	24.4	24.8	23.1	22.8	94	92	70-130	1	30					
Styrene	ug/kg	ND	24.4	24.8	22.9	22.2	94	89	70-130	3	30					
Tetrachloroethene	ug/kg	2.0J	24.4	24.8	23.7	26.4	89	98	70-130	11	30					
Toluene	ug/kg	ND	24.4	24.8	23.8	24.2	97	97	52-163	2	30					
trans-1,2-Dichloroethene	ug/kg	ND	24.4	24.8	23.4	22.7	96	91	70-130	3	30					
trans-1,3-Dichloropropene	ug/kg	ND	24.4	24.8	23.1	22.0	95	89	70-130	5	30					
Trichloroethene	ug/kg	4630	24.4	24.8	4030	6890	-2460	9090	49-167	52	30 E,M1, R1					
Trichlorofluoromethane	ug/kg	ND	24.4	24.8	23.2	23.9	95	96	70-130	3	30					

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2036059		2036060						Max		
		92346162023 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	RPD	Qual
Vinyl chloride	ug/kg	ND	24.4	24.8	19.9	21.1	81	85	70-130	6	30	
1,2-Dichloroethane-d4 (S)	%						94	91	70-132			
4-Bromofluorobenzene (S)	%						100	99	70-130			
Toluene-d8 (S)	%						101	101	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

QC Batch:	367230	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	92346162016, 92346162017, 92346162018, 92346162019, 92346162020, 92346162021, 92346162022, 92346162023, 92346162024, 92346162025, 92346162026		

SAMPLE DUPLICATE: 2035678

Parameter	Units	92346090001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	23.2	24.2	4	25	

SAMPLE DUPLICATE: 2035679

Parameter	Units	92346162026 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	18.4	19.1	3	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-C Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.

L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

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

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CTS OF ASHEVILLE
Pace Project No.: 92346162

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92346162001	TB-08	EPA 8260	367365		
92346162002	FD-10	EPA 8260	367463		
92346162003	GW-75-26	EPA 8260	367463		
92346162004	GW-80-40	EPA 8260	367463		
92346162005	GW-81-36	EPA 8260	367463		
92346162006	EB-03	EPA 8260	367463		
92346162007	GW-78-46	EPA 8260	367463		
92346162008	EB-04	EPA 8260	367368		
92346162009	GW-95-46	EPA 8260	367463		
92346162010	GW-93-46	EPA 8260	367463		
92346162011	GW-87-35	EPA 8260	367463		
92346162012	GW-87-53	EPA 8260	367585		
92346162013	GW-90-42	EPA 8260	367752		
92346162014	GW-102-52	EPA 8260	367585		
92346162015	TB-09	EPA 8260	367297		
92346162016	FD-09	EPA 8260	367297		
92346162017	SS-75-23	EPA 8260	367297		
92346162018	SS-80-37	EPA 8260	367297		
92346162019	SS-81-33	EPA 8260	367297		
92346162020	SS-78-46	EPA 8260	367297		
92346162021	SS-95-42	EPA 8260	367297		
92346162022	SS-93-42	EPA 8260	367297		
92346162023	SS-87-31	EPA 8260	367297		
92346162024	SS-87-48	EPA 8260	367297		
92346162025	SS-90-37	EPA 8260	367297		
92346162026	SS-102-53	EPA 8260	367297		
92346162016	FD-09	ASTM D2974-87	367230		
92346162017	SS-75-23	ASTM D2974-87	367230		
92346162018	SS-80-37	ASTM D2974-87	367230		
92346162019	SS-81-33	ASTM D2974-87	367230		
92346162020	SS-78-46	ASTM D2974-87	367230		
92346162021	SS-95-42	ASTM D2974-87	367230		
92346162022	SS-93-42	ASTM D2974-87	367230		
92346162023	SS-87-31	ASTM D2974-87	367230		
92346162024	SS-87-48	ASTM D2974-87	367230		
92346162025	SS-90-37	ASTM D2974-87	367230		
92346162026	SS-102-53	ASTM D2974-87	367230		

REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville

Sample Condition Upon Receipt

Client Name:

Project:

WO# : 92346162



92346162

Courier:
 Commercial

FedEx UPS USPS Client
 Pace Other: _____

Custody Seal Present?

 Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 10/6/29/17

Packing Material: Bubble Wrap Bubble Bags None Other: _____

Thermometer:

 IR/Gun ID: S

Type of Ice:

 Wet Blue None Samples on ice, cooling process has begun

Correction Factor: Cooler Temp Corrected (°C): 1.6 / 2.4 Biological Tissue Frozen? Yes No N/A

Temp should be above freezing to -6°C

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

 Yes NoDid samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No N/A

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A 1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A 2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A 3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A 4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A 5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A 6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A 7.
Containers Intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A 8.
Samples Field Filtered?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A Note if sediment is visible in the dissolved container
Sample Labels Match COC?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A 9.
-Includes Date/Time/ID/Analysis Matrix: WT/S			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A 10.
Trp Blank Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A 11.
Trp Blank Custody Seals Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

CLIENT NOTIFICATION/RESOLUTION

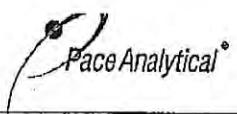
Field Data Required? Yes No

Person Contacted:

Date/Time: _____

Comments/Sample

Discrepancy: _____



**Document Name:
Sample Condition Upon Receipt(SCUR)
Document No.:
F-CAR-CS-033-Rev.01**

Document Revised: Sept. 21, 2010
Page 2 of 2

***Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.**

****Bottom half of box is to list number of bottles**

Project #

WO# : 92346162

PM: KRG Due Date: 07/07/17
CLIENT: 92-AMEC A

1	Item#	
2		BP4U-125 mL Plastic Unpreserved (N/A) (CH)
3		BP3U-250 mL Plastic Unpreserved (N/A)
4		BP2U-500 mL Plastic Unpreserved (N/A)
5		BPUU-1 liter Plastic Unpreserved (N/A)
6		BPSS-250 mL Plastic H2SO4 (pH < 2) (Cl-)
7		BP3N-250 mL plastic HNO3 (pH < 2)
8		BP3Z-250 mL Plastic ZN Acetate & NaOH (>9)
9		BP3C-250 mL Plastic NaOH (pH > 12) (Cl-)
10		WGFU-Wide-mouthed Glass jar Unpreserved
11		AG1U-1 liter Amber Unpreserved (N/A) (Cl-)
12		AG1R-1 liter Amber HCl (pH < 2)
13		AG3U-250 mL Amber Unpreserved (N/A) (Cl-)
14		AG1S-1 liter Amber H2SO4 (pH < 2)
15		AG3S-250 mL Amber NH4Cl (N/A)(Cl-)
16		AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)
17		DG9H-40 mL VOA -Cl (N/A)
18		VG9T-40 mL VOA Na2S2O3 (N/A)
19		VGSU-40 mL VOA Unp (N/A)
20		DG9P-40 mL VOA H3PO4 (N/A)
21		VOAK (6 vials per lot)-5035 kit (N/A)
22		V/GK (3 vials per kit)-vPH/Gas kit (N/A)
23		SPST-125 mL Sterile Plastic (N/A - lab)
24		SP2T-250 mL Sterile Plastic (N/A - lab)
25		BP3A-250 mL Plastic (NH4)2SO4 (9.3-9.7)
26		Cubitainer
27		VSGU-20 mL Scintillation vials (N/A)
28		GN

pH Adjustment Log for Preserved Samples

pH Adjustment Log for Preserved Samples						
Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #



CHAIN-OF-CUSTODY / Analytical Request Document

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



**Document name:
Sample Condition Upon Receipt(SCUR)
Document No.:
F-CAR-CS-033-Rev.01**

DOCUMENT REVISED, SEPT. 21, 2010
Page 2 of 2
Issuing Authority:
Pace Quality Office

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

****Bottom half of box is to list number of bottles**

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
Required Client Information:

Company: **Amac Foster Wheeler**
Address: **108 Patten Avenue**
Asheville, NC 28806
Email To: **Susan.Kelly@DowChemical.com**
Phone: **828-252-8722** Fax:

Requested Due Date/FRAT: **Standard**

Section B
Required Project Information:

Report To: **Susan Kelly**
Copy To:
Purchase Order No.:
Project Name: **CTS of Asheville**
Project Number: **6252-16-202.06**

Section C
Invoice Information:

Attention: **Susan Kelly**
Company Name: **Amac Foster Wheeler**
Address:
Phone/Quote Reference:
Project Manager: **Karen Grotjan**
Pax Profile #:

STATE: **N.C.**

Page: **2** of **3**

1732711

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER **US EPA**

ITEM #

Section D
Required Client Information

MATRIX / CODES

DW

WT

PN

SL

OL

WP

AR

TS

OT

Other

</



**Document Name:
Sample Condition Upon Receipt(SCUR)
Document No.:
F-CAR-CS-033-Rev.01**

DOCUMENT REVISED, Sept. 21, 2010
Page 2 of 2
Issuing Authority:
Pace Quality Office

***Check mark top half of box If pH and/or dechlorination is verified and within the acceptance range for preservation samples.**

Project #

****Bottom half of box is to list number of bottles**

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #



CHAIN-OF-CUSTODY / Analytical Request Document

THE CHARTER OF THE INSTITUTE OF TECHNOLOGISTS OF IRELAND

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

E-A11-020rev 07 15-May-2007

APPENDIX F

PERMANGANATE NATURAL OXIDANT DEMAND RESULTS



July 28, 2017

Ms. Susan E. Kelly, PE, LG
Amec Foster Wheeler Environment & Infrastructure, Inc.
& Infrastructure, Inc.
1308 Patton Avenue, Suite C
Asheville, NC 28806

**RE: CTS of Asheville, Inc. Superfund Site
Permanganate Natural Oxidant Demand Results**

Dear Ms. Kelly:

Geo-Cleanse International, Inc. (Geo-Cleanse) is pleased to present Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) with the following results from permanganate natural oxidant demand (PNOD) testing of soil for the CTS of Asheville, Inc. Superfund Site. PNOD values are utilized to develop site-specific in-situ chemical oxidation field program designs. The overall average PNOD at 48 hours for the six soil samples submitted was determined to be 1.4 g KMnO₄ per kg dry soil with individual test averages ranging from 0.9 g/kg to 2.20 g/kg. PNOD is calculated as the ratio of the mass of potassium permanganate (KMnO₄) consumed per dry soil mass during a specified period of time.

Permanganate Chemistry

Permanganate is supplied as a soluble salt, either as the potassium permanganate (KMnO₄) or sodium permanganate (NaMnO₄). The two salts differ primarily by solubility; in aqueous solution both dissolve to release the cation (Na⁺ or K⁺) and the anion (MnO₄⁻):



The active oxidant for either salt is the permanganate anion (MnO₄⁻), which is a strong and persistent oxidant in the subsurface. Permanganate has a lifetime in the subsurface typically of weeks to months depending upon field conditions and remediation design, and although the oxidation reaction is exothermic it occurs so slowly that no measureable increase in temperature is observed. Permanganate is also effective over a wide pH range and does not require a catalyst.

Background

Twenty soil samples were provided by Amec Foster Wheeler from the CTS of Asheville, Inc. Superfund Site. PNOD values are required to develop an in-situ chemical oxidation field design with permanganate. In order to accurately assess the site-specific PNOD, soil must be collected from the same vertical interval that will be targeted during field application. The twenty soil samples were received by Geo-Cleanse on July 6, 2017 and identified as SS-75-24, SS-85-47, SS-87-37, SS-88-46, SS-90-27, SS-90-34, SS-90-39, SS-93-28, SS-93-33, SS-95-37, SS-94-54, SS-96-43, SS-97-24, SS-97-54, SS-101-43, SS-101-57, SS-102-38, SS-102-47, SS-103-41, and SS-105-49.

Experiment Design

Samples were analyzed according to ASTM D7262-07 Test Method A to determine the 48-hour PNOD of soil and aquifer solids. A total of six composited samples were analyzed for PNOD. Samples are dried at 105°C for 24 hours, blended, and passed through a U.S. 10 sieve (2 mm). Reactors are loaded in triplicate with 50 grams of soil and 100 mL of 20 g/L KMnO₄, for an initial dose of 40 g KMnO₄ per kg of soil. The reactors are initially mixed by inversion and allowed to digest for 48 hours, after which residual permanganate (MnO₄⁻) concentration is measured. The PNOD is expressed as the mass of potassium permanganate consumed per mass of dry aquifer solids as shown in equation 1 below:

$$PNOD_t = \frac{V([KMnO_4]_0 - [KMnO_4]_t)}{m_{soil}} \quad (1)$$

where $PNOD_t$ is the permanganate natural oxidant demand at time=t (g KMnO₄/kg dry soil), V is the volume of the aqueous phase (L), $[KMnO_4]_0$ is the initial potassium permanganate concentration (g/l), $[KMnO_4]_t$ is the potassium permanganate concentration at time=t(g/l), and m_{soil} is the mass of dry soil or aquifer solids (kg).

Results

In general, PNOD is the determination of the quantity of permanganate that organic matter and other naturally occurring oxidizable species present in soil and aquifer solids will consume in a given period of time. The oxidation of a compound by permanganate is dependent on the initial dose of permanganate and the reaction time available. The results of the 48-hour PNOD tests are provided in Table 1.

Table 1: PNOD

Sample ID	Replicate 1 PNOD _t (48hr) (g/kg)	Replicate 2 PNOD _t (48hr) (g/kg)	Replicate 3 PNOD _t (48hr) (g/kg)	Average PNOD _t (48hr) (g/kg)	Standard Deviation (g/kg)
SS-75-24	1.1	1.3	1.1	1.1	0.12
SS-85-47	1.2	1.4	1.2	1.2	0.10
SS-87-37	1.3	1.4	1.3	1.3	0.02
SS-88-46	1.2	1.2	1.2	1.2	0.03
SS-90-27	1.2	1.2	1.8	1.4	0.35
SS-90-34	1.5	1.6	1.2	1.4	0.22
SS-90-39	1.3	2.2	1.3	1.6	0.53
SS-93-28	1.0	0.8	0.9	0.9	0.10
SS-93-33	1.0	1.0	1.0	1.0	0.04
SS-95-37	0.9	1.0	1.1	1.0	0.10
SS-94-54	1.5	1.7	1.4	1.6	0.15
SS-96-43	1.7	1.7	1.5	1.6	0.11
SS-97-24	1.8	1.4	1.6	1.6	0.20
SS-97-54	1.3	2.0	1.3	1.5	0.39
SS-101-43	1.0	0.9	1.1	1.0	0.11
SS-101-57	1.5	2.2	1.7	1.8	0.38
SS-102-38	0.8	1.2	1.0	1.0	0.20
SS-102-47	1.3	3.0	2.5	2.2	0.88
SS-103-41	1.4	1.3	1.6	1.4	0.17
SS-105-49	1.3	1.3	1.4	1.3	0.07
Overall Average				1.4	

Conclusions

The amount of permanganate degraded depends on many factors including the reaction time and initial concentration of permanganate. During a 48-hour reaction time, the samples had an overall average of 1.4 g KMnO₄ per kg dry soil with individual test averages ranging from 0.9 g/kg to 2.20 g/kg. Based on the PNOD results from the provided aquifer materials, ISCO with permanganate is appropriate for field remediation.

If you have any questions or comments regarding this report, please feel free to contact us at (732) 970-6696 or via email at bconnell@geocleanse.com. We thank you for considering the Geo-Cleanse® Process in assisting you in your remedial needs.

Sincerely,
Geo-Cleanse International, Inc.



Robert Connell
Vice President, Senior Project Manager

APPENDIX G
DATA VALIDATION REPORT

**DATA VALIDATION REPORT
ISCO Pre-Design Investigation
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina**

1.0 INTRODUCTION

Groundwater and soil samples were collected at the CTS of Asheville, Inc. Superfund Site in Asheville, North Carolina, in June 2017 and submitted for off-site laboratory analysis. Samples were analyzed by Pace Analytical Services, located in Huntersville, North Carolina. Results were reported in the following Sample Delivery Groups (SDGs): 92345484 and 92346162.

A listing of samples included in this Data Validation Report is presented in Table G.1. Data were evaluated using project quality control limits summarized in Table G.2. A summary of the final validated analytical results is presented in Table G.3. Documentation of data validation actions is presented in Table G.4 and discussed in Section 2 of this report.

Samples were analyzed by the following method:

- Volatile organic compounds (VOCs) by USEPA Method 8260

Data validation was completed based on procedures in the USEPA Region 4 Data Validation Standard Operating Procedures (SOP) for Organic Data (USEPA, 2016), Method 8260, and the CTS of Asheville Remedial Design Work Plan: Quality Assurance Project Plan (QAPP; Amec Foster Wheeler, 2017). 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

UJ = estimated not detected at the reported detection limit

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

2.0 VOCs

2.1 Groundwater Samples

Initial Calibration Standards

The average relative response factors (RRFs) and percent relative standard deviations (RSDs) between initial calibration RRFs were evaluated. Percent RSDs for 1,2-dibromo-3-chloropropane and 2-butanone in the initial calibrations associated with a subset of samples were outside initial calibration goals specified in the USEPA validation guidelines. Results for these samples are qualified estimate (J/UJ). A summary of qualified results is provided in Table G.4 with reason code ICVRSD.

The initial calibration average RRFs for 1,4-dioxane in all initial calibrations were less than the minimum goal of 0.05 in the validation guidelines. The analyte 1,4-dioxane was not detected in any groundwater samples, and based on professional judgment the reporting limits for 1,4-dioxane in all groundwater samples were qualified estimated (UJ). Qualified results are summarized in Table G.4 with reason code ICVRRF.

Continuing Calibration Standards

The percent differences between the RRF in the continuing calibration verification (CCV) standard and the average RRF in the initial calibration were calculated and reported by the laboratory. If regression (i.e., linear) was used in the initial calibration, the percent difference was calculated between the known standard concentration and the amount recovered in the continuing calibration.

A subset of target compounds had responses for at least one analytical batch that did not meet the continuing calibration goals specified in the USEPA validation guidelines and were qualified as estimated values (UJ). A summary of qualified results is provided in Table G.4 with reason code CCV%D.

The continuing calibration RRFs for 1,4-dioxane in all continuing calibrations were less than the minimum goal of 0.05 in the validation guidelines. The analyte 1,4-dioxane was not detected in any groundwater samples, and based on professional judgment the reporting limits for 1,4-dioxane in all groundwater samples were qualified estimated (UJ). Qualified results are summarized in Table 4 with reason code CCVRRF.

Matrix Spikes

Matrix spike/matrix spike duplicate analyses were performed using sample MW-7. Percent recoveries were less than the 70-130 control limits for bromomethane (42, 47), chloromethane (54, 55), dichlorodifluoromethane (21, 22), and vinyl chloride (63, 66). These target compounds were not detected in sample MW-7 and reporting limits were qualified estimated (UJ). Qualified results are summarized in Table G.4 with reason code MS-L.

Field Duplicates

A field duplicate was associated with sample GW-80-40. Inconsistent results were observed for 2-butanone in the field duplicate pair. 2-Butanone was detected at a concentration of 865 µg/L in sample GW-80-40, but was not detected in field duplicate FD-10. The positive and non-detected results for 2-butanone in GW-80-40 and FD-10 were qualified estimated (J/UJ) and are included in Table G.4 with reason code FD.

2.2 Soil Samples

Initial Calibration Standards

The initial calibration average RRFs for 1,4-dioxane in all initial calibrations were less than the minimum goal of 0.05 in the validation guidelines. The analyte 1,4-dioxane was not detected in any soil samples, and based on professional judgment the reporting limits for 1,4-dioxane in all soil samples were qualified estimated (UJ). Qualified results are summarized in Table G.4 with reason code ICVRRF.

Continuing Calibration Standards

Continuing calibration percent differences for chloromethane are outside the continuing calibration goals specified in the USEPA validation guidelines. Chloromethane was not detected in samples and reporting limits are qualified as estimated (UJ). A summary of qualified results is provided in Table G.4 with reason code CCV%D.

The continuing calibration RRFs for 1,4-dioxane in all continuing calibrations were less than 0.05. The analyte 1,4-dioxane was not detected in any soil samples, and based on professional judgment the reporting limits for 1,4-dioxane in all soil samples were qualified estimated (UJ). Qualified results are summarized in Table G.4 with reason code CCVRRF.

Blank Contamination

Acetone, methylene chloride, xylenes (m&p), and acetic acid, methyl ester were reported in one or more field or trip blanks associated with all soil samples. Low concentration detections of acetone, methylene chloride, xylenes (m&p), and acetic acid, methyl ester in associated soil samples were qualified non-detect (U). Qualified results are summarized in Table G.4 with reason code BL2.

Matrix Spikes

Matrix spike/matrix spike duplicate analyses were performed using sample SS-87-31. Percent recoveries were less than the 70-130 control limits for acetone (62, 133) and acetic acid, methyl ester (47, 51). These target compounds were previously qualified

non-detect (U) in sample SS-87-31 due to blank contamination, and reporting limits were qualified estimated (UJ). Qualified results are summarized in Table G.4 with reason code MS-L.

References

Amec Foster Wheeler, 2017. "Remedial Design Work Plan: Quality Assurance Project Plan;" April 19, 2017.

USEPA Region 4, 2016. "Data Validation Standard Operating Procedures for Contract Laboratory Program Organic Data Using GC/MS and GC/ECD" Science and Ecosystem Support Division, Quality Assurance Section, MTSB, Revision 0.0, February 2016.

Data Validator: Julie Ricardi



Date: 8/30/2017

Reviewed by Chris Ricardi, NRCC-EAC



Date: 9/5/2017

TABLE G.1
Data Validation Report: Sample Summary
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Sample Delivery Group	Sample Location	Field Sample ID	Sample Date	Lab Sample ID	QC Code
92345484	MW-6	MW-6	6/22/2017	92345484001	FS
92345484	MW-6A	MW-6A	6/22/2017	92345484002	FS
92345484	MW-7	MW-7	6/22/2017	92345484006	FS
92345484	MW-7A	FD-08	6/22/2017	92345484004	FD
92345484	MW-7A	MW-7A	6/22/2017	92345484003	FS
92345484	QC	TB-07	6/22/2017	92345484005	TB
92346162	GW-102	GW-102-52	6/22/2017	92346162014	FS
92346162	GW-75	GW-75-26	6/22/2017	92346162003	FS
92346162	GW-78	GW-78-46	6/22/2017	92346162007	FS
92346162	GW-80	FD-10	6/22/2017	92346162002	FD
92346162	GW-80	GW-80-40	6/22/2017	92346162004	FS
92346162	GW-81	GW-81-36	6/22/2017	92346162005	FS
92346162	GW-87	GW-87-35	6/22/2017	92346162011	FS
92346162	GW-87	GW-87-53	6/22/2017	92346162012	FS
92346162	GW-90	GW-90-42	6/22/2017	92346162013	FS
92346162	GW-93	GW-93-46	6/22/2017	92346162010	FS
92346162	GW-95	GW-95-46	6/22/2017	92346162009	FS
92346162	QC	EB-03	6/22/2017	92346162006	EB
92346162	QC	EB-04	6/22/2017	92346162008	EB
92346162	QC	TB-08	6/22/2017	92346162001	TB
92346162	QC	TB-09	6/22/2017	92346162015	TB
92346162	SS-102	SS-102-53	6/22/2017	92346162026	FS
92346162	SS-75	SS-75-23	6/22/2017	92346162017	FS
92346162	SS-78	SS-78-46	6/22/2017	92346162020	FS
92346162	SS-80	FD-09	6/22/2017	92346162016	FD
92346162	SS-80	SS-80-37	6/22/2017	92346162018	FS
92346162	SS-81	SS-81-33	6/22/2017	92346162019	FS
92346162	SS-87	SS-87-31	6/22/2017	92346162023	FS
92346162	SS-87	SS-87-48	6/22/2017	92346162024	FS
92346162	SS-90	SS-90-37	6/22/2017	92346162025	FS
92346162	SS-93	SS-93-42	6/22/2017	92346162022	FS
92346162	SS-95	SS-95-42	6/22/2017	92346162021	FS

QC Codes:

FS = Field sample, FD = Field duplicate, TB = Trip blank, EB = Equipment Blank

Prepared By: WCG 8/25/17

Checked By: JAR 8/28/17

TABLE G.2
Data Validation Report: Project Quality Control Limits
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Parameter	QC Test	Water %R	Water RPD	Soil %R	Soil RPD
VOC	Surrogate	70-130	---	70-130	---
	LCS/LCSD	70-130	30	70-130	30
	MS/MSD	70-130	30	70-130	30
	Field Duplicate	---	30	---	30

Notes:

LCS = laboratory control sample

LCSD = laboratory control sample duplicate

MS = matrix spike

MSD = matrix spike duplicate

%R = percent recovery

RPD = relative percent difference

Prepared By: JAR 8/30/17

Checked By: CSR 8/31/17

TABLE G.3a
Data Validation Report: Summary of Analytical Results (Soil)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Method	Units	Parameter Name	Sample Location		QC		SS-102		SS-75		SS-78		SS-80		SS-80	
			Sample Date	Field Sample ID	06/26/17	06/29/17	06/26/17	06/27/17	06/27/17	06/26/17	06/27/17	06/26/17	06/27/17	06/26/17	06/27/17	
					TB-09	SS-102-53	SS-75-23	SS-78-46	FD-09	SS-80-37						
ASTM D2974	Percent	Percent Moisture					18.4		17		18.3		24.1		30.4	
EPA 8260	UG/KG	1,1,1-Trichloroethane			5 U		8.4		5.4 U		75.9		5.3 U		6.1 U	
EPA 8260	UG/KG	1,1,2,2-Tetrachloroethane			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	1,1,2-Trichloro-1,2,2-Trifluoroethane			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	1,1,2-Trichloroethane			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	1,1-Dichloroethane			5 U		5 U		5.4 U		2.2 J		5.3 U		6.1 U	
EPA 8260	UG/KG	1,1-Dichloroethene			5 U		2 J		5.4 U		11.3		5.3 U		6.1 U	
EPA 8260	UG/KG	1,2,3-Trichlorobenzene			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	1,2,4-Trichlorobenzene			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	1,2-Dibromo-3-chloropropane			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	1,2-Dibromoethane			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	1,2-Dichlorobenzene			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	1,2-Dichloroethane			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	1,2-Dichloropropene			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	1,3-Dichlorobenzene			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	1,4-Dichlorobenzene			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	1,4-Dioxane			150 U		149 UJ		162 UJ		147 UJ		158 UJ		183 UJ	
EPA 8260	UG/KG	2-Butanone			100 U		99 U		108 U		97.8 U		105 U		122 U	
EPA 8260	UG/KG	2-Hexanone			50 U		49.5 U		54 U		48.9 U		52.6 U		60.9 U	
EPA 8260	UG/KG	4-Methyl-2-pentanone			50 U		49.5 U		54 U		48.9 U		52.6 U		60.9 U	
EPA 8260	UG/KG	Acetic acid, methyl ester			10.3		9.9 U		10.8 U		9.8 U		10.5 U		12.2 U	
EPA 8260	UG/KG	Acetone			88.7 J		99 U		108 U		97.8 U		105 U		122 U	
EPA 8260	UG/KG	Benzene			5 U		11.8		5.4 U		18		5.3 U		6.1 U	
EPA 8260	UG/KG	Bromochloromethane			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	Bromodichloromethane			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	Bromoform			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	Bromomethane			10 U		9.9 U		10.8 U		9.8 U		10.5 U		12.2 U	
EPA 8260	UG/KG	Carbon disulfide			10 U		9.9 U		10.8 U		9.8 U		10.5 U		12.2 U	
EPA 8260	UG/KG	Carbon tetrachloride			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	Chlorobenzene			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	Chloroethane			10 U		9.9 U		10.8 U		9.8 U		10.5 U		12.2 U	
EPA 8260	UG/KG	Chloroform			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	Chloromethane			10 U		9.9 UJ		10.8 UJ		9.8 UJ		10.5 UJ		12.2 UJ	
EPA 8260	UG/KG	cis-1,2-Dichloroethene			5 U		5 U		5.4 U		82.1		5.3 U		6.1 U	
EPA 8260	UG/KG	cis-1,3-Dichloropropene			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	

TABLE G.3a
Data Validation Report: Summary of Analytical Results (Soil)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Method	Units	Parameter Name	Sample Location		QC		SS-102		SS-75		SS-78		SS-80		SS-80	
			Sample Date	Field Sample ID	06/26/17	06/29/17	06/26/17	06/27/17	06/27/17	06/26/17	06/27/17	06/26/17	06/27/17	06/26/17	06/27/17	
					TB-09	SS-102-53	SS-75-23	SS-78-46	FD-09	SS-80-37						
EPA 8260	UG/KG	Cyclohexane			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	Dibromochloromethane			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	Dichlorodifluoromethane			10 U		9.9 U		10.8 U		9.8 U		10.5 U		12.2 U	
EPA 8260	UG/KG	Ethylbenzene			5 U		3.5 J		5.4 U		3.3 J		5.3 U		6.1 U	
EPA 8260	UG/KG	Isopropylbenzene			5 U		5 U		5.4 U		2.1 J		5.3 U		6.1 U	
EPA 8260	UG/KG	Methyl cyclohexane			10 U		9.9 U		10.8 U		9.8 U		10.5 U		12.2 U	
EPA 8260	UG/KG	Methyl Tertbutyl Ether			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	Methylene chloride			20 U		19.8 U		21.6 U		19.6 U		21.1 U		24.4 U	
EPA 8260	UG/KG	Styrene			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	Tetrachloroethene			5 U		5 U		5.4 U		4.9 U		2.1 J		2.2 J	
EPA 8260	UG/KG	Toluene			5 U		6.5		5.4 U		3.3 J		5.3 U		6.1 U	
EPA 8260	UG/KG	trans-1,2-Dichloroethene			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	trans-1,3-Dichloropropene			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	Trichloroethene			5 U		438		13.3		2930		3160		3310	
EPA 8260	UG/KG	Trichlorofluoromethane			5 U		5 U		5.4 U		4.9 U		5.3 U		6.1 U	
EPA 8260	UG/KG	Vinyl chloride			10 U		9.9 U		10.8 U		9.8 U		10.5 U		12.2 U	
EPA 8260	UG/KG	Xylene, o			5 U		13		5.4 U		25.4		5.3 U		6.1 U	
EPA 8260	UG/KG	Xylenes (m&p)			4.6 J		17.2 U		10.8 U		19.7 U		10.5 U		12.2 U	

Notes:

UG/KG = microgram per kilogram

Qualifiers

U = not detected at the detection limit

UJ = estimated not detected at the detection limit

J = estimated concentration

Prepared By: WCG 8/30/17

Checked By: JAR 8/31/17

TABLE G.3a
Data Validation Report: Summary of Analytical Results (Soil)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Method	Units	Parameter Name	Sample Location		SS-81		SS-87		SS-87		SS-90		SS-93		SS-95	
			Sample Date	06/27/17	Result	Qual	Result	Qual	Result	Qual	Result	Qual	06/28/17	Result	Qual	06/27/17
				Field Sample ID	SS-81-33	SS-87-31	SS-87-48	SS-90-37	SS-93-42	SS-95-42	06/27/17	Result	Qual	06/28/17	Result	Qual
ASTM D2974	Percent	Percent Moisture			18.5		24.7		18.1		25.5		27		19.7	
EPA 8260	UG/KG	1,1,1-Trichloroethane			5.5 U		4.8 U		5.7 U		4.3 J		4.9 U		5.9 U	
EPA 8260	UG/KG	1,1,2,2-Tetrachloroethane			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	1,1,2-Trichloro-1,2,2-Trifluoroethane			5.5 U		4.8 U		2.2 J		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	1,1,2-Trichloroethane			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	1,1-Dichloroethane			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	1,1-Dichloroethene			5.5 U		4.7 J		6.2		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	1,2,3-Trichlorobenzene			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	1,2,4-Trichlorobenzene			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	1,2-Dibromo-3-chloropropane			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	1,2-Dibromoethane			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	1,2-Dichlorobenzene			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	1,2-Dichloroethane			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	1,2-Dichloropropane			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	1,3-Dichlorobenzene			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	1,4-Dichlorobenzene			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	1,4-Dioxane			166 UJ		145 UJ		171 UJ		170 UJ		146 UJ		177 UJ	
EPA 8260	UG/KG	2-Butanone			110 U		96.5 U		114 U		113 U		97.3 U		118 U	
EPA 8260	UG/KG	2-Hexanone			55.2 U		48.2 U		57.1 U		56.6 U		48.7 U		59 U	
EPA 8260	UG/KG	4-Methyl-2-pentanone			55.2 U		48.2 U		57.1 U		56.6 U		48.7 U		59 U	
EPA 8260	UG/KG	Acetic acid, methyl ester			11 U		10.8 UJ		11.4 U		11.3 U		9.7 U		11.8 U	
EPA 8260	UG/KG	Acetone			110 U		96.5 UJ		114 U		113 U		97.3 U		118 U	
EPA 8260	UG/KG	Benzene			5.5 U		4.8 U		5.7 U		6.9		4.9 U		5.9 U	
EPA 8260	UG/KG	Bromochloromethane			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	Bromodichloromethane			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	Bromoform			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	Bromomethane			11 U		9.6 U		11.4 U		11.3 U		9.7 U		11.8 U	
EPA 8260	UG/KG	Carbon disulfide			11 U		9.6 U		11.4 U		11.3 U		9.7 U		11.8 U	
EPA 8260	UG/KG	Carbon tetrachloride			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	Chlorobenzene			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	Chloroethane			11 U		9.6 U		11.4 U		11.3 U		9.7 U		11.8 U	
EPA 8260	UG/KG	Chloroform			5.5 U		4.8 U		5.7 U		3.5 J		4.9 U		5.9 U	
EPA 8260	UG/KG	Chloromethane			11 UJ		9.6 UJ		11.4 UJ		11.3 UJ		9.7 UJ		11.8 UJ	
EPA 8260	UG/KG	cis-1,2-Dichloroethene			5.5 U		4.8 U		4.2 J		5.7 U		4.9 U		5.9 U	
EPA 8260	UG/KG	cis-1,3-Dichloropropene			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		5.9 U	

TABLE G.3a
Data Validation Report: Summary of Analytical Results (Soil)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Method	Units	Parameter Name	Sample Location		SS-81		SS-87		SS-87		SS-90		SS-93		SS-95	
			Sample Date	06/27/17	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	06/28/17	06/27/17
				SS-81-33	SS-87-31	SS-87-48	SS-90-37	SS-93-42	SS-95-42						SS-95-42	
EPA 8260	UG/KG	Cyclohexane			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		4.9 U	5.9 U
EPA 8260	UG/KG	Dibromochloromethane			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		4.9 U	5.9 U
EPA 8260	UG/KG	Dichlorodifluoromethane			11 U		9.6 U		11.4 U		11.3 U		9.7 U		9.7 U	11.8 U
EPA 8260	UG/KG	Ethylbenzene			5.5 U		4.8 U		5.7 U		4.2 J		4.9 U		4.9 U	5.9 U
EPA 8260	UG/KG	Isopropylbenzene			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		4.9 U	5.9 U
EPA 8260	UG/KG	Methyl cyclohexane			11 U		9.6 U		11.4 U		11.3 U		9.7 U		9.7 U	11.8 U
EPA 8260	UG/KG	Methyl Tertbutyl Ether			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		4.9 U	5.9 U
EPA 8260	UG/KG	Methylene chloride			22.1 U		19.3 U		22.8 U		22.6 U		19.5 U		19.5 U	23.6 U
EPA 8260	UG/KG	Styrene			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		4.9 U	5.9 U
EPA 8260	UG/KG	Tetrachloroethene			5.5 U		2 J		4.1 J		5.7 U		4.9 U		4.9 U	5.9 U
EPA 8260	UG/KG	Toluene			5.5 U		4.8 U		5.7 U		2.3 J		4.9 U		4.9 U	5.9 U
EPA 8260	UG/KG	trans-1,2-Dichloroethene			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		4.9 U	5.9 U
EPA 8260	UG/KG	trans-1,3-Dichloropropene			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		4.9 U	5.9 U
EPA 8260	UG/KG	Trichloroethene			25.6		4630		5030		1950		1130		1130	432
EPA 8260	UG/KG	Trichlorofluoromethane			5.5 U		4.8 U		5.7 U		5.7 U		4.9 U		4.9 U	5.9 U
EPA 8260	UG/KG	Vinyl chloride			11 U		9.6 U		11.4 U		11.3 U		9.7 U		9.7 U	11.8 U
EPA 8260	UG/KG	Xylene, o			5.5 U		4.8 U		5.7 U		9		4.9 U		4.9 U	5.9 U
EPA 8260	UG/KG	Xylenes (m&p)			11 U		9.6 U		11.4 U		11.3 U		9.7 U		9.7 U	11.8 U

Notes:

UG/KG = microgram per kilogram

Qualifiers

U = not detected at the detection limit

UJ = estimated not detected at the detection limit

J = estimated concentration

Prepared By: WCG 8/30/17

Checked By: JAR 8/31/17

TABLE G.3b
Data Validation Report: Summary of Analytical Results (Groundwater)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Method	Units	Parameter Name	Sample Location		MW-6		MW-6A		MW-7		MW-7A		MW-7A		QC		
			Sample Date	Field Sample ID	06/22/17	MW-6	06/22/17	MW-6A	06/22/17	MW-7	06/22/17	FD-08	06/22/17	MW-7A	06/22/17	TB-07	06/22/17
					Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	
EPA 8260	UG/L	1,1,1-Trichloroethane			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	1,1,2,2-Tetrachloroethane			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	1,1,2-Trichloro-1,2,2-Trifluoroethane			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	1,1,2-Trichloroethane			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	1,1-Dichloroethane			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	1,1-Dichloroethene			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	1,2,3-Trichlorobenzene			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	1,2,4-Trichlorobenzene			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	1,2-Dibromo-3-chloropropane			100 U		1000 U		2 U		400 U		500 U		2 U		
EPA 8260	UG/L	1,2-Dibromoethane			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	1,2-Dichlorobenzene			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	1,2-Dichloroethane			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	1,2-Dichloropropane			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	1,3-Dichlorobenzene			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	1,4-Dichlorobenzene			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	1,4-Dioxane			7,500 UJ		75,000 UJ		150 UJ		30,000 UJ		37,500 UJ		150 U		
EPA 8260	UG/L	2-Butanone			250 U		2500 U		5 U		1000 U		1250 U		5 U		
EPA 8260	UG/L	2-Hexanone			250 U		2500 U		5 U		1000 U		1250 U		5 U		
EPA 8260	UG/L	4-Methyl-2-pentanone			250 U		2500 U		5 U		1000 U		1250 U		5 U		
EPA 8260	UG/L	Acetic acid, methyl ester			500 U		5000 U		10 U		2000 U		2500 U		10 U		
EPA 8260	UG/L	Acetone			1,250 U		12,500 U		25 U		5,000 U		6,250 U		18 J		
EPA 8260	UG/L	Benzene			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	Bromochloromethane			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	Bromodichloromethane			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	Bromoform			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	Bromomethane			100 UJ		1000 UJ		2 UJ		400 UJ		500 UJ		2 U		
EPA 8260	UG/L	Carbon disulfide			100 U		1000 U		2 U		400 U		500 U		2 U		
EPA 8260	UG/L	Carbon tetrachloride			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	Chlorobenzene			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	Chloroethane			50 U		500 UJ		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	Chloroform			50 U		500 U		6.1		200 U		250 U		1 U		
EPA 8260	UG/L	Chloromethane			50 U		500 U		1 UJ		200 U		250 U		0.27 J		
EPA 8260	UG/L	Cis-1,2-Dichloroethene			50 U		98.6 J		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	Cis-1,3-Dichloropropene			50 U		500 U		1 U		200 U		250 U		1 U		
EPA 8260	UG/L	Cyclohexane			50 U		500 U		1 U		200 U		250 U		1 U		

TABLE G.3b
Data Validation Report: Summary of Analytical Results (Groundwater)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Method	Units	Parameter Name	Sample Location		MW-6		MW-6A		MW-7		MW-7A		MW-7A		QC	
			Sample Date	06/22/17	06/22/17		06/22/17		06/22/17		06/22/17		06/22/17		06/22/17	
				Field Sample ID	MW-6	MW-6A	MW-7	MW-7A	FD-08	MW-7A	TB-07					
EPA 8260	UG/L	Dibromochloromethane			50 U		500 U		1 U		200 U		250 U		1 U	
EPA 8260	UG/L	Dichlorodifluoromethane			50 U		500 UJ		1 UJ		200 U		250 U		1 U	
EPA 8260	UG/L	Ethylbenzene			50 U		500 U		1 U		200 U		250 U		1 U	
EPA 8260	UG/L	Isopropylbenzene			50 U		500 U		1 U		200 U		250 U		1 U	
EPA 8260	UG/L	Methyl cyclohexane			500 U		5000 U		10 U		2000 U		2500 U		10 U	
EPA 8260	UG/L	Methyl Tertbutyl Ether			50 U		500 U		1 U		200 U		250 U		1 U	
EPA 8260	UG/L	Methylene chloride			72 J		1000 U		2 U		400 U		434 J		2 U	
EPA 8260	UG/L	Styrene			50 U		500 U		1 U		200 U		250 U		1 U	
EPA 8260	UG/L	Tetrachloroethene			50 U		500 U		1 U		200 U		250 U		1 U	
EPA 8260	UG/L	Toluene			50 U		500 U		1 U		200 U		250 U		1 U	
EPA 8260	UG/L	trans-1,2-Dichloroethene			50 U		500 U		1 U		200 U		250 U		1 U	
EPA 8260	UG/L	trans-1,3-Dichloropropene			50 U		500 U		1 U		200 U		250 U		1 U	
EPA 8260	UG/L	Trichloroethene			7,890		60,600		43		33,100		30,800		1 U	
EPA 8260	UG/L	Trichlorofluoromethane			50 U		500 U		1 U		200 U		250 U		1 U	
EPA 8260	UG/L	Vinyl chloride			50 U		500 U		1 UJ		200 U		250 U		1 U	
EPA 8260	UG/L	Xylene, o			50 U		500 U		1 U		200 U		250 U		1 U	
EPA 8260	UG/L	Xylenes (m&p)			100 U		1000 U		2 U		400 U		500 U		2 U	

Units:

UG/L = microgram per liter

Qualifiers:

U = not detected at the detection limit

UJ = estimated not detected at the detection limit

J = estimated concentration

Prepared By: WCG 8/30/17

Checked By: JAR 8/30/17

TABLE G.3b
Data Validation Report: Summary of Analytical Results (Groundwater)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Method	Units	Parameter Name	Sample Location		GW-102		GW-75		GW-78		GW-80		GW-80		GW-81			
			Sample Date	06/29/17	Result	Qual	Sample Date	06/26/17	Result	Qual	Sample Date	06/27/17	Result	Qual <th data-kind="parent" data-rs="2">Sample Date</th> <td>06/26/17</td> <th data-kind="parent" data-rs="2">Result</th> <td data-kind="parent" data-rs="2">Qual</td>	Sample Date	06/26/17	Result	Qual
				Field Sample ID	GW-102-52	GW-75-26		GW-78-46				FD-10		GW-80-40	GW-81-36			
EPA 8260	UG/L	1,1,1-Trichloroethane			138			20 U		1110		58.2 J		54.7 J		50 U		
EPA 8260	UG/L	1,1,2,2-Tetrachloroethane			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	1,1,2-Trichloro-1,2,2-Trifluoroethane			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	1,1,2-Trichloroethane			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	1,1-Dichloroethane			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	1,1-Dichloroethene			100 U			20 U		183 J		100 U		100 U		50 U		
EPA 8260	UG/L	1,2,3-Trichlorobenzene			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	1,2,4-Trichlorobenzene			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	1,2-Dibromo-3-chloropropane			200 U			40 UJ		500 UJ		200 UJ		200 UJ		100 UJ		
EPA 8260	UG/L	1,2-Dibromoethane			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	1,2-Dichlorobenzene			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	1,2-Dichloroethane			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	1,2-Dichloropropane			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	1,3-Dichlorobenzene			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	1,4-Dichlorobenzene			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	1,4-Dioxane			15,000 UJ			3,000 UJ		37,500 UJ		15,000 UJ		15,000 UJ		7,500 UJ		
EPA 8260	UG/L	2-Butanone			544			182 J		3220 J		500 UJ		865 J		250 UJ		
EPA 8260	UG/L	2-Hexanone			500 U			100 U		1250 U		500 U		500 U		250 U		
EPA 8260	UG/L	4-Methyl-2-pentanone			500 U			100 U		1250 U		500 U		500 U		250 U		
EPA 8260	UG/L	Acetic acid, methyl ester			1000 U			200 U		2500 U		1000 U		1000 U		500 U		
EPA 8260	UG/L	Acetone			2,500 U			500 U		6,250 U		2,500 U		2,500 U		1,250 U		
EPA 8260	UG/L	Benzene			167			20 U		70.6 J		100 U		100 U		50 U		
EPA 8260	UG/L	Bromochloromethane			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	Bromodichloromethane			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	Bromoform			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	Bromomethane			200 U			40 U		500 U		200 U		200 U		100 U		
EPA 8260	UG/L	Carbon disulfide			200 U			40 U		500 U		200 U		200 U		100 U		
EPA 8260	UG/L	Carbon tetrachloride			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	Chlorobenzene			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	Chloroethane			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	Chloroform			100 U			12.4 J		250 U		100 U		100 U		18.9 J		
EPA 8260	UG/L	Chloromethane			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	Cis-1,2-Dichloroethene			100 U			20 U		726		100 U		100 U		50 U		
EPA 8260	UG/L	Cis-1,3-Dichloropropene			100 U			20 U		250 U		100 U		100 U		50 U		
EPA 8260	UG/L	Cyclohexane			100 U			20 U		250 U		100 U		100 U		50 U		

TABLE G.3b
Data Validation Report: Summary of Analytical Results (Groundwater)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Method	Units	Parameter Name	Sample Location		GW-102		GW-75		GW-78		GW-80		GW-80		GW-81			
			Sample Date	06/29/17	Result	Qual	Sample Date	06/26/17	Result	Qual	Sample Date	06/27/17	Result	Qual <th data-kind="parent" data-rs="2">Sample Date</th> <td>06/27/17</td> <th data-kind="parent" data-rs="2">Result</th> <td data-kind="parent" data-rs="2">Qual</td>	Sample Date	06/27/17	Result	Qual
				Field Sample ID	GW-102-52	GW-75-26	GW-78-46	FD-10	GW-80-40	GW-81-36	Field Sample ID	GW-80-40	GW-81-36	Field Sample ID	GW-81-36	Result	Qual	
EPA 8260	UG/L	Dibromochloromethane			100	U		20	U	250	U	100	U	100	U	50	U	
EPA 8260	UG/L	Dichlorodifluoromethane			100	U		20	U	250	U	100	U	100	U	50	U	
EPA 8260	UG/L	Ethylbenzene			41.7	J		20	U	250	U	100	U	100	U	50	U	
EPA 8260	UG/L	Isopropylbenzene			100	U		20	U	250	U	100	U	100	U	50	U	
EPA 8260	UG/L	Methyl cyclohexane			1000	U		200	U	2500	U	1000	U	1000	U	500	U	
EPA 8260	UG/L	Methyl Tertbutyl Ether			100	U		20	U	250	U	100	U	100	U	50	U	
EPA 8260	UG/L	Methylene chloride			200	U		40	U	500	U	200	U	200	U	100	U	
EPA 8260	UG/L	Styrene			100	U		20	U	250	U	100	U	100	U	50	U	
EPA 8260	UG/L	Tetrachloroethene			100	U		20	U	250	U	100	U	100	U	50	U	
EPA 8260	UG/L	Toluene			84.2	J		20	U	250	U	100	U	100	U	50	U	
EPA 8260	UG/L	trans-1,2-Dichloroethene			100	U		20	U	250	U	100	U	100	U	50	U	
EPA 8260	UG/L	trans-1,3-Dichloropropene			100	U		20	U	250	U	100	U	100	U	50	U	
EPA 8260	UG/L	Trichloroethene			17,800		2,410		48,500		18,300		17,200		5,200			
EPA 8260	UG/L	Trichlorofluoromethane			100	U		20	U	250	U	100	U	100	U	50	U	
EPA 8260	UG/L	Vinyl chloride			100	U		20	U	250	U	100	U	100	U	50	U	
EPA 8260	UG/L	Xylene, o			139			20	U	118	J	30.1	J	27.8	J	50	U	
EPA 8260	UG/L	Xylenes (m&p)			191	J		40	U	500	U	200	U	200	U	100	U	

Units:

UG/L = microgram per liter

Qualifiers:

U = not detected at the detection limit

UJ = estimated not detected at the detection limit

J = estimated concentration

Prepared By: WCG 8/30/17

Checked By: JAR 8/30/17

TABLE G.3b
Data Validation Report: Summary of Analytical Results (Groundwater)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Method	Units	Parameter Name	Sample Location		GW-87		GW-87		GW-90		GW-93		GW-95		QC	
			Sample Date	06/28/17	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	06/27/17	06/26/17
				Field Sample ID	GW-87-35	GW-87-53	GW-90-42	GW-93-46	GW-95-46	TB-08						
EPA 8260	UG/L	1,1,1-Trichloroethane			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	1,1,2,2-Tetrachloroethane			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	1,1,2-Trichloro-1,2,2-Trifluoroethane			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	1,1,2-Trichloroethane			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	1,1-Dichloroethane			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	1,1-Dichloroethene			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	1,2,3-Trichlorobenzene			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	1,2,4-Trichlorobenzene			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	1,2-Dibromo-3-chloropropane			200	UJ	200	U	400	U	250	UJ	80	UJ	2	U
EPA 8260	UG/L	1,2-Dibromoethane			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	1,2-Dichlorobenzene			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	1,2-Dichloroethane			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	1,2-Dichloropropane			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	1,3-Dichlorobenzene			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	1,4-Dichlorobenzene			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	1,4-Dioxane			15,000	UJ	15,000	UJ	30,000	UJ	18,800	UJ	6,000	UJ	150	U
EPA 8260	UG/L	2-Butanone			2610	J	500	U	1000	U	625	UJ	200	UJ	5	U
EPA 8260	UG/L	2-Hexanone			500	U	500	U	1000	U	625	U	200	U	5	U
EPA 8260	UG/L	4-Methyl-2-pentanone			500	U	500	U	1000	U	625	U	200	U	5	U
EPA 8260	UG/L	Acetic acid, methyl ester			1000	U	1000	U	2000	U	1250	U	400	U	10	U
EPA 8260	UG/L	Acetone			2,500	U	2,500	U	5,000	UJ	3,120	U	1,000	U	11	J
EPA 8260	UG/L	Benzene			100	U	100	U	83.3	J	125	U	40	U	1	U
EPA 8260	UG/L	Bromochloromethane			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	Bromodichloromethane			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	Bromoform			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	Bromomethane			200	U	200	U	400	UJ	250	U	80	U	2	U
EPA 8260	UG/L	Carbon disulfide			200	U	200	U	400	U	250	U	80	U	2	U
EPA 8260	UG/L	Carbon tetrachloride			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	Chlorobenzene			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	Chloroethane			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	Chloroform			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	Chloromethane			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	Cis-1,2-Dichloroethene			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	Cis-1,3-Dichloropropene			100	U	100	U	200	U	125	U	40	U	1	U
EPA 8260	UG/L	Cyclohexane			100	U	100	U	200	UJ	125	U	40	U	1	U

TABLE G.3b
Data Validation Report: Summary of Analytical Results (Groundwater)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Method	Units	Parameter Name	Sample Location		GW-87		GW-87		GW-90		GW-93		GW-95		QC	
			Sample Date	06/28/17	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	06/27/17	06/26/17
				Field Sample ID	GW-87-35	GW-87-53	GW-90-42	GW-93-46	GW-95-46	TB-08						
EPA 8260	UG/L	Dibromochloromethane			100 U		100 U		200 U		125 U		40 U		1 U	
EPA 8260	UG/L	Dichlorodifluoromethane			100 U		100 U		200 U		125 U		40 U		1 U	
EPA 8260	UG/L	Ethylbenzene			100 U		100 U		200 U		125 U		40 U		1 U	
EPA 8260	UG/L	Isopropylbenzene			100 U		100 U		200 U		125 U		40 U		1 U	
EPA 8260	UG/L	Methyl cyclohexane			1000 U		1000 U		2000 U		1250 U		400 U		10 U	
EPA 8260	UG/L	Methyl Tertbutyl Ether			100 U		100 U		200 U		125 U		40 U		1 U	
EPA 8260	UG/L	Methylene chloride			200 U		135 J		400 U		250 U		80 U		2 U	
EPA 8260	UG/L	Styrene			100 U		100 U		200 U		125 U		40 U		1 U	
EPA 8260	UG/L	Tetrachloroethene			100 U		100 U		200 U		125 U		40 U		1 U	
EPA 8260	UG/L	Toluene			100 U		100 U		55.1 J		125 U		40 U		1 U	
EPA 8260	UG/L	trans-1,2-Dichloroethene			100 U		100 U		200 U		125 U		40 U		1 U	
EPA 8260	UG/L	trans-1,3-Dichloropropene			100 U		100 U		200 U		125 U		40 U		1 U	
EPA 8260	UG/L	Trichloroethene			14,600		13,900		25,700		16,700		5,170		1 U	
EPA 8260	UG/L	Trichlorofluoromethane			100 U		100 U		200 U		125 U		40 U		1 U	
EPA 8260	UG/L	Vinyl chloride			100 U		100 U		200 U		125 U		40 U		1 U	
EPA 8260	UG/L	Xylene, o			100 U		100 U		200 U		125 U		40 U		1 U	
EPA 8260	UG/L	Xylenes (m&p)			200 U		200 U		400 U		250 U		80 U		2 U	

Units:

UG/L = microgram per liter

Qualifiers:

U = not detected at the detection limit

UJ = estimated not detected at the detection limit

J = estimated concentration

Prepared By: WCG 8/30/17

Checked By: JAR 8/30/17

TABLE G.3b
Data Validation Report: Summary of Analytical Results (Groundwater)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Method	Units	Parameter Name	Sample Location		QC	
			Sample Date	Field Sample ID	06/27/17	06/27/17
				EB-03	EB-04	
EPA 8260	UG/L	1,1,1-Trichloroethane			1 U	1 U
EPA 8260	UG/L	1,1,2,2-Tetrachloroethane			1 U	1 U
EPA 8260	UG/L	1,1,2-Trichloro-1,2,2-Trifluoroethane			1 U	1 U
EPA 8260	UG/L	1,1,2-Trichloroethane			1 U	1 U
EPA 8260	UG/L	1,1-Dichloroethane			1 U	1 U
EPA 8260	UG/L	1,1-Dichloroethene			1 U	1 U
EPA 8260	UG/L	1,2,3-Trichlorobenzene			1 U	1 U
EPA 8260	UG/L	1,2,4-Trichlorobenzene			1 U	1 U
EPA 8260	UG/L	1,2-Dibromo-3-chloropropane			2 U	2 U
EPA 8260	UG/L	1,2-Dibromoethane			1 U	1 U
EPA 8260	UG/L	1,2-Dichlorobenzene			1 U	1 U
EPA 8260	UG/L	1,2-Dichloroethane			1 U	1 U
EPA 8260	UG/L	1,2-Dichloropropane			1 U	1 U
EPA 8260	UG/L	1,3-Dichlorobenzene			1 U	1 U
EPA 8260	UG/L	1,4-Dichlorobenzene			1 U	1 U
EPA 8260	UG/L	1,4-Dioxane			150 U	150 U
EPA 8260	UG/L	2-Butanone			5 U	5 U
EPA 8260	UG/L	2-Hexanone			5 U	5 U
EPA 8260	UG/L	4-Methyl-2-pentanone			5 U	5 U
EPA 8260	UG/L	Acetic acid, methyl ester			10 U	10 U
EPA 8260	UG/L	Acetone			10 J	13 J
EPA 8260	UG/L	Benzene			1 U	1 U
EPA 8260	UG/L	Bromochloromethane			1 U	1 U
EPA 8260	UG/L	Bromodichloromethane			1 U	1 U
EPA 8260	UG/L	Bromoform			1 U	1 U
EPA 8260	UG/L	Bromomethane			2 U	2 U
EPA 8260	UG/L	Carbon disulfide			2 U	2 U
EPA 8260	UG/L	Carbon tetrachloride			1 U	1 U
EPA 8260	UG/L	Chlorobenzene			1 U	1 U
EPA 8260	UG/L	Chloroethane			1 U	1 U
EPA 8260	UG/L	Chloroform			1 U	1 U
EPA 8260	UG/L	Chloromethane			1 U	1 U
EPA 8260	UG/L	Cis-1,2-Dichloroethene			1 U	1 U
EPA 8260	UG/L	Cis-1,3-Dichloropropene			1 U	1 U
EPA 8260	UG/L	Cyclohexane			1 U	1 U

TABLE G.3b
Data Validation Report: Summary of Analytical Results (Groundwater)
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Method	Units	Parameter Name	Sample Location		QC	
			Sample Date	06/27/17	EB-03	06/27/17
						EB-04
EPA 8260	UG/L	Dibromochloromethane		1 U		1 U
EPA 8260	UG/L	Dichlorodifluoromethane		1 U		1 U
EPA 8260	UG/L	Ethylbenzene		1 U		1 U
EPA 8260	UG/L	Isopropylbenzene		1 U		1 U
EPA 8260	UG/L	Methyl cyclohexane		10 U		10 U
EPA 8260	UG/L	Methyl Tertbutyl Ether		1 U		1 U
EPA 8260	UG/L	Methylene chloride		1.5 J		1.4 J
EPA 8260	UG/L	Styrene		1 U		1 U
EPA 8260	UG/L	Tetrachloroethene		1 U		1 U
EPA 8260	UG/L	Toluene		1 U		1 U
EPA 8260	UG/L	trans-1,2-Dichloroethene		1 U		1 U
EPA 8260	UG/L	trans-1,3-Dichloropropene		1 U		1 U
EPA 8260	UG/L	Trichloroethene		1 U		1 U
EPA 8260	UG/L	Trichlorofluoromethane		1 U		1 U
EPA 8260	UG/L	Vinyl chloride		1 U		1 U
EPA 8260	UG/L	Xylene, o		1 U		1 U
EPA 8260	UG/L	Xylenes (m&p)		2 U		2 U

Units:

UG/L = microgram per liter

Qualifiers:

U = not detected at the detection limit

UJ = estimated not detected at the detection limit

J = estimated concentration

Prepared By: WCG 8/30/17

Checked By: JAR 8/30/17

TABLE G.4
Data Validation Report: Summary of Qualification Actions
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Sample Delivery Group	Analysis Method	Field Sample Id	Lab Sample ID	Analyte	Units	Lab Result	Lab Qualifier*	Final Result	Final Qualifier	Validation Reason Code
92346162	EPA 8260	GW-102-52	92346162014	1,4-Dioxane	UG/L	15,000 U		15,000 UJ		ICVRRF, CCVRRF
92346162	EPA 8260	GW-75-26	92346162003	1,2-Dibromo-3-chloropropane	UG/L	40 U		40 UJ		ICVRSD
92346162	EPA 8260	GW-75-26	92346162003	1,4-Dioxane	UG/L	3,000 U,L1		3,000 UJ		ICVRRF, CCVRRF, CCV%D
92346162	EPA 8260	GW-75-26	92346162003	2-Butanone	UG/L	182		182 J		ICVRSD
92346162	EPA 8260	GW-78-46	92346162007	1,2-Dibromo-3-chloropropane	UG/L	500 U		500 UJ		ICVRSD
92346162	EPA 8260	GW-78-46	92346162007	1,4-Dioxane	UG/L	37,500 U,L1		37,500 UJ		ICVRRF, CCVRRF, CCV%D
92346162	EPA 8260	GW-78-46	92346162007	2-Butanone	UG/L	3,220		3,220 J		ICVRSD
92346162	EPA 8260	FD-10	92346162002	1,2-Dibromo-3-chloropropane	UG/L	200 U		200 UJ		ICVRSD
92346162	EPA 8260	FD-10	92346162002	1,4-Dioxane	UG/L	15,000 U,L1		15,000 UJ		ICVRRF, CCVRRF, CCV%D
92346162	EPA 8260	FD-10	92346162002	2-Butanone	UG/L	500 U		500 UJ		ICVRSD, FD
92346162	EPA 8260	GW-80-40	92346162004	1,2-Dibromo-3-chloropropane	UG/L	200 U		200 UJ		ICVRSD
92346162	EPA 8260	GW-80-40	92346162004	1,4-Dioxane	UG/L	15,000 U,L1		15,000 UJ		ICVRRF, CCVRRF, CCV%D
92346162	EPA 8260	GW-80-40	92346162004	2-Butanone	UG/L	865		865 J		ICVRSD, FD
92346162	EPA 8260	GW-81-36	92346162005	1,2-Dibromo-3-chloropropane	UG/L	100 U		100 UJ		ICVRSD
92346162	EPA 8260	GW-81-36	92346162005	1,4-Dioxane	UG/L	7,500 U,L1		7,500 UJ		ICVRRF, CCVRRF, CCV%D
92346162	EPA 8260	GW-81-36	92346162005	2-Butanone	UG/L	250 U		250 UJ		ICVRSD
92346162	EPA 8260	GW-87-35	92346162011	1,2-Dibromo-3-chloropropane	UG/L	200 U		200 UJ		ICVRSD
92346162	EPA 8260	GW-87-35	92346162011	1,4-Dioxane	UG/L	15,000 U,L1		15,000 UJ		ICVRRF, CCVRRF, CCV%D
92346162	EPA 8260	GW-87-35	92346162011	2-Butanone	UG/L	2,610		2,610 J		ICVRSD
92346162	EPA 8260	GW-87-53	92346162012	1,4-Dioxane	UG/L	15,000 U		15,000 UJ		ICVRRF, CCVRRF
92346162	EPA 8260	GW-90-42	92346162013	1,4-Dioxane	UG/L	30,000 U,L1		30,000 UJ		ICVRRF, CCVRRF
92346162	EPA 8260	GW-90-42	92346162013	Acetone	UG/L	5,000 U		5,000 UJ		CCV%D
92346162	EPA 8260	GW-90-42	92346162013	Bromomethane	UG/L	400 U		400 UJ		CCV%D
92346162	EPA 8260	GW-90-42	92346162013	Cyclohexane	UG/L	200 U		200 UJ		CCV%D
92346162	EPA 8260	GW-93-46	92346162010	1,2-Dibromo-3-chloropropane	UG/L	250 U		250 UJ		ICVRSD
92346162	EPA 8260	GW-93-46	92346162010	1,4-Dioxane	UG/L	18,800 U,L1		18,800 UJ		ICVRRF, CCVRRF, CCV%D
92346162	EPA 8260	GW-93-46	92346162010	2-Butanone	UG/L	625 U		625 UJ		ICVRSD
92346162	EPA 8260	GW-95-46	92346162009	1,2-Dibromo-3-chloropropane	UG/L	80 U		80 UJ		ICVRSD
92346162	EPA 8260	GW-95-46	92346162009	1,4-Dioxane	UG/L	6,000 U,L1		6,000 UJ		ICVRRF, CCVRRF, CCV%D
92346162	EPA 8260	GW-95-46	92346162009	2-Butanone	UG/L	200 U		200 UJ		ICVRSD
92345484	EPA 8260	MW-6	92345484001	1,4-Dioxane	UG/L	7,500 U,L1		7,500 UJ		ICVRRF, CCVRRF, CCV%D
92345484	EPA 8260	MW-6	92345484001	Bromomethane	UG/L	100 U		100 UJ		CCV%D
92345484	EPA 8260	MW-6A	92345484002	1,4-Dioxane	UG/L	75,000 U		75,000 UJ		ICVRRF, CCVRRF
92345484	EPA 8260	MW-6A	92345484002	Bromomethane	UG/L	1,000 U		1,000 UJ		CCV%D
92345484	EPA 8260	MW-6A	92345484002	Chloroethane	UG/L	500 U		500 UJ		CCV%D
92345484	EPA 8260	MW-6A	92345484002	Dichlorodifluoromethane	UG/L	500 U		500 UJ		CCV%D
92345484	EPA 8260	MW-7	92345484006	1,4-Dioxane	UG/L	150 U,L1,M0,R1		150 UJ		ICVRRF, CCVRRF, CCV%D

TABLE G.4
Data Validation Report: Summary of Qualification Actions
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Sample Delivery Group	Analysis Method	Field Sample Id	Lab Sample ID	Analyte	Units	Lab Result	Lab Qualifier*	Final Result	Final Qualifier	Validation Reason Code
92345484	EPA 8260	MW-7	92345484006	Bromomethane	UG/L	2 U,M1		2 UJ		CCV%D, MS-L
92345484	EPA 8260	MW-7	92345484006	Chloromethane	UG/L	1 U,M1		1 UJ		MS-L
92345484	EPA 8260	MW-7	92345484006	Dichlorodifluoromethane	UG/L	1 U,M1		1 UJ		MS-L
92345484	EPA 8260	MW-7	92345484006	Vinyl chloride	UG/L	1 U,M1		1 UJ		MS-L
92345484	EPA 8260	FD-08	92345484004	1,4-Dioxane	UG/L	30,000 U,L1		30,000 UJ		ICVRRF, CCVRRF, CCV%D
92345484	EPA 8260	FD-08	92345484004	Bromomethane	UG/L	400 U		400 UJ		CCV%D
92345484	EPA 8260	MW-7A	92345484003	1,4-Dioxane	UG/L	37,500 U,L1		37,500 UJ		ICVRRF, CCVRRF, CCV%D
92345484	EPA 8260	MW-7A	92345484003	Bromomethane	UG/L	500 U		500 UJ		CCV%D
92346162	EPA 8260	SS-102-53	92346162026	1,4-Dioxane	UG/KG	149 U		149 UJ		ICVRRF, CCVRRF
92346162	EPA 8260	SS-102-53	92346162026	Acetic acid, methyl ester	UG/KG	5.7 J		9.9 U		BL2
92346162	EPA 8260	SS-102-53	92346162026	Acetone	UG/KG	49.9 J		99 U		BL2
92346162	EPA 8260	SS-102-53	92346162026	Chloromethane	UG/KG	9.9 U		9.9 UJ		CCV%D
92346162	EPA 8260	SS-102-53	92346162026	Xylenes (m&p)	UG/KG	17.2		17.2 U		BL2
92346162	EPA 8260	SS-75-23	92346162017	1,4-Dioxane	UG/KG	162 U		162 UJ		ICVRRF, CCVRRF
92346162	EPA 8260	SS-75-23	92346162017	Acetic acid, methyl ester	UG/KG	6.7 J		10.8 U		BL2
92346162	EPA 8260	SS-75-23	92346162017	Acetone	UG/KG	57.8 J		108 U		BL2
92346162	EPA 8260	SS-75-23	92346162017	Chloromethane	UG/KG	10.8 U		10.8 UJ		CCV%D
92346162	EPA 8260	SS-78-46	92346162020	1,4-Dioxane	UG/KG	147 U		147 UJ		ICVRRF, CCVRRF
92346162	EPA 8260	SS-78-46	92346162020	Acetone	UG/KG	38.7 J		97.8 U		BL2
92346162	EPA 8260	SS-78-46	92346162020	Chloromethane	UG/KG	9.8 U		9.8 UJ		CCV%D
92346162	EPA 8260	SS-78-46	92346162020	Methylene chloride	UG/KG	9.6 J		19.6 U		BL2
92346162	EPA 8260	SS-78-46	92346162020	Xylenes (m&p)	UG/KG	19.7		19.7 U		BL2
92346162	EPA 8260	FD-09	92346162016	1,4-Dioxane	UG/KG	158 U		158 UJ		ICVRRF, CCVRRF
92346162	EPA 8260	FD-09	92346162016	Acetic acid, methyl ester	UG/KG	7 J		10.5 U		BL2
92346162	EPA 8260	FD-09	92346162016	Acetone	UG/KG	76.6 J		105 U		BL2
92346162	EPA 8260	FD-09	92346162016	Chloromethane	UG/KG	10.5 U		10.5 UJ		CCV%D
92346162	EPA 8260	SS-80-37	92346162018	1,4-Dioxane	UG/KG	183 U		183 UJ		ICVRRF, CCVRRF
92346162	EPA 8260	SS-80-37	92346162018	Acetic acid, methyl ester	UG/KG	10.2 J		12.2 U		BL2
92346162	EPA 8260	SS-80-37	92346162018	Acetone	UG/KG	43.8 J		122 U		BL2
92346162	EPA 8260	SS-80-37	92346162018	Chloromethane	UG/KG	12.2 U		12.2 UJ		CCV%D
92346162	EPA 8260	SS-81-33	92346162019	1,4-Dioxane	UG/KG	166 U		166 UJ		ICVRRF, CCVRRF
92346162	EPA 8260	SS-81-33	92346162019	Acetic acid, methyl ester	UG/KG	6.5 J		11 U		BL2
92346162	EPA 8260	SS-81-33	92346162019	Acetone	UG/KG	66.2 J		110 U		BL2
92346162	EPA 8260	SS-81-33	92346162019	Chloromethane	UG/KG	11 U		11 UJ		CCV%D
92346162	EPA 8260	SS-87-31	92346162023	1,4-Dioxane	UG/KG	145 U		145 UJ		ICVRRF, CCVRRF
92346162	EPA 8260	SS-87-31	92346162023	Acetic acid, methyl ester	UG/KG	10.8		10.8 UJ		BL2, MS-L
92346162	EPA 8260	SS-87-31	92346162023	Acetone	UG/KG	32.7 J		96.5 UJ		BL2, MS-L

TABLE G.4
Data Validation Report: Summary of Qualification Actions
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Amec Foster Wheeler Project 6252-16-2012

Sample Delivery Group	Analysis Method	Field Sample Id	Lab Sample ID	Analyte	Units	Lab Result	Lab Qualifier*	Final Result	Final Qualifier	Validation Reason Code
92346162	EPA 8260	SS-87-31	92346162023	Chloromethane	UG/KG	9.6 U		9.6 UJ		CCV%D
92346162	EPA 8260	SS-87-48	92346162024	1,4-Dioxane	UG/KG	171 U		171 UJ		ICVRRF, CCVRRF
92346162	EPA 8260	SS-87-48	92346162024	Acetic acid, methyl ester	UG/KG	4.3 J		11.4 U		BL2
92346162	EPA 8260	SS-87-48	92346162024	Acetone	UG/KG	45.7 J		114 U		BL2
92346162	EPA 8260	SS-87-48	92346162024	Chloromethane	UG/KG	11.4 U		11.4 UJ		CCV%D
92346162	EPA 8260	SS-90-37	92346162025	1,4-Dioxane	UG/KG	170 U		170 UJ		ICVRRF, CCVRRF
92346162	EPA 8260	SS-90-37	92346162025	Acetic acid, methyl ester	UG/KG	4.9 J		11.3 U		BL2
92346162	EPA 8260	SS-90-37	92346162025	Acetone	UG/KG	57.7 J		113 U		BL2
92346162	EPA 8260	SS-90-37	92346162025	Chloromethane	UG/KG	11.3 U		11.3 UJ		CCV%D
92346162	EPA 8260	SS-90-37	92346162025	Xylenes (m&p)	UG/KG	10.9 J		11.3 U		BL2
92346162	EPA 8260	SS-93-42	92346162022	1,4-Dioxane	UG/KG	146 U		146 UJ		ICVRRF, CCVRRF
92346162	EPA 8260	SS-93-42	92346162022	Acetic acid, methyl ester	UG/KG	8.1 J		9.7 U		BL2
92346162	EPA 8260	SS-93-42	92346162022	Acetone	UG/KG	30.4 J		97.3 U		BL2
92346162	EPA 8260	SS-93-42	92346162022	Chloromethane	UG/KG	9.7 U		9.7 UJ		CCV%D
92346162	EPA 8260	SS-95-42	92346162021	1,4-Dioxane	UG/KG	177 U		177 UJ		ICVRRF, CCVRRF
92346162	EPA 8260	SS-95-42	92346162021	Acetic acid, methyl ester	UG/KG	9.5 J		11.8 U		BL2
92346162	EPA 8260	SS-95-42	92346162021	Acetone	UG/KG	97.4 J		118 U		BL2
92346162	EPA 8260	SS-95-42	92346162021	Chloromethane	UG/KG	11.8 U		11.8 UJ		CCV%D

Units:

UG/L = microgram per liter

UG/KG = microgram per kilogram

Qualifiers:

U = not detected at the detection limit

UJ = estimated not detected at the detection limit

J = estimated concentration

Validation Qualifier Reason Codes:

ICVRRF = Initial calibration relative response factor low

CCVRRF = Continuing calibration relative response factor low

CCV%D = Continuing calibration percent difference exceeds goal

BL2 = Detected in field QC blank

FD = Field duplicate limit exceeded

MS-L = matrix spike and/or matrix spike duplicate percent recovery low

ICVRSD = Initial calbraiton relative standard deviation

*Refer to laboratory analytical reports for laboratory qualifiers.

Prepared By: WCG 8/30/17

Checked By: JAR 8/30/17