

2017 Annual Report

Whirlpool Facility
Fort Smith, Arkansas

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Whirlpool Corporation

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1 Introduction

Ramboll Environ US Corporation (Ramboll Environ) has prepared this 2017 Annual Report (Report) for the Fort Smith, Arkansas, Site (Site) on behalf of Whirlpool Corporation (Whirlpool). The work was performed and the report prepared in accordance with the Revised Groundwater Monitoring Plan (RGWMP) approved by the Arkansas Department of Environmental Quality (ADEQ) in September 2016; the Remedial Action Decision Document (RADD) issued by ADEQ on December 27, 2013 and revised in November 2015 (Revised RADD); and, ADEQ comment letters and Ramboll Environ/Whirlpool responses to previous quarterly monitoring reports.

Whirlpool has been monitoring the groundwater at the Site since 1989. This report describes the results of the groundwater monitoring event (annual event) performed during the week of October 23, 2017. This annual event included measuring water levels on October 23, 2017, from 119 wells followed by the collection of groundwater samples from 81 wells consisting of 69 wells denoted as plume boundary, onsite, or offsite wells according to the RADD and RGWMP (Table 1) plus 12 temporary wells sampled to support the evaluation of the source area, plume boundary and shallow groundwater.

Six of the 12 temporary wells were sampled in the northern plume near and just up-gradient of the northeastern/eastern plume boundary (TMW-20 through TMW-24 and TMW-29) and the other six temporary wells were sampled in the southern plume near the southern and western boundaries (TMW-16, TMW-19, TMW-25 through TMW-27 and TMW-30). The temporary wells were installed as discussed within the July 2017 Revised Action Plan.

2 Groundwater Sample Collection and Onsite Activities

Groundwater monitoring activities performed during the week of October 23, 2017, included measuring water levels and collecting groundwater samples for analysis of volatile organic compounds (VOCs) in accordance with the RGWMP.

Constituents of concern (COCs) monitored in groundwater are defined within the RGWMP. Table 1 of the plan lists the wells sampled during the annual event (69 wells are included in the annual groundwater monitoring event). Samples from all wells were analyzed for VOCs via EPA Method 8260. The COCs and additional geochemical parameters were analyzed in collected groundwater samples to evaluate the effectiveness of monitored natural attenuation (MNA) in support of the natural degradation of site-related chlorinated compounds.

The following sections describe the groundwater monitoring activities completed during the annual event.

2.1 Well Inspection and Static Water Level Measurements

On October 23, 2017, monitoring wells were visually inspected and static water levels and well depths were measured in a total of 119 monitoring wells. Prior to the next sampling event outstanding well issues will be addressed, however it is expected that none of the issues identified will affect the quality of the samples collected. During inspection, monitoring wells were opened to allow water levels to equilibrate to atmospheric conditions prior to their measurement using an electronic water level meter. The instrument was calibrated by the manufacturer prior to its purchase and therefore does not require calibration in the field. The water levels were measured to the nearest 0.01 foot with an accuracy of 0.02 feet per the manufacturer's specification. The water level meter probe and tape (i.e. the only non-dedicated sampling equipment) were decontaminated prior to use at each well by spraying and scrubbing the probe and tape with Alconox detergent mixed with distilled water and then rinsing the probe and tape with distilled water prior to being wiped dry.

The Annual event static water level measurements are presented in Table 3 along with the previous six events of water level measurements recorded from project wells.

2.2 Monitoring Well Sampling

After static water level measurement activities were completed, low flow sampling was performed at each well via the use of a peristaltic pump and dedicated polyethylene tubing. The tubing was placed at a depth within the well approximately equal to the midpoint of the well screen. The wells were then purged, via the USEPA low stress (low flow) purging procedures (USEPA, 1996); at a rate generally less than 0.1 liter (L) per minute to minimize the amount of drawdown in the well and to reduce the likelihood of elevated turbidity. Flow rates and drawdown were checked continuously during purging. Purge water was then placed into a container prior to transfer to the onsite water holding tank for ultimate proper disposal.

Water quality parameters were measured via a water quality probe and flow thru cell. Instruments were calibrated daily prior to the start of sampling. All instruments were calibrated at a minimum of once per day. Calibration logs are included as Attachment A. Readings were recorded approximately every five minutes until the parameters stabilized. Stabilization was considered obtained when three consecutive rounds of parameter readings met the following:

- Turbidity: +/- 10% for values greater than 10 Nephelometric Turbidity Unit (NTU), or less than 10 NTU;
- Dissolved oxygen (DO): +/- 10% for values greater than 0.5 milligrams per liter (mg/L);
- Specific conductance: +/- 3%;
- Temperature: +/- 1^{o}C;
- pH: Within +/- 0.1 standard units; and
- Oxidation reduction potential (ORP): Within +/- 10 millivolts (mV).

Table 4 presents a summary of results for measured field parameters for the 2017 annual event.

The groundwater samples were obtained by directly filling the laboratory provided sampling bottles from the peristaltic pump discharge. VOCs were collected in three 40 milliliter (mL) glass vials that contained hydrochloric acid as a preservative per standard procedures. Samples for assessing quality assurance/quality control (QA/QC) metrics were collected by alternately filling investigative and QA/QC sample bottles for each parameter. VOC sample bottles for both the investigative and the QA/QC sample were completely filled, purged of headspace and sealed. Hach Test Kits (all verified with valid expiration dates) were used to measure ferrous iron in the field. Groundwater samples for analysis of dissolved hydrogen concentration were collected by the Microseeps gas stripping procedure (Microseeps 2014).

A total of 81 groundwater samples, eight field duplicate samples, four matrix spike/matrix spike duplicate (MS/MSD) samples and five equipment blanks were collected during the 2017 annual event. Duplicate samples were taken at a frequency of one duplicate sample per 10 groundwater monitoring samples. Duplicate samples were collected from ITMW-18, MW-39R, MW-25, MW-62R, MW-82, MW-178, MW-186 and TMW-20.

Because monitoring wells contain dedicated or new tubing, the only equipment transferred and used from well to well is the water level meter used to monitor well water levels during purging and stabilization prior to sampling and tube weights. Equipment rinsate blanks were collected after water level meters used during the monitoring event were decontaminated to evaluate field decontamination procedures. Equipment rinsate blanks were collected by pouring ASTM Type II deionized water over the decontaminated water level meter probe and tape into the appropriate sample containers. The rinsate blanks were collected after decontamination procedures at MW-194 (EB-01-201710 at 17:50) TMW-22 (EB-02-2017010 at 17:25), MW-95-201711 (EB-03-201710 at 12:00), MW-38 (EB-04-201710 at 12:13) and ITMW-19-201711 (EB-05-201710 at 12:30). The preservation and analysis of the equipment rinsate blanks was identical to those of the associated environmental samples.

Sample containers were labeled and packed on ice in insulated coolers before being shipped under chain of custody via overnight courier or FedEx to Pace Analytical Services in Lenexa,

Kansas (VOC and MNA parameters), via FedEx to Microseeps in Pittsburg, Pennsylvania and via FedEx to Microbial Insights in Knoxville, Tennessee (microbial parameters). Chain-of-custody procedures were followed from the point of sample collection through completion of analysis. The laboratories used infrared thermometers to take sample temperatures upon sample receipt in accordance with USEPA Manual for the Certification of Laboratories Analyzing Drinking Water, Fifth Edition.

2.3 Other Site Monitoring Activities

In accordance with the RGWMP, groundwater monitoring was performed for shallow monitoring wells in the north plume consisting of MW-175, MW-176, MW-178 and MW-179. These wells are screened to monitor shallow perched water and this data is used to assist in evaluating the potential for vapor intrusion from groundwater. Due to slow recovery rates, low-flow sampling techniques were not used at MW-175; therefore, the well was purged dry once, allowed to recover prior to collection of the sample within 24 hours of purging dry. MW-178 and MW-179 also purged dry and were allowed to recover prior to sample collection within 24 hours. See Section 3.2.3 Groundwater Data Quality Assessment for additional information.

The data from these shallow wells is presented in Attachment B, Annual 2017 Soil Vapor Monitoring and Vapor Intrusion Assessment Report.

As discussed in the July 2017 Revised Action Plan, temporary wells (TMW-12 through TMW-30; although, TMW-13, TMW-15, TMW-17, TMW-18 and TMW-28 have been abandoned and TMW-12 and TMW-14 were not sampled during the annual event) were installed to further define trichloroethene (TCE) concentrations, groundwater flow, thickness of Basal Transmissive Zone and top of competent shale near certain down-gradient edges of the northern and southern plumes. Twelve temporary wells were sampled during the 2017 annual event.

3 Annual Monitoring Event Results

The following sections present a discussion of the hydrogeology, analytical methods, the results of the laboratory analyses and an assessment of data quality and usability.

3.1 Hydrogeology

Gradient

Water levels from 119 wells at the Site were collected during the annual event (Table 3) as discussed in Section 2.1. These wells were monitored during this event to provide current potentiometric information regarding groundwater flow direction at the Site.

The static water level measured in the wells ranged from 2.15 feet below top of the well casing (btwc) in the northeast (MW-46R) to 26.14 feet btwc to the southwest (MW-189) during the monitoring event. Figure 1A shows the contours of the groundwater elevations based on the monitoring well static water level measurements completed October 23-24, 2017. Based on the current potentiometric maps, the hydraulic gradient, as an indication of the likely direction of groundwater flow, is generally consistent with historical conditions. The groundwater gradient divide (hydraulic divide) trends west to east, north of the former manufacture facility building. In the vicinity of the hydraulic divide (north of the facility building), the hydraulic gradient is near zero. North of Jacobs Avenue the hydraulic gradient is directed to the north/northeast. South of the hydraulic divide and beneath the southern portion of the former manufacture facility building, the hydraulic gradient is directed to the south, southeast then begins to trend to the southwest along the south boundary of the property.

The installation of eight additional (sentinel) wells to the south in September 2015 and subsequent additional investigations in 2016 and 2017 have refined the understanding of the southern flow regime. The groundwater data collected since installation of the additional wells continues to indicate a second hydraulic gradient divide beneath the former manufacture facility, the axis of which trends from northwest to southeast. The gradient(s) steepen to the east, northeast east of the former manufacturing building and southwest beyond the extent of the former manufacturing building.

A linear interpolation of the gradient between six groups of wells was completed in order to assess the groundwater flow direction and gradients as follows:

- South plume southeast flow direction from MW-25 to MW-192 results in a gradient of 0.002 feet/foot;
- South plume southwest flow direction from MW-182 to MW-186 results in a gradient of 0.013 feet/foot;
- South plume southwest flow direction from ITMW-7 to MW-186 results in a gradient of 0.008 feet/foot;
- Northeast plume northeast flow direction from MW-87 to MW-183 results in a gradient of 0.007 feet/foot;

- North plume northeast flow direction from MW-58R to MW-61R results in a gradient of 0.018 feet/foot; and
- North plume easterly flow direction from MW-56R to MW-194 results in a gradient of 0.004 feet/foot.

Although the gradient remains relatively flat beneath the former manufacture building (i.e. 0.002 feet/foot), the gradient steepens somewhat towards the southwest at the southwest corner of the building and towards the northeast. The gradient increases from 0.008 feet/foot to 0.013 feet/foot towards the southwest based upon the October 2017 water level measurements. The northeast gradient(s) range from 0.004 feet/foot to 0.018 feet/foot based upon the October 2017 water level measurements.

Shallow Monitoring Wells

Groundwater elevations from shallow groundwater wells (MW-174 through MW-176) located along the north side of Jacobs Avenue and MW-178 (located immediately south of Ingersoll Avenue) were used to evaluate the shallow horizontal gradient. Static water elevations along Jacobs Avenue decrease from west to east; from a high of 462.93 feet at MW-176 to a low of 453.10 feet at MW-174. The calculated shallow groundwater gradient west to east based on these two wells is 0.02 feet/foot. Static water elevations in the deeper Basal Transmissive Zone wells also generally decrease from west (MW-70, 462.93 feet) to east (MW-63R, 459.92 feet) with a resulting gradient of 0.004 feet/foot. The highest shallow groundwater elevations were measured in the most up-gradient shallow well MW-178 (471.31 feet). These results suggest that the shallow groundwater horizontal flow gradient generally mimics the deeper groundwater flow gradient to the east/northeast based on the number and location of shallow groundwater monitoring wells available.

Groundwater elevations from shallow groundwater wells MW-174 through MW-176 and MW-178 were also compared to groundwater elevations from nearby deeper monitoring wells to evaluate vertical gradient. MW-175 is located approximately at the midpoint between deeper groundwater monitoring wells MW-46R and MW-56R allowing the comparison of groundwater elevations at MW-175 to the average of the groundwater elevations at MW-46R and MW-56R. The vertical gradients are summarized in Table 5. Based on this evaluation observations are as follows:

- Downward vertical gradient (-0.50 feet/foot) at the most up-gradient (south western) well grouping MW-178/MW-83;
- Downward gradient (- 0.08 feet/foot) at MW-176/MW-46R;
- Upward gradient (1.09 feet/foot) at MW-175/MW-46R and MW-56R; and
- Upward gradient (1.24 feet/foot) at the eastern most well pairing, MW-174/MW-63.

A comparison of gradients based upon the April and October 2017 water level measurements is shown on Figure 1B. The difference in vertical gradients April to October 2017 was larger (exceeded 1-feet/foot upward) at the MW-175/MW-46R and MW-56R and MW-174/MW-63 well couplets than the historical data range. At the MW-176/MW-46R wells the downward gradient was the greatest since April 2015. At the MW-178/MW-83 wells the downward gradient was

within the normal downward range (-0.38 to -0.54 feet/foot). Precipitation was approximately 8.6 inches above normal from April 2017 through October 2017 (observed precipitation of 36.92 inches versus normal precipitation of 28.35 inches[1]. The above normal precipitation occurred April 2017 through August 2017 and then there was no rain recorded in September 2017 followed by below normal precipitation in October 2017. The potentiometric surface declined in three of the four shallow wells ranging from -4.77 feet (MW-174) to -0.19 feet (MW-178) and increased in four of five deeper wells ranging from 1.36 feet (MW-63R) to 0.52 feet (MW-46R). Historically the changes between the shallow and deeper wells were relatively similar which reflects at least some connectivity between the respective saturated zones. It would not be unexpected that the shallow and deeper wells may respond differently over time to significant precipitation trends.

3.2 Groundwater Analytical Results

All VOC analytical data from all wells were subjected to data validation in accordance with the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Review (August 2014). The laboratory analytical reports for the samples are presented in Attachment C. Summaries of analytical results (i.e. detected compounds) for samples collected during the Annual event are presented in Table 6. This table includes data qualifiers that may have been assigned from validation. A discussion of the field and laboratory analytical results for this event is presented below.

3.2.1 VOC Results

This section presents an evaluation of the VOC data that were collected from the Site during the annual event. TCE results for the annual event are presented on Figures 2A and 2B. Similar to the groundwater monitoring well classifications presented in the RADD, the groundwater monitoring wells included in the RGWMP have been organized into groups consisting of the plume “boundary” wells, offsite wells and onsite wells. Table 2A summarizes the wells in each group.

Plume Boundary Wells

Twenty-nine monitoring wells are identified as plume boundary wells to be sampled during the annual monitoring event (Table 2A) at the Site. VOC concentrations were detected above the RADD remedial action levels (RALs) (Table 1) in six of the 29 samples collected from the plume

[1] http://www.usclimatedata.com/climate/fort-smith/arkansas/united-states/usar0197/2016/10.

boundary wells. Tabulated VOC concentrations measured in these wells during the annual event are presented in Table 6.

Notable results from the annual sampling event include:

- ITMW-21: TCE concentration of 7.9 micrograms per liter (µg/L) (vs. RAL of 5 µg/L);
- MW-55R: TCE concentration of 10.9 µg/L (vs. RAL of 5 µg/L)
- MW-185: TCE concentration of 12.7 µg/L (vs. RAL of 5 µg/L);
- MW-186: TCE concentration of 7.8 µg/L (vs. RAL of 5 µg/L);
- MW-189: TCE concentration of 195 µg/L (vs. RAL of 5 µg/L); and
- MW-194: TCE concentration of 15.4 µg/L (vs. RAL of 5 µg/L).

The occurrence of TCE concentrations exceeding the RAL at the plume boundaries at ITMW-21 and MW-55R are mitigated due to upgradient wells ITMW-20 and MW-68, respectively; both of which exhibit little or no TCE impact. An Action Plan is not necessary for these wells since the plume boundary is not expanding at ITMW-20 and MW-68.

TCE impacts in groundwater at plume boundary wells MW-185, MW-186, MW-189 and MW-194 are discussed in the Revised Action Plan provided in Attachment F.

Consistent with historical analytical results for the Site, all other plume boundary well VOC results were reported as non-detect or at concentrations less than RALs.

Offsite Wells

Fifteen monitoring wells are identified as offsite wells to be sampled during the annual monitoring event (Table 2A). The offsite wells include those installed at offsite properties to the north and northeast of the Whirlpool northern property boundary that are not otherwise identified as plume boundary wells. Tabulated VOC concentrations measured in the fifteen offsite monitoring wells during the annual event are presented in Table 6.

During the annual event, the highest concentration of TCE detected in groundwater samples from the offsite wells was 815 µg/L collected from MW-56R. This is an increase from 679 µg/L at MW-56R in November 2016. MW-46R is located up-gradient of MW-56R and TCE concentration at MW-46R was 408 µg/L during the Annual event indicating the up-gradient concentrations are lower than the maximum concentrations detected at MW-56R. We expect variations in TCE concentrations within the north plume and while we will continue to monitor MW-56R, we have sufficient downgradient monitoring locations to assess TCE concentrations downgradient of MW-56R.

Onsite Wells

Twenty-five monitoring wells are identified as onsite wells to be sampled during the annual monitoring event (Table 2A). Onsite wells include certain wells that are located along the perimeter of the former Whirlpool manufacturing facility, within the source area, or south of the source area which includes wells immediately adjacent to the former Whirlpool manufacturing

building. Tabulated VOC concentrations measured in onsite wells during the annual event are presented in Table 6.

VOCs were detected above the RADD RALs in 19 of the 25 groundwater samples collected from onsite wells. VOCs detected at concentrations exceeding the respective RALs consist of:

- TCE in most onsite wells;
- 1,1-dichloroethane (1,1-DCA) in three wells;
- 1,1-dichloroethene (1,1-DCE) in five wells;
- cis-1,2-dichloroethene (cis-1,2-DCE) in five wells;
- trans-1,2-dichloroethene (trans-1,2-DCE) in one well;
- 1,1,2,2-tetrachloroethane (1,1,2,2-TCA) in four wells;
- Tetrachloroethene (PCE) in four wells; and
- Vinyl chloride (VC) in two wells.

During the annual event, the maximum onsite TCE concentration measured was 97,400 µg/L at MW-25. MW-25 is located near the former linear drainage feature within the source area. The current TCE concentration at MW-25 (97,400 µg/L) is higher than the TCE concentration detected in November 2016 (36,900 µg/L). Since 1999, MW-25 has exhibited seasonally higher TCE concentrations during the fall when compared with the corresponding TCE concentrations for spring and summer monitoring events for the respective years (except in 2002, 2014 and 2016). MW-86 is adjacent to MW-25 and exhibited a TCE concentration of 61,300 µg/L and the TCE concentrations in MW-86 have exhibited a decreasing trend since October 2015 (see Table 8).

TCE concentrations at MW-93 and MW-95 (wells located underneath the floor of the former manufacturing building near the source area) have decreased since the April 2017 sampling event (MW-93: 16,600 µg/L vs 28,200 µg/L; MW-95: 23,900 µg/L vs 36,300 µg/L). TCE concentration trends in MW-93 and MW-95 are characterized as stable and increasing, respectively (see Table 8); however, TCE concentrations in MW-95 have remained reasonably stable since monitoring commenced in October 2014 excluding the April 2017 monitoring event when the maximum TCE concentrations was detected (see Table 7).

Northeast Corner Wells

Seven wells were monitored during the annual event to delineate TCE impacts at or near the northeast corner of the Site. MW-96, MW-97, MW-98, MW-99 and MW-184 are plume boundary wells, MW-183 is an offsite well and MW-91 is an onsite well. Analytical results from these wells are included in Table 6.

During this event, MW-91 exhibited a TCE concentration of 534 µg/L which is less than the last two sampling events (599 µg/L November 2016, 605 µg/L April 2017) and has exhibited stable TCE concentrations since May 2016 with TCE concentrations ranging from 530 µg/L to 605 µg/L (Table 8 indicates TCE concentration trend is increasing in MW-91)

TCE concentrations in MW-96 and MW-97 on the Boys and Girls Club property continue to be below detection limits and the results for MW-98 and MW-99 were below detection limits during

the October 2017 sampling event. MW-183 and MW-184 were installed in late September 2015. The TCE concentration at MW-183 during the annual event was 2.8 µg/L, less than the 5.3 µg/L concentration during the 2016 annual event (November 2016).

Temporary Wells

In October 2017, ten temporary wells (TMW-20 through TMW-27, TMW-29 and TMW-30) were installed on the southern portion of the former Whirlpool property and in the northern plume area. These wells were installed in accordance with Revised Action Plan (Attachment F) of the 2017 Semi-Annual Report dated July 2017. As shown on Figure 2A, temporary wells in the north were installed to delineate the northeastern edge of the plume. TCE concentrations ranged from non-detect at TMW-20 to 486 µg/L at TMW-22. As shown on Figure 2B, temporary wells TMW-25 through TMW-28 and TMW-30 were installed southwest of the former manufacturing building. TCE concentrations in these wells ranged from non-detect at TMW-27 to 956 µg/L at TWM-16. Additional information concerning these wells and further proposed actions are included in Attachment F, January 2018 Revised Action Plan. The proposed actions include additional wells to fully delineate the extent of groundwater impact and In-situ Chemical reduction (ISCR) treatment walls to mitigate plume expansion.

3.2.2 MNA Results

Eighty-one monitoring wells were sampled for chlorinated VOCs and 14 wells were monitored for laboratory and field natural attenuation parameters in accordance with the RGWMP. This section presents the evaluation of the VOC results as they relate to MNA field data collected from the Site during the 2017 annual sampling event. Tabulated results of the field parameters collected from 81 monitoring wells (which includes the 14 temporary monitoring wells TMW-10 through TMW-11, TMW-16, TMW-19 through TMW-27 and TMW-29 and TMW-30) are presented in Table 4.

The USEPA documents Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Groundwater (USEPA 1998) and An Approach for Evaluating the Progress of Natural Attenuation in Groundwater (USEPA 2011) provides a framework for presenting the lines of evidence that natural attenuation of chlorinated solvents is occurring. The three recognized lines of evidence include:

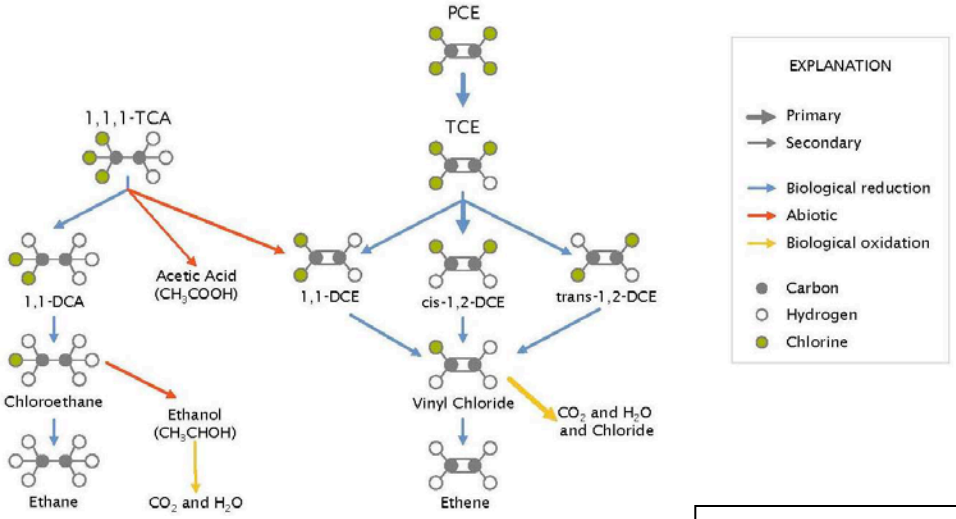
- Historical groundwater and/or soil chemistry data that clearly demonstrate a trend of decreasing contaminant mass and/or concentration over time at appropriate monitoring points (USEPA 1998);
- Hydrogeologic and geochemical data that can be used to establish indirectly the type(s) of natural attenuation processes occurring at the site and the rate at which the processes will reduce contaminant concentrations to the cleanup goal (USEPA 1998); and
- Data from field or microcosm studies which directly demonstrate the occurrence of a specific natural attenuation process at the site and its capacity to degrade the contaminants of concern (USEPA 1998).

The MNA assessment evaluates predominant electron acceptors, the variability of these electron acceptors, major nutrients, general groundwater quality, key microbial population and enzyme activities and dissolved gasses. The assessment uses this data to determine the types of organisms that will be able to effectively flourish in the aquifer, how the geochemistry and chemistry of the aquifer impacts MNA processes, how the indigenous microbial population is being supported, the availability of microbial populations and the presence of reductive dechlorination occurring in the aquifer.

3.2.2.1 Chemical Lines of Evidence

The occurrence and progress of natural attention in reducing COC concentrations is provided by evaluating the presence and effectiveness of the transformation pathways for chlorinated ethenes. Chlorinated ethenes are degraded by both biological and abiotic (non-biological) mechanisms. The graphic below shows the biological (anaerobic) and abiotic transformation pathways for chlorinated ethenes. This graphic does not include other chemically induced aerobic [e.g. in-situ chemical oxidation (ISCO)] and anaerobic [e.g. zero valent iron (ZVI)] pathways that can promote degradation of chlorinated compounds.

Abiotic and Biotic Pathways for Chlorinated Ethenes and Ethanes



Source: Vogel et al., 1987.

Tables 4 and 6 present a summary of field parameters and analytical results for VOCs in groundwater, respectively. These data provide lines of evidence that natural attenuation of TCE is continuing to occur via biological mechanisms in both onsite and offsite groundwater. Groundwater sample results continue to show elevated levels of cis-1,2-DCE in Site monitoring wells. Approximately 60% of the wells showed detectable levels of cis-1,2-DCE while approximately 20% of the wells displayed the presence of VC. Table 6 also includes the laboratory MNA analytical results and the microbial data.

Sampling MNA parameters at locations where TCE is below 5 µg/L does not provide valuable data when evaluating MNA processes. When TCE concentrations are below 5 µg/L the remedial

action level [maximum contaminant level (MCL)] has already been achieved and due to the low concentration further significant reduction in contaminants is not expected within a relatively brief timeframe. Also in areas where VOC concentrations are at very low levels, it is unlikely to observe microbial populations, genes and other indicator parameters necessary to demonstrate biodegradation of VOCs.

3.2.2.2 Geochemical Lines of Evidence

The occurrence and progress of natural attenuation in reducing COC concentrations is provided by evaluating geochemical parameters along with the results of conventional chemical and microbial analyses. The detection of cis-1,2-DCE in groundwater samples from this Site is evidence that conditions likely are favorable for active reductive dechlorination processes. Key parameters used to assess the progress of reductive dechlorination include: temperature, concentration or presence of electron acceptors (DO, nitrate, iron, manganese and sulfate), presence and amount of nutrients (e.g. concentrations of nitrogen and phosphorus), bioavailable carbon source to sustain microbial population, concentrations of COCs and pH.

Tables 4 and 6 present the groundwater field parameters for MNA assessment for the annual event. A summary of the key items on Tables 4 and 6 are discussed below:

- The groundwater during this sampling event was generally considered to be under bulk anaerobic conditions, with 63 of the 84 wells measured showing DO concentrations less than 1 mg/L (see Table 4). In addition, nine wells displayed microaerophilic conditions with DO less than 2.0 mg/L. DO levels were relatively low in both the northern and southern plumes. Elevated DO levels were observed in some areas that had been exposed to ISCO injections, similar to previous monitoring rounds.
- The ORP of the groundwater samples ranged from a low of -379.5 mV in TMW-30 to a high of 769.4 mV in ITMW-20. This is the first time TMW-30 has been sampled and the result for ITMW-20 is much higher than the previous readings (November 2016 ORP at ITMW-20 was 148.6) (ITMW-20 is up-gradient of Area 1 and was not impacted by the ISCO events in 2014). Except for ITMW-20, the measured ORP levels were less than 500 mV in the remaining Site monitoring wells, which indicates that the groundwater is under manganese to iron reducing conditions.
- The pH of the groundwater ranged from a low of 4.39 in MW-24 to a high of 12.24 in MW-190, which is consistent with the prior sampling event. In general, pH levels are in the range of 5 to 7; however, the pH is affected by ISCO injections.
- The temperature of the groundwater ranged from about 15.11° to 24.7° Celsius (C), with many of the temperatures around 19-23ºC, which is a range that would support microbial growth in groundwater.

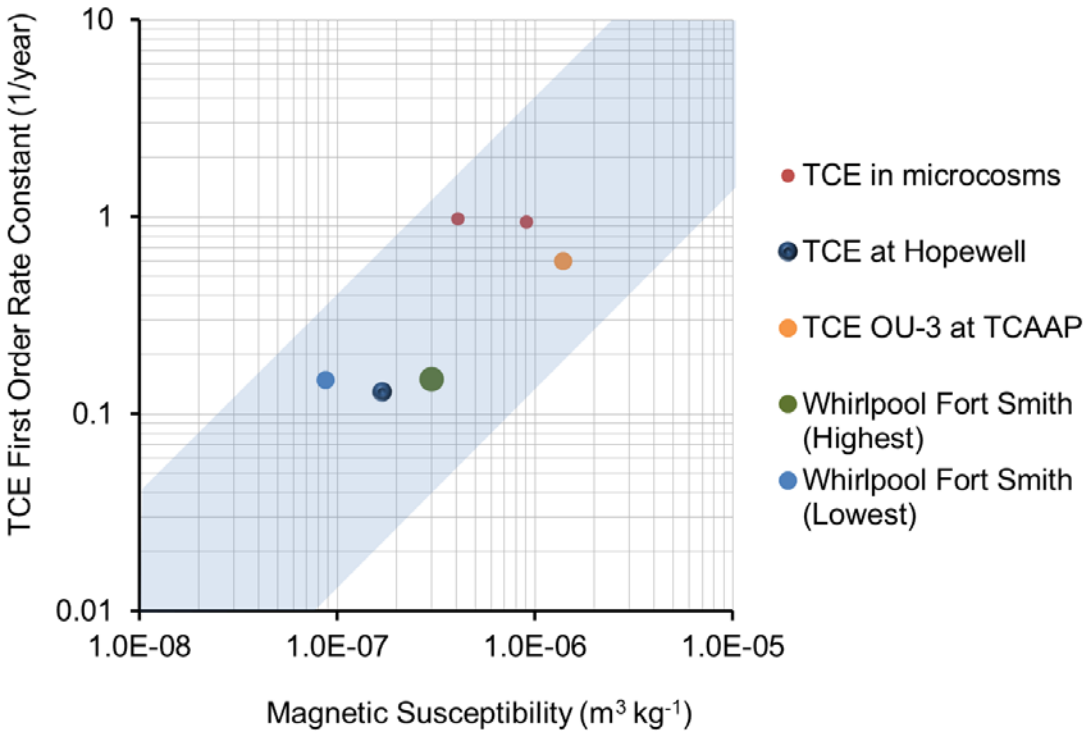
The chemical and geochemical data from the 2017 annual event are similar to the previous monitoring events from 2014 through 2016. The VOC results demonstrate that reductive dechlorination is occurring in multiple locations within the plume.

3.2.2.3 Abiotic Degradation

Abiotic reactions are non-biological (as described above) and may bring significant contribution to natural attenuation processes for degradation of TCE. Abiotic agents that may enhance the reductive dechlorination of chlorinated ethenes include zero-valent metals and sulfide minerals.

We have collected and analyzed soil samples near the plume boundaries in the Basal Transmissive Zone to assess magnetic susceptibility, and this analysis provides an estimate of the amount of magnetite (iron-containing mineral) in the respective soil sample which may react abiotically with TCE. The use and evaluation of magnetic susceptibility as a line of evidence for degradation processes is an emerging concept (as noted in previous correspondence).

The USEPA Biological Pathway Identification Criteria screening tool (BioPIC) as discussed within the Development and Validation of a Quantitative Framework and Management Expectation Tool for the Selection of Bioremediation Approaches at Chlorinated Ethene Sites (ESTCP Project ER-201129) (final report December 2015) was used to evaluate the magnetic susceptibility results as they may relate to the TCE degradation pathway. The BioPIC tool plots the degradation rate constant versus magnetic susceptibility values to determine if the site specific values correlate with a value range (blue area on the plot below) then if the values plot within the blue area per the ESTCP expectation tool "the mass magnetic susceptibility can explain the apparent in situ rate of TCE degradation." The highest and lowest magnetic susceptibility results from the table above were plotted using the BioPIC tool and the resulting graph is shown below (using the degradation rate constant of -0.15 yr-1):



The results from soil samples for magnetic susceptibility analysis from both the northern and southern plume boundaries suggest the potential for abiotic transformation processes to occur at the site exist, and these processes are likely occurring given the limited daughter products detected in some boundary wells (see Attachment F for further discussion).

Sulfide and acetylene were retained for MNA evaluation purposes in the revised Groundwater Monitoring Plan. Sulfide results were below detection limits (i.e. less than 50 µg/L) in all samples except MW-50R and MW-61R where the sulfide concentrations were 7 µg/L and 21 µg/L, respectively (estimated values since the reported concentrations were below the detection limits). The sulfide detection at MW-61R is not unexpected based upon the ISCR performed at this location to enhance biological and abiotic degradation of TCE in this area.

Acetylene analysis was mistakenly omitted for samples for MNA assessment. Acetylene analysis will be performed for future samples for MNA assessment. Acetylene is a break down constituent from the abiotic degradation of cis-1,2-DCE (acetylene then degrades to ethylene or ethene). Ethene data is provided on Table 6 and indicates generally low concentrations of ethene for most wells (i.e. ethene concentration less than 1 µg/L)[2]; although, ethene was detected in MW-38 at 22 µg/L during this monitoring event.

Future monitoring will continue to assess abiotic processes.

3.2.3 Groundwater Data Quality Assessment

All field and analytical data were reviewed by Ramboll Environ. Validation findings are summarized in the following. The detailed validation report is included in Attachment C.

3.2.3.1 Field Data

Field data was collected and validated according to the RADD, work plan and associated standard operating procedures (SOPs) and USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Review (August 2014). The field data and documentation were evaluated against the following criteria, as appropriate:

Samples were collected at the specified locations identified in the RGWMP approved by ADEQ in September 2016.

- Field instrumentation calibration and QA/QC checks on equipment were conducted on a daily basis, prior to field work; and
- Sample documentation protocol and chain-of-custody protocols were followed per Ramboll Environ field procedures.

[2] The detection of breakdown constituents is unlikely at monitoring locations where MNA analysis is performed where TCE concentrations are low (i.e. typically less than 5 µg/L to 100 µg/L) since the concentrations of breakdown constituents will be two to three orders of magnitude less than the TCE concentrations depending upon the rate of TCE degradation.

3.2.3.2 Laboratory Analytical Data

All VOC (SW846 5030B/8260B) analytical results for the plume boundary, onsite and offsite wells received data validation by a Ramboll Environ Project Chemist. During the data validation process, data validation qualifiers were assigned to the results per USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Review (August 2014), as necessary, to indicate potential limitation on use of the data. In addition, data qualifier codes were added to the results to indicate the reason(s) for qualification and the associated bias direction, if discernible.

4 Plume Stability

This section includes discussion of trends for individual wells, trends for groups of wells, plume boundaries and concentration versus time plots. The discussion and assessment of the plume area are based upon a macro-analysis of the entire plume versus a single well analysis to categorize the plume stability. Individual wells will inherently exhibit variability and fluctuations that will influence perception, inference or modeling of plume boundaries at the time of any given monitoring event. The macro-analysis of the entire data set minimizes the over weighting of any particular well or data set from a well. Monitoring wells installed after the 2013 RADD was issued by ADEQ are only included in this analysis if they have been sampled a sufficient number of times to establish temporal trends (statistical trend analysis typically requires data from at least four sampling events).

Table 7 presents a historical summary of TCE and degradation products, cis-1,2-DCE and VC, concentrations in groundwater samples. These values are used for the analysis of trends described in the remainder of this section.

4.1 Lines of Evidence

Several analytical tools or “lines of evidence” were used to evaluate plume stability conditions including:

- **Statistical Methods**. Mann-Kendall nonparametric test (Gilbert 1987; USEPA 2000) to calculate the temporal trend in individual well analyte concentrations over time.
- **Isoconcentration Maps.** Qualitative method to evaluate temporal trends by comparing representations of plume concentration and extent for certain periods over the duration of monitoring.
- **Time vs. Concentration Plots.** Qualitative method to evaluate temporal trends in constituent concentration for individual wells and for representative concentration of overall plume (mean). The plots also include exponential regression lines to aid the analysis of temporal trends.

4.1.1 Statistical Analysis of Temporal Trends

The Mann-Kendall test (Gilbert 1987) is a non-parametric test for linear trend, based on the idea that a lack of trend would be represented by a time series plot fluctuating randomly about a constant mean level, with no visually apparent upward or downward pattern. Because Mann-Kendall is a non-parametric test, it is not dependent upon the magnitude of data, the distribution of the data (does not have to have a normal distribution), missing data from a particular sampling event, or irregularly spaced monitoring events. Mann-Kendall assesses whether a time-ordered data set exhibits an increasing or decreasing trend, at a predetermined level of significance.

The Mann-Kendall statistic is computed by looking at all possible pairs of measurements in the data set and scoring each pair as follows:

- An earlier value lower in magnitude than a later one is assigned a value of 1;
- An earlier value higher in magnitude than a later sample is assigned a value of –1; and
- Two identical values are assigned 0.

The scores from all of the pairs are added together to get the Mann-Kendall statistic (S), a positive value of S indicates that a majority of the differences between earlier and later measurements are positive, which suggests an increasing trend over time. Conversely, a negative value for S implies that a majority of the differences between earlier and later values are negative, indicating a decreasing trend. A value near zero indicates a roughly equal number of positive and negative results. This indicates the values have randomly fluctuated around a constant mean with no apparent trend. If the Mann-Kendall test indicates that there is not a statistically significant trend a second test, coefficient of variation (COV), is performed to determine if the trend is stable (COV is less than 1, little variation above and below the mean value) or if no trend exists (COV is greater than 1, high variation above and below the mean value).

The applicable outcomes of the temporal trend analysis are as follows:

- **Increasing**. Statistically significant increasing trend for concentrations (>90% confidence);
- **Stable.** No statistically significant trend for concentrations along with low variability for results (coefficient of variance <1);
- **No Trend**. No statistically significant trend for concentrations along with high variability for results (coefficient of variance >1);
- **Decreasing**. Statistically significant decreasing trend for concentrations (>90% confidence);
- **Practical Quantitation Limit (<PQL).** All sample results have a "J" qualifier (estimated result greater than the method detection limit but less than the reporting limit) or a mixture of non-detects and results with "J" qualifiers; and
- **Not Detected (ND).** Constituent has not been detected at the well during the time period analyzed.

The trend analysis performed for groundwater concentrations from 2014 through the 2017 annual event are summarized in Table 8. Only monitoring wells included in the RGWMP are included in the temporal trend analysis[3]. The following is the list of wells in each category (this list is only presented for evaluation of plume stability):

[3] Trend analysis was performed for the network of monitoring wells in the ADEQ approved RGWMP. Trend analysis utilizing old data from monitoring wells not in the ADEQ approved RGWMP is not appropriate. Monitoring wells not currently monitored as part of the ADEQ approved RGWMP still exist and could be utilized in the future, if warranted.

- **Northern Plume Wells (26 wells)**. MW-24, MW-27, MW-28, MW-39/39R, MW-40/40R, MW-46R, MW-50, MW-55/55R, MW-56, MW-57/57R, MW-58/58R, MW-60/60R, MW-61/MW61R, MW-62/62R, MW-63/63R, MW-68, RW-69, IW-73, IW-77, IW-78, MW-82, MW-83, MW-84, MW-194, MW-195 and MW-196.
- **Northeast Corner Wells (9 wells)**. MW-87, MW-89, MW-91, MW-96, MW-97, MW-98, MW-99, MW-183 and MW-184.
- **Southern Plume Wells (29 wells)**. ITMW-1, ITMW-2, ITMW-5, ITMW-7, ITMW-9, ITMW-10, ITMW-16, ITMW-18, ITMW-19, ITMW-20, ITMW-21, MW-22, MW-24, MW-25, MW-26, MW-29, MW-38, MW-86, MW-93, MW-95, MW-182, MW-185, MW-186, MW-187, MW-188, MW-189, MW-190, MW-191 and MW-192.
- **Source Area Wells (7 wells)**. ITMW-18, ITMW-19, MW-25, MW-38, MW-86, MW-93 and MW-95.

Contaminant concentration trends as established during the annual monitoring event are summarized below:

- **Northern Plume Wells (26 wells).** The Mann-Kendall trend analysis utilizes data from all wells associated with the 2017 annual groundwater monitoring event for the northern plume (Table 8). As described in more detail below, our determination that a majority of the wells exhibit little or no TCE or a decreasing or stable TCE concentration trend is based on the fact that 84% (21 of 26 wells) of these wells exhibit either little or no TCE or a decreasing or stable TCE concentration trend.

  The trend analysis for the 26 wells associated with monitoring the northern plume indicates the following:

  - Two wells exhibit a stable trend for TCE concentrations.
  - Ten wells exhibit a decreasing trend for TCE concentrations.
  - Five wells exhibit no trend regarding TCE concentrations according to the statistical test. TCE concentrations in four out of five of these wells consisting of MW-27, MW-39/39R, MW-62/62R and MW-68, have been non-detect or TCE has been detected at very low concentrations (less than an estimated concentration of 0.84 µg/L since October 2012). MW-82 is the fifth well exhibiting no trend and TCE concentrations have ranged from approximately 4 µg/L to 36 µg/L during the last two years of monitoring.
  - Three wells exhibit TCE concentrations below detection limits or below reporting limits.
  - Six wells exhibit an increasing trend for TCE concentrations (each of which is discussed below). However, two of these six wells (MW-50R and MW-60R) exhibit TCE concentrations less than 1 µg/L.

  TCE concentrations in nine of the 26 northern plume wells (35%) have been non-detect or less than an estimated concentration of 1 µg/L since October 2012 and 12 of the 26 wells (46%) have exhibited decreasing or stable trends; therefore, 21 of the 26 northern

plume wells (81%) exhibit either little or no TCE or a decreasing or stable TCE concentration trend. We believe that this supports our plume stability conclusions.

As noted, TCE concentration trends are increasing in six of 26 (23%) of the wells (MW-50R, MW-56R, MW-57R, MW-60R, MW-61R and MW-194). Further, of the six wells located in the northern plume with increasing TCE concentration trends:

- As noted above, TCE concentrations in MW-50R and MW-60R are less than 1 µg/L.
- The TCE concentration of 2.9 µg/L at MW-61R is the fourth lowest detected concentration since monitoring began. The lowest detected concentration at MW-61R was in March 2011 with an estimated concentration of 1.8 µg/L. The current concentration at MW-61R represents a substantial decrease in TCE concentration as a result of the ISCR effort within this area. Further monitoring is necessary to confirm continued downward or stable trends in TCE concentrations as a result of ISCR.
- The TCE concentration at MW-56R of 815 µg/L is a historical high concentration slightly higher than the previous historical high of 734 µg/L during May 2016. MW-46R is located up-gradient of MW-56R and TCE concentration at MW-46R was 408 µg/L during the Annual event indicating the up-gradient concentrations are lower than the maximum concentrations detected at MW-56R. TCE concentration at MW46R were similar to the concentrations at MW-56R (680 µg/L) May 2010 through April 2012 and have continued a generally declining trend since. TCE concentrations and trends will continue to be monitored at both wells.
- The TCE concentration at MW-57R of 441 µg/L is lower than the historical high of 453 µg/L during November 2016. TCE concentrations at MW-57R have remained stable during the last 27 months (seven sampling events) with previous TCE concentrations ranging 400 µg/L during October 2015 to 453 µg/L during November 2016. TCE concentrations and trends will continue to be monitored at this well.
- The TCE concentration at MW-194 has ranged from 6.6 µg/L during well installation in August 2016 to the current concentration of 15.4 µg/L. MW-194 is a plume boundary well. TCE trends will continue to be monitored at this well and additional response actions are discussed in Attachment F.

- **Northeast Corner Wells (nine wells).** Three wells (MW-87, MW-89 and MW-91) located on Whirlpool property in the area of the northeast corner plume and six wells (MW-96 through MW-99, MW-183 and MW-184) located on Boys and Girls Club property further to the northeast have been sampled at least six times between June 2014 and October 2017.

  The overall TCE concentration trends are increasing in MW-87 and MW-91 with concentrations ranging from 486 µg/L to 948 µg/L and 234 µg/L to 599 µg/L, respectively. The current concentration of 486 µg/L is a historical low at MW-87. The current concentration of 11.3 µg/L at MW-89, noted as a stable well, is a historical low

(11.3 µg/L during October 2014). TCE concentrations and trends will continue to be monitored at this well.

TCE concentrations in MW-96 through MW-99 and MW-184 on the Boys and Girls Club property continue to be below detection limits (i.e. less than 0.17 µg/L). The TCE concentration trend is stable at MW-183 with concentrations ranging from 2.0 µg/L in October 2015 and April 2017 to 5.3 µg/L in November 2016 (first and only exceedance of 5 µg/L). TCE concentrations and trends will continue to be monitored at this well.

- **Southern Plume Wells (29 wells).** As described in more detail below, our determination that a majority of the wells exhibit little or no TCE or a decreasing or stable TCE concentration trend is based on the fact that 20 of 29 (71%) of the southern wells exhibit either little or no TCE or a decreasing or stable TCE concentration trend. The trend analysis for the 29 wells associated with monitoring the southern plume indicates the following:
  - Three wells exhibit a stable trend for TCE concentrations.
  - Eight wells exhibit a decreasing trend for TCE concentrations.
  - Six wells, consisting of ITMW-9, ITMW-20, MW-25, MW-26, MW-191 and MW-192 exhibit no trend regarding TCE concentrations; although TCE concentrations at four of the six wells (ITMW-20, MW-26, MW-191 and MW-192) have been non-detect or less than 0.3 µg/L since October 2011. The concentration of 797 µg/L at ITMW-9 is the second highest historical concentration behind 2,550 µg/L during November 2016 indicating a recent increase in TCE concentrations. TCE concentrations and trends will continue to be monitored at this well. MW-25 is a source area well and discussed further below.
  - Six wells exhibit TCE concentrations below detection limits or below reporting limits.
  - Six wells (ITMW-5, ITMW-10, MW-95, MW-185, MW-186 and MW-189) exhibit increasing TCE concentration trends (see further discussion below).

  As noted, TCE concentration trends are statistically increasing in six of the 29 (21%) southern plume wells (ITMW-5, ITMW-10, MW-95, MW-185, MW-186 and MW-189) and of these wells the following observations can be made:
  - MW-95 is a source area well and is discussed further below.
  - The TCE concentration at ITMW-5 of 1,470 µg/L is a historical high concentration. The previous historical high was 664 µg/L during April 2017. TCE concentrations and trends will continue to be monitored at this well.
  - The TCE concentration in ITMW-10 is currently 72.9 µg/L and is lowest detected TCE concentration since April 2008. The current TCE concentration is significantly lower than the May 2016 TCE concentration of 743 µg/L and January 2016 concentration of 761 µg/L. TCE concentrations and trends will continue to be monitored at this well.

  - The TCE concentration of 12.7 µg/L in MW-185 exceeded the historical maximum concentration of 8.0 µg/L. TCE concentrations have been detected in four out of the seven times this well has been sampled historically. TCE trends will continue to be monitored at this well and additional response actions are discussed in Attachment F.
  - The TCE concentration of 7.8 µg/L in MW-186 marginally exceeding the historical maximum concentration of 5.2 µg/L. TCE concentrations and trends will continue to be monitored at this well and additional response actions are discussed in Attachment F.
  - The TCE concentration of 195 µg/L in MW-189 exceeded the historical maximum concentration of 30.1 µg/L. TCE concentrations in this well have increased since installation in September 2015. TCE concentrations and trends will continue to be monitored at this well. TCE has not been detected in TMW-19 located south of MW-189 at the property boundary.

- **Source Area Wells (seven wells).** The source area wells showed predominantly decreasing or stable concentration trends for TCE (three wells decreasing, two wells stable, one well increasing and one well no trend) and for cis-1,2-DCE (three wells decreasing, two wells stable and two wells increasing). Source area well, MW-38, has continued to demonstrate an increasing concentration trend for TCE based upon the Mann-Kendall test, however TCE concentrations have been continuing to decrease at MW-38 since October 2014 and the current TCE concentration of 2,240 µg/L is 67% less than the October 2014 concentration. During the last 30 months, the quarterly TCE concentrations in MW-38 have been 3,420; 2,740; 3,680; 3,040; 2,860; 2,550 and 2,240 µg/L; therefore, these results suggest the TCE concentrations in MW-38 are stabilizing. The current TCE concentration at MW-95 of 23,900 µg/L is the lowest since May 2016. TCE concentrations at MW-95 have remained relatively stable since October 2014 with TCE concentrations ranging from 20,900 to 36,300 µg/L. TCE concentrations and trends will continue to be monitored at this well. Since 1999, MW-25 has exhibited higher TCE concentrations during the fall when compared with the corresponding TCE concentrations for spring and summer for the respective years (except in 2002, 2014 and 2016). MW-86 is adjacent to MW-25 and exhibited a TCE concentration of 61,300 µg/L and the TCE concentrations in MW-86 have exhibited a decreasing trend since October 2015 (see Table 8).

4.1.2 Isoconcentration Maps

Figures 2A and 2B show isoconcentration lines at the northern, northeastern and southern plumes for the 2017 Annual event. Notable changes in the north and northeast plume boundaries on Figure 2A consist of:

- TCE concentration reductions at the south end of the north plume (generally on the Bost property) and further expansion of the separation of the north and south plumes;
- TCE concentration of 2.8 µg/L at MW-183, the second event where TCE was less than the RAL after one detection of 5.3 µg/L last November 2016;

- TCE concentration of 89.5 µg/L at TMW-10 restricting the 100 µg/L TCE isoconcentration line from extending to TMW-10; and
- With the October 2017 installation of temporary monitoring wells TMW-21 through TMW-24 (see the November 2017 Revised Action Plan for discussion of temporary well installations and proposed action plan), TCE concentrations ranging from 385 µg/L to 461 µg/L have delineated the 100 µg/L TCE isoconcentration line to the north and northeast.

Notable changes in the south plume boundary on Figure 2B consist of:

- A TCE concentration of 36.3 µg/L at TMW-26 (temporary well installed during October 2017) and 7.8 µg/L at MW-186 causing the TCE isoconcentration line to extend slightly further south and southwest toward the site boundary.
- A further delineated TCE isoconcentration line near southwest site boundary north of TMW-26 and MW-186 due to installation of TWM-27 and TMW-28 at the southwest property boundary.
- TCE concentration of 195 µg/L in MW-189 causing the 100 µg/L TCE isoconcentration line to extend further south near the south central site boundary. TCE was not detected in TMW-19 located south of MW-189 at the property boundary.
- TCE concentration of 1,470 µg/L in ITMW-5 causing the 1,000 µg/L TCE isoconcentration line to extend slightly further east in the vicinity of the former manufacturing building near the central portion of the site.

4.1.3 Concentration vs. Time Plots

TCE, cis-1,2-DCE and VC concentrations versus time charts are provided for ITMW-10 located in the southern plume source area and MW-61R located in the northern plume (Figures 3 and 4). As shown on Figure 3, although TCE concentrations show an increasing trend at ITMW-10 (primarily during sampling events in 2014 through mid-2016) the TCE concentrations of 72.9 µg/L during this annual event and 132 µg/L during the May 2017 event are significantly lower than previous events. Concentrations of cis-1,2-DCE in ITMW-10 have been decreasing and VC concentrations continue to be less than 1.0 µg/L. Figure 4 shows TCE concentrations at MW-61/61R increasing above historical maximums between mid-2014 and mid-2015 but since the application of the ISCR treatment in this area in October 2015, the January 2016, May 2016, November 2016, April 2017 and October 2017 results are comparable to historical low concentrations.

4.2 Summary of Plume Stability

The overall groundwater conditions at the Site exhibit decreasing to stable characteristics in a predominant number of wells based upon statistical analysis of temporal concentration trends, decreasing average TCE concentrations in the southern plume and decreasing to stable average TCE concentrations in the northern plume. The aerial extent for the north and northeastern plumes remain predominantly within the bounds of the historical maximum plume

extent; however, TCE concentrations of ranging from 385 µg/L to 461 µg/L redefined the 100 µg/L TCE isoconcentration line north and northeast of where previous data indicated. Using the Mann-Kendall statistic test, temporal trend increases in TCE concentrations observed in MW-61R are within low historical ranges and continue to be reported at levels below or near the RAL.

TCE concentrations of 36.3 µg/L at TMW-26, 7.8 µg/L at MW-186 and 195 µg/L at MW-190 have caused TCE isoconcentration lines to extend slightly further south and southwest toward the site boundary. Further delineation has occurred north of TMW-26 and MW-186 near the southwest property boundary due to the installation of TMW-27 and TMW-28 and delineation has occurred south of MW-189 by a non-detect concentration at TMW-19.

The site-wide groundwater conditions can be categorized as three separate plumes with distinct characteristics (i.e. the southern plume, the northern plume and northeastern plume).

The southern plume is characterized by:

- A relatively flat south, southeast potentiometric gradient with a southwestern gradient in the southern section of the plume;
- Source area (Area 1) TCE concentrations greater than 10,000 µg/L;
- An aerial extent of approximately 1,219,900 square feet (ft^2) (predominately located under the footprint of the Whirlpool building); and
- Decreasing to stable trends in TCE concentrations.

The northern plume is characterized by:

- A north/northeast potentiometric gradient that is flat in the south portion of the north plume but steepens to north/northeast;
- TCE concentrations generally between 100 and 850 µg/L;
- An aerial extent of approximately 480,300 ft^2 located north of the Whirlpool property (containing the manufacturing building) and extending to the residential area to the north-northeast; and
- Decreasing to stable trends in TCE concentrations.

The northeast plume is characterized by:

- An east, northeast potentiometric gradient.
- TCE concentrations generally between 5 and 600 µg/L.
- An aerial extent of approximately 270,700 ft^2 located northeast of the Whirlpool building and extending to property owned by the Boys and Girls Club. Offsite groundwater TCE concentrations in monitoring wells are below the RALs.

4.3 TCE Mass Estimate

Estimated average minimum and maximum quantities of TCE in groundwater were calculated for the Site using the results of the annual event. The distinction between the north and south groundwater plumes is identified based upon the consistent groundwater divide north of the Whirlpool manufacturing facility and south of Ingersoll Avenue and the reduction or elimination of TCE in groundwater near the hydraulic barrier. The quantity of TCE calculations are based on separating the northern and southern plumes at the hydraulic divide at the location of MW-24 (see Figures 2A and 2B). The quantity of TCE in the northeast plume is also included in the calculations.

The estimated quantities of TCE included calculation of the volume of groundwater based upon the distinct areas within the plumes (i.e. area of plume within the isoconcentration lines on Figures 2A and 2B), average saturated thickness and total porosity (i.e. area x average saturated thickness x porosity = volume of water). The volume of water and minimum and maximum TCE concentrations based upon the plume boundaries were used to calculate the mass of TCE within each section of the plume. The volume of TCE was then determined based upon the specific gravity of TCE. Parameters used in the calculation of TCE quantities are presented below. Calculations are presented in Attachment E.

Northern plume parameters:

- Plume area of approximately 480,300 ft^2 consisting of 254,100 ft^2 for the portion of the plume with TCE concentrations ranging from 5 µg/L to 100 µg/L; 226,200 ft^2 for the portion of the plume with TCE concentrations ranging from 100 µg/L to 1,000 µg/L; and no portion of the plume exhibiting TCE concentrations greater than 1,000 µg/L; (the northern plume delineation has been refined to reflect additional data resulting from the installation of temporary monitoring wells TMW-12 through TMW-15) and TMW-20, TMW-21, TMW-22A, TMW-22, TMW-23, TMW-24 and TMW-29;
- Average saturated thickness of 3.7 feet;
- Total porosity of 0.4; and
- TCE specific gravity of 1.465.

Southern plume parameters:

- Plume area of approximately 1,219,900 ft^2 consisting of approximately 446,500 ft^2 for the portion of the plume with TCE concentrations ranging from 5 µg/L to 100 µg/L; 494,600 ft^2 for the portion of the plume with TCE concentrations ranging from 100 µg/L to 1,000 µg/L; 249,400 ft^2 for the portion of the plume with TCE concentrations ranging from 1,000 µg/L to 10,000 µg/L; and 29,300 ft^2 for the portion of the plume with TCE concentrations greater than 10,000 µg/L, (the southern plume delineation has been refined to reflect additional data resulting from the installation of temporary monitoring wells TMW-16 through TWM-19) and (TMW-25 through TMW-28 and TMW-30);
- Average saturated thickness of 8.3 feet;
- Total porosity of 0.4; and

- TCE specific gravity of 1.465.

Northeastern plume parameters:

- Plume area of approximately 270,700 ft^2 consisting of an estimated 185,200 ft^2 for the portion of the plume with TCE concentrations ranging from 5 µg/L to 100 µg/L; 85,500 ft^2 for the portion of the plume with TCE concentrations ranging from 100 µg/L to 1,000 µg/L;
- Average saturated thickness of 4.4 feet;
- Total porosity of 0.4; and
- TCE specific gravity of 1.465.

Based on the plume information listed above, the following ranges of the quantities of TCE distributed throughout the respective plumes were calculated:

Plume Location	Calculated Minimum Volume	Calculated Maximum Volume
Northern Plume	Less than 1 gallon	2 gallons
Southern Plume	10 gallons	36 gallons
Northeastern Plume	Less than 1 gallon	1 gallon

Therefore the total average minimum and maximum quantities of TCE in groundwater associated with the Site are approximately 10 to 36 gallons of TCE.

4.4 Rebound

The Annual event was completed in October 2017 which is approximately three years after the October 2014 ISCO injection event in Area 1 and the linear drainage feature and two years after the October 2015 ISCO injection event in Area 2 and the Neck Area. Based upon the active life-span of the oxidant reagents (i.e. several weeks of active life-span for base activated sodium persulfate), an evaluation of rebound at this point is outside the timeline generally used for rebound assessment for Area 1 (as noted in the 2016 Annual Report).

TCE concentrations in monitoring wells in Area 1 (i.e. source area wells in Section 4.1.1) exhibit predominantly decreasing or stable concentrations indicating rebound is not a concern for Area 1. MW-25 and MW-86 are located adjacent to each other at or near the linear drainage feature in Area 1 and rebound was previously assessed at these locations in the 2016 Annual Report. Although the TCE concentration increased at MW-25 to 97,400 µg/L from 36,900 µg/L in November 2016, no current TCE concentration trend exists for MW-25 (see Section 4.1.1 and Table 8), and the TCE concentration trend at adjacent monitoring well MW-86 is decreasing. The combined seasonally high TCE concentrations historically observed at MW-25 (see Section 3.2.1) with the decreasing TCE concentrations at MW-86 suggest rebound is not a concern in

this area. In addition, the cis-1,2-DCE concentration at MW-25 increased from 509 µg/L in November 2016 to the current concentration of 22,900 µg/L. The increase in the cis-1,2-DCE concentration at MW-25 is not an indication of rebound, but suggests significant degradation of TCE has occurred at this location during the last year. The TCE and cis-1,2-DCE concentrations at MW-25 will continue to be monitored.

TCE concentrations in Areas 2 and 3 continue to decrease and TCE concentrations in the Neck Area are less than 5 µg/L. No indication of rebound exists in Areas 2 and 3 and the Neck Area.

5 In-situ Chemical Reduction Remedial Effectiveness

This section includes discussion of results for the In-situ Chemical Reduction (ISCR) Pilot Study being conducted at the northeast corner of the north plume in the vicinity of MW-61R. A total of 4,844 gallons of ISCR reagents including 7,500 pounds of ProvectIR-40™ (40% by weight 20-30 micron ZVI), 660 pounds of magnesium oxide (MgO) and 13 L of DHC (SDC-9 consortium) inoculum were injected across three permeable reactive barrier (PRB) treatment zones in 44 temporary direct push injection points from September 29 through October 2, 2015 (Figure 5). Post-injection monitoring has included field water quality parameters (temperature, conductivity, DO, pH, ORP, ferrous iron), laboratory geochemical and biochemical indicators (total iron, manganese, sulfate, alkalinity, ammonia, phosphate, TOC and volatile fatty acids (VFA), hydrogen and VOCs (EPA Method 5030B/8260). Monitoring was conducted on October 8, 2015 (six days following the end of the injection event), at subsequent 30 day intervals through January 2016 and at 210, 405, 575 and 754 days post-injection (Tables 9 and 11). This annual sampling event represents approximately 24 months post-injection monitoring.

Observations regarding the field water quality data collected approximately 19 months post-ISCR injection (concurrent with the annual event) are as follows:

- At MW-61R sampling results indicate sustained negative ORP beginning 20 days post-injection (–152 mV) through October 2017 (-119.3 mV), very low DO over the same period (0 to 0.18 mg/L) and elevated specific conductance [2,190 to 1,073 microsiemens per centimeters (µS/cm)]. The field pH reading of 6.95 standard units (SU) is within the range considered optimal (6 to 8 SU) and exceeds the baseline value of 6.22.
- At TMW-11 the ORP continue to be negative (-137.9), DO continues to be effectively zero and the specific conductance is elevated (1,510 µS/cm). The field pH reading of 7.07 SU exceeds the baseline value of 6.52 SU.
- At TMW-10, DO has continued to decrease and is near zero (0.18 mg/L) and the pH remains neutral (6.33 SU). The ORP became slightly negative (-3.2 mV) for the first time since injection in April 2017 but recovered to slightly oxidative at 55.1 in October 2017.

Table 10 presents the laboratory analytical results for VOCs and various natural attenuation parameters. Results in Table 10 indicate that the ISCR injection promoted a significant increase in total iron, manganese, sulfate, alkalinity, ammonia, phosphate, TOC and VFA, acetate, propionate and butyrate in comparison to the baseline data for MW-61R and TMW-11. The increases in total iron, ferric iron and ferrous iron were due to the ZVI material associated with the ProvectIR-40™ product. Likewise, the ISCR injection also resulted in a significant increase in TOC, which was subsequently utilized by the indigenous and bio-augmented microbial populations to produce VFA. The VFAs increased by more than two to three orders of magnitude in MW-61R, which also promoted the production of hydrogen, which is used as the electron donor for reductive dechlorination of VOCs.

Dissolved gases concentrations of methane, ethane and ethene continue to be present and increased at TMW-10 indicating geochemistry is ideal for the reductive process to continue. Conditions at TMW-10 which was not directly affected by the initial injections continue to

indicate progress towards reductive conditions. Hydrogen continues to be detected at all three wells. The molecular analyses indicate sustained to elevated levels of the TCE and VC reductase and dehalococcoides (DHC) at TMW-10 and TMW-11. The molecular analysis for MW-61R was not positive for the first time since the injection. The lack of positive results for the molecular analysis is contrary to the accompanying data for MW-61R that indicate positive geochemical conditions for the reductive process to continue. Molecular analysis at MW-61R will continue during annual monitoring events to assess trends.

Table 11 shows the TCE concentrations for MW-61R, TMW-10 and TMW-11 over time and the percent TCE reductions. Concentrations have fluctuated but results still indicate an 82% and 98% reduction in TCE levels in MW-61R and TMW-11, respectively, indicating significant reduction of TCE continues near these wells. The cis-1,2-DCE and ethene results in Table 10 demonstrate reductive dechlorination in the groundwater near these wells.

A summary of the field and analytical monitoring data is discussed below:

- Field water quality parameters and laboratory geochemical and biochemical analytical data indicate that the ISCR injection impacted MW-61R and TMW-11 within approximately one month post-injection. Specifically, there was a significant reduction in DO and ORP in MW-61R and TMW-11.
- The increase in cis-1,2-DCE concentrations in MW-61R and TMW-11 in comparison to baseline levels over the first 90 days indicate that the ISCR injection enhanced microbial reductive dechlorination in the groundwater.
- TCE concentration reductions ranging from 54-98% at TMW-11 over the 24 months since the ISCR injection, which appear to be due to a combination of abiotic and biological reactions.
- There has been a 29-86% reduction in TCE at MW-61R since the ISCR injection, which appears to be due to a combination of abiotic and biological reactions.
- There have been TCE reductions ranging from 35-50% in TMW-10 and cis-1,2-DCE levels have increased, indicating reductive dechlorination is occurring.
- The sum of the TCE concentrations for MW-61R, TMW-10 and TMW-11, approximately 24 months post-injection, decreased from a baseline of approximately 238 µg/L to 93 µg/L (~58% decrease).

6 Summary and Conclusions

Ramboll Environ performed the 2017 Annual Groundwater Monitoring Event on behalf of Whirlpool during the week of October 23, 2017. The monitoring was conducted for collection of groundwater samples for analysis of VOCs in accordance with the RGWMP.

A summary of the annual monitoring event and associated conclusions are as follows:

- The direction of the hydraulic gradient continues to be influenced by a hydraulic divide located just north of the Whirlpool building with groundwater flow directions predominantly to the northeast and south on either side of the general divide.
    - Groundwater north of the divide is flowing in a northeasterly direction; and
    - Groundwater south of the divide is flowing in a southern/southeasterly direction with another divide trending southwesterly and southeasterly/south of the former manufacturing building.
- Groundwater monitoring data shows generally decreasing to stable trends for TCE concentrations.
    - Plume boundary well data continue to show results generally consistent with historical TCE concentrations. Trends in the northern portion of the plume near MW-61R have decreased due to ISCR injections. The installation of temporary monitoring wells have delineated concentrations exceeding 100 µg/L and confirmed the plume boundaries. TCE concentrations near the eastern plume boundary in the vicinity of MW-194 have increased (see Attachment F).
    - Offsite well data are similar to previous monitoring events and continue to show generally decreasing to stable TCE concentration trends.
    - Onsite well data continue to show generally decreasing to stable TCE concentration trends; although, the data has been influenced by the ISCO injections.
    - Plume boundary well data in the south portion of the south plume continue to show results generally consistent with historical TCE concentrations although in the vicinity of TMW-16, near the southwestern property boundary, increased TCE concentrations have been identified with the installation of temporary monitoring wells (see Attachment F). Increased TCE concentrations have also been identified at MW-189 which is bounded on the south by TMW-19 where TCE has not been detected.
- The combination of chemical and geochemical data from 2017 are similar to the data generated from 2014 through 2016. The VOC results demonstrate that reductive dechlorination is occurring in multiple locations in the plume.
- The ISCR event performed in September/October 2015 is proving to be effective with TCE concentrations reducing as follows:

  - The TCE concentration in MW-61R has been reduced by 82% and the TCE concentration in TMW-11 has been reduced by 98% as of approximately 754 days after ISCR injection; and
  - The sum of TCE concentrations for wells monitored continue to show a decreasing concentration trend from approximately 238 µg/L to 93 µg/L (~58% decrease).

- Vapor intrusion monitoring continues to identify that risk estimates for vapor intrusion from groundwater in the neighborhood are below ADEQ's risk management limits of 10-4 and 1 for cumulative cancer risk and non-cancer hazards, respectively except at Parcel 3 where the TCE vapor concentration in VP-9 resulted in an upper-bound HI that exceeds 1. However, the current TCE concentration at VP-9 [400 µg/cubic meter (m^3)] is lower than the TCE concentration in November 2015 (1,200 µg/m^3), when data from outdoor, crawl space, and indoor air sampling demonstrated that vapor intrusion from groundwater was actually not occurring (see Attachment B).
- Based upon the indoor air and sub-slab vapor samples collected during 2016, future monitoring was recommended after the building has been renovated to assess whether, under the actual circumstances, a potential complete exposure pathway would exist due to vapor intrusion and, if so, the significance of the potential exposure pathway and the need for remedial or protective measures, if any. Building renovation is currently in progress.

The investigation and monitoring activities at the site have not identified any complete exposure pathways (i.e. direct exposure, consumption or vapor intrusion). Given the current deed restrictions for the Whirlpool property and impacted offsite properties, there is no unacceptable risk to human health or the environment. Whirlpool has completed settlement agreements with the property owners where groundwater impacts have been characterized and these settlement agreements include: deed restrictions precluding the use of groundwater; a financial settlement; and, an access agreement to facilitate future investigation or monitoring, if required.

Monitoring at the site will continue in accordance with the RGWMP with the next groundwater monitoring event planned to occur in the spring of 2018.

7 References

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Tables

TABLE 1
CONSTITUENTS OF CONCERN AND RADD GROUNDWATER REMEDIAL ACTION LEVELS
Whirlpool Facility - Fort Smith, Arkansas

Constituent of Concern	Remedial Action Level (ug/L)[1]
Acetone	12,000[2]
Benzene	5.0
Bromodichloromethane	80
Bromoform	80
Bromomethane	7.0[2]
2-Butanone	4,900[2]
Carbon Disulfide	720[2]
Carbon Tetrachloride	5.0
Chlorobenzene	100
Chloroethane	21,000[2]
Chloroform	80
Chloromethane	190[2]
Dibromochloromethane	80
1,1-Dichloroethane	2.4[2]
1,2-Dichloroethane	5.0
1,1-Dichloroethene	7.0
cis-1,2-Dichloroethene	70
trans-1,2-Dichloroethene	100
1,2-Dichloropropane	5.0
1,3-Dichloropropene	0.41[2]
Ethylbenzene	700
2-Hexanone	34[2]
4-methyl-2-pentanone	1,000[2]
Methylene chloride	5.0
Styrene	100
1,1,2,2-Tetrachloroethane	0.066[2]
Tetrachloroethene (PCE)	5.0
Toluene	1,000
1,1,1-Trichloroethane	200
1,1,2-Trichloroethane	5.0
Trichloroethene (TCE)	5.0
Vinyl chloride	2.0
Xylenes (total)	10,000

Notes:
RADD = Remedial action decision document
µg/L = Micrograms per liter
(1) = Maximum Contamination Level (USEPA, May 2013)
(2) = USEPA Tapwater Screening Level (MCL and Maximum Contaminant Level Goal Unavailable)

TABLE 2
GROUNDWATER MONITORING WELL NETWORK SAMPLED
FOR ANNUAL EVENTS
Whirlpool Facility - Fort Smith, Arkansas

Plume Boundary Wells				
ITMW-20	ITMW-21	MW-26	MW-29	MW-39R
MW-40R	MW-50	MW-55R	MW-60R	MW-61R
MW-63R	MW-68	MW-96	MW-97	MW-98
MW-99	MW-183	MW-184	MW-185	MW-186
MW-187	MW-188	MW-189	MW-190	MW-191
MW-192	MW-194	MW-195	MW-196	
Offsite Wells				
TMW-10	TMW-11	MW-46R	MW-56R	MW-57R
MW-58R	MW-62R	RW-69	IW-73	IW-77
IW-78	MW-82	MW-175	MW-176	MW-182
Onsite Wells				
ITMW-1	ITMW-2	ITMW-5	ITMW-7	ITMW-9
ITMW-10	ITMW-16	ITMW-18	ITMW-19	MW-22
MW-24	MW-25	MW-27	MW-28	MW-38
MW-83	MW-84	MW-86	MW-87	MW-89
MW-91	MW-93	MW-95	MW-178	MW-179

TABLE 3
SUMMARY OF MONITORING WELL STATIC WATER LEVEL MEASUREMENTS
Whirlpool Facility - Fort Smith, Arkansas

Location	Well Coordinates		TOC Elevation (ft)	Ground Surface (ft)	Top of Screen Elevation (ft)	Bottom of Screen Elevation (ft)	Screen Length (ft)	Top of screen Depth	Bottom of screen Depth	Screened Interval (ft)	Maximum Static Water Elevation	Maximum Elevation Date	Minimum Static Water Elevation	Minimum Elevation Date	Static Water Level Elevation (ft)						
	Easting (ft)	Northing (ft)													7/20/2015	10/5/2015	1/6/2016	5/2/2016	11/7/2016	4/25/2017	10/23/2017
ITMW-1	591383	368913	476.93	NA	460.43	446.68	13.75	16.50	30.25	16.50 - 30.25	469.03	10/28/1999	460.53	3/25/2014	463.82	463.92	463.04	462.74	461.21	460.53	461.00
ITMW-2	591189	369021	474.97	NA	462.22	447.77	14.45	12.75	27.20	12.75 - 27.20	465.92	10/14/2013	461.87	3/25/2014	464.87	464.85	464.25	463.98	462.25	461.87	462.36
ITMW-3	591306	369075	474.72	NA	464.07	449.27	14.80	10.65	25.45	10.65 - 25.45	467.17	10/14/2013	460.27	1/12/2015	464.39	464.42	463.65	463.39	461.82	461.25	NA
ITMW-4	591251	368208	478.19	NA	459.99	445.99	14.00	18.20	32.20	18.20 - 32.20	466.85	1/12/2015	459.69	4/22/2013	463.38	463.41	462.76	462.53	460.01	459.86	459.69
ITMW-5	590982	368205	478.93	NA	459.03	449.28	9.75	19.90	29.65	19.90 - 29.65	465.05	10/28/1999	454.77	4/22/2013	463.20	463.22	462.67	462.41	460.11	459.79	459.65
ITMW-6	590923	367970	483.04	NA	461.39	446.89	14.50	21.65	36.15	21.65 - 36.15	466.20	1/12/2015	454.06	4/22/2013	462.94	462.86	462.49	462.28	460.01	459.67	459.49
ITMW-7	590546	368323	481.95	NA	460.05	445.05	15.00	21.90	36.90	21.90 - 36.90	464.25	10/1/2009	457.98	10/14/2013	463.65	463.30	463.48	463.35	461.13	461.43	461.04
ITMW-9	591256	368146	481.90	NA	461.95	448.45	13.50	19.95	33.45	19.95 - 33.45	465.16	10/28/1999	455.60	4/22/2013	463.27	463.29	462.67	462.41	459.89	459.70	459.53
ITMW-10	590978	368157	480.84	NA	458.19	447.24	10.95	22.65	33.60	22.65 - 33.60	465.01	10/28/1999	457.64	4/22/2013	463.17	463.17	462.64	462.41	460.11	459.79	459.64
ITMW-11	590978	369040	474.07	NA	458.82	445.37	13.45	15.25	28.70	15.25 - 28.70	465.82	10/1/2012	459.11	1/12/2015	465.39	465.26	464.83	464.53	462.84	462.36	462.26
ITMW-12	590998	369007	476.67	NA	461.67	446.67	15.00	15.00	30.00	15.00 - 30.00	466.49	1/12/2015	462.07	3/1/2011	465.13	465.00	464.57	464.27	462.49	462.07	462.74
ITMW-13	591047	369052	477.79	NA	463.79	448.79	15.00	14.00	29.00	14.00 - 29.00	465.25	10/1/2009	462.09	3/25/2014	465.10	465.01	464.54	464.22	462.49	462.09	462.65
ITMW-14	591098	369056	477.30	NA	462.50	447.80	14.70	14.80	29.50	14.80 - 29.50	468.88	10/14/2013	461.08	1/12/2015	464.98	464.93	464.40	464.17	462.40	461.99	462.54
ITMW-15	590944	369043	474.50	NA	459.50	444.50	15.00	15.00	30.00	15.00 - 30.00	465.48	10/1/2009	462.36	1/12/2015	465.38	465.25	464.85	464.58	462.75	462.36	463.00
ITMW-16	590967	369100	478.79	NA	461.79	446.79	15.00	17.00	32.00	17.00 - 32.00	468.22	1/12/2015	462.49	3/25/2014	465.31	465.20	464.76	464.49	462.73	462.52	462.67
ITMW-17	590864	369051	477.90	NA	461.90	446.90	15.00	16.00	31.00	16.00 - 31.00	466.20	10/14/2013	462.17	3/25/2014	465.16	465.03	464.67	464.33	462.57	462.17	462.28
ITMW-18	590976	368955	473.55	NA	458.55	443.55	15.00	15.00	30.00	15.00 - 30.00	465.19	10/1/2009	458.99	1/12/2015	465.03	464.96	464.51	464.18	462.45	462.03	461.59
ITMW-19	590890	368961	476.25	NA	460.25	445.25	15.00	16.00	31.00	16.00 - 31.00	465.94	1/12/2015	462.15	3/25/2014	465.11	465.01	464.59	464.26	462.59	462.15	462.82
ITMW-20	590370	369042	477.87	NA	463.87	448.87	15.00	14.00	29.00	14.00 - 29.00	465.44	10/1/2009	462.80	10/14/2013	465.23	464.82	464.94	464.78	462.80	462.95	462.90
ITMW-21	590629	368898	476.52	NA	460.52	445.52	15.00	16.00	31.00	16.00 - 31.00	465.32	10/1/2009	461.27	4/22/2013	465.12	464.78	464.78	464.60	462.68	462.74	462.82
MW-22	591853	368913	473.93	NA	459.93	444.93	15.00	14.00	29.00	14.00 - 29.00	465.64	10/28/1999	461.18	3/25/2014	464.19	464.24	463.37	463.09	461.56	461.18	461.30
MW-23	590892	369238	475.80	NA	461.80	446.80	15.00	14.00	29.00	14.00 - 29.00	474.19	10/1/2009	462.40	3/25/2014	465.32	464.93	464.84	464.55	462.79	462.40	462.97
MW-24	590876	369134	476.39	NA	458.39	443.39	15.00	18.00	33.00	18.00 - 33.00	465.35	7/20/2015	462.41	3/25/2014	465.35	465.23	464.79	464.53	462.72	462.41	462.97
MW-25	590743	369006	476.89	NA	459.89	444.89	15.00	17.00	32.00	17.00 - 32.00	465.49	10/1/2009	462.46	3/25/2014	465.37	465.22	464.87	464.54	462.79	462.46	462.95
MW-26	590566	369230	478.05	NA	459.55	444.55	15.00	18.50	33.50	18.50 - 33.50	465.75	10/1/2009	463.10	3/25/2014	465.56	465.22	465.23	465.02	463.18	463.10	463.29
MW-27	591077	369226	475.42	NA	460.42	445.42	15.00	15.00	30.00	15.00 - 30.00	465.33	7/20/2015	462.39	3/25/2014	465.33	465.21	464.79	464.53	462.70	462.39	462.70
MW-28	591324	369209	470.49	NA	457.49	442.49	15.00	13.00	28.00	13.00 - 28.00	465.20	7/20/2015	458.86	1/12/2016	465.20	464.52	464.49	464.18	462.59	462.16	462.72
MW-29	590181	368371	474.91	NA	458.91	443.91	15.00	16.00	31.00	16.00 - 31.00	468.30	1/12/2015	461.94	10/1/2011	464.42	463.87	464.51	464.50	461.94	462.94	462.18
MW-30	590579	368432	478.99	NA	457.99	442.99	15.00	21.00	36.00	21.00 - 36.00	467.41	1/12/2015	461.81	3/25/2014	464.33	463.96	464.10	463.90	461.81	462.09	461.88
MW-31	590824	369286	476.03	NA	458.53	448.53	10.00	17.50	27.50	17.50 - 27.50	465.35	9/10/2001	460.52	1/12/2015	NA	NA	NA	NA	NA	NA	NA
MW-31R	590823	369288	475.73	NA	455.73	445.73	10.00	20.00	30.00	20.00-30.00	465.13	7/20/2015	463.93	4/13/2015	465.13	465.08	464.61	NA	NA	NA	NA
MW-32[1]	590909	369279	475.68	NA	458.68	448.68	10.00	17.00	27.00	17.00 - 27.00	464.80	4/1/2010	462.59	3/25/2014	NA	NA	NA	NA	NA	NA	NA
MW-32R	590908	369282	475.50	NA	455.00	445.00	10.00	20.50	30.50	20.50-30.50	465.09	7/20/2015	463.94	4/13/2015	465.09	465.05	464.61	NA	NA	NA	NA
MW-33[1]	590994	369276	474.88	NA	459.08	449.08	10.00	15.80	25.80	15.80 - 25.80	465.70	9/10/2001	462.50	3/25/2014	NA	NA	NA	NA	NA	NA	NA
MW-33R	590993	369277	474.60	NA	455.60	445.60	10.00	19.00	29.00	19.00 - 29.00	465.19	7/20/2015	463.97	4/13/2015	465.19	465.08	464.61	NA	NA	NA	NA
MW-34[1]	590932	369336	474.29	NA	454.79	444.79	10.00	19.50	29.50	19.50 - 29.50	465.52	10/1/2009	462.68	3/26/2001	NA	NA	NA	NA	NA	NA	NA
MW-34R	590911	369339	474.23	NA	452.73	445.73	7.00	21.50	28.50	21.50-28.50	465.43	7/20/2015	462.48	5/2/2016	465.43	465.37	464.91	464.61	462.85	462.48	463.02
MW-35R[3]	590994	369333	473.87	NA	454.37	444.37	10.00	19.50	29.50	19.50 - 29.50	465.32	7/20/2015	462.33	3/25/2014	465.32	465.26	464.78	464.54	462.72	462.33	462.91
MW-36[1]	591079	369329	473.30	NA	461.30	446.30	15.00	12.00	27.00	12.00 - 27.00	465.51	10/1/2009	462.71	4/1/2010	NA	NA	NA	NA	NA	NA	NA
MW-36R	591078	369328	472.98	NA	452.98	443.98	9.00	20.00	29.00	20.00-29.00	465.27	7/20/2015	462.25	5/2/2016	465.27	465.20	464.73	464.47	462.58	462.25	462.86
MW-37	590972	369028	473.57	NA	458.57	443.57	15.00	15.00	30.00	15.00 - 30.00	465.48	10/1/2009	462.37	3/25/2014	465.39	465.27	464.85	464.53	462.78	462.37	463.07
MW-38	590960	369040	474.60	NA	459.60	444.60	15.00	15.00	30.00	15.00 - 30.00	465.48	10/1/2009	462.35	3/25/2014	465.39	465.25	464.83	464.51	462.75	462.35	462.96
MW-39[1]	590833	369421	475.46	NA	455.96	445.96	10.00	19.50	29.50	19.50 - 29.50	465.00	1/12/2015	461.61	3/5/2014	NA	NA	NA	NA	NA	NA	NA
MW-39R	590840	369429	474.72	NA	450.22	445.22	5.00	24.50	29.50	24.50-29.50	465.41	7/20/2015	462.43	5/2/2016	465.41	465.32	464.84	464.56	462.88	462.43	463.03
MW-40[1]	590998	369622	473.35	NA	455.60	445.60	10.00	17.75	27.75	17.75 - 27.75	464.76	10/13/2014	455.04	10/14/2013	NA	NA	NA	NA	NA	NA	NA
MW-40R	591013	369624	473.09	NA	454.59	444.59	10.00	18.50	28.50	18.50 - 28.50	465.29	7/20/2015	462.31	5/2/2016	465.29	465.23	464.73	464.49	462.72	462.31	462.92
MW-41[1]	591061	369469	472.09	NA	453.34	443.34	10.00	18.75	28.75	18.75 - 28.75	464.45	10/13/2014	462.63	3/25/2014	NA	NA	NA	NA	NA	NA	NA
MW-41R	591061	369478	471.84	NA	453.84	443.84	10.00	18.00	28.00	18.00 - 28.00	465.13	7/20/2015	462.17	5/2/2016	465.13	465.10	464.63	464.41	462.64	462.21	462.17
MW-46R	591472	369609	465.79	NA	449.19	444.19	5.00	16.60	21.60	16.60 - 21.60	464.88	7/20/2015	457.50	1/12/2015	464.88	464.67	464.40	464.21	462.34	462.03	463.64

TABLE 3
SUMMARY OF MONITORING WELL STATIC WATER LEVEL MEASUREMENTS
Whirlpool Facility - Fort Smith, Arkansas

Location	Well Coordinates		TOC Elevation (ft)	Ground Surface (ft)	Top of Screen Elevation (ft)	Bottom of Screen Elevation (ft)	Screen Length (ft)	Top of screen Depth	Bottom of screen Depth	Screened Interval (ft)	Maximum Static Water Elevation	Maximum Elevation Date	Minimum Static Water Elevation	Minimum Elevation Date	Static Water Level Elevation (ft)						
	Easting (ft)	Northing (ft)													7/20/2015	10/5/2015	1/6/2016	5/2/2016	11/7/2016	4/25/2017	10/23/2017
MW-50	591415	370213	463.11	NA	455.11	445.11	10.00	8.00	18.00	8.00 - 18.00	459.81	10/13/2014	453.92	1/12/2015	NA	NA	NA	NA	NA	NA	NA
MW-50R	591415	370210	462.65	NA	449.65	444.65	5.00	13.00	18.00	13.00 - 18.00	455.84	7/20/2015	452.67	5/2/2016	455.84	455.32	455.35	454.19	453.77	452.67	454.95
MW-55[1]	591291	369893	465.50	NA	450.00	445.00	5.00	15.50	20.50	15.50 - 20.50	463.06	10/14/2013	461.59	3/5/2014	NA	NA	NA	NA	NA	NA	NA
MW-55R	591291	369895	465.30	NA	446.30	444.30	2.00	19.00	21.00	19.00 - 21.00	465.06	7/20/2015	462.02	1/6/2016	465.06	464.60	464.57	NA	462.39	462.02	462.70
MW-56[1]	591687	369730	463.22	NA	448.72	443.72	5.00	14.50	19.50	14.50 - 19.50	462.55	10/13/2014	456.49	3/25/2014	NA	NA	NA	NA	NA	NA	NA
MW-56R	591687	369732	463.17	NA	445.17	443.17	2.00	18.00	20.00	18.00 - 20.00	462.47	7/20/2015	459.03	10/5/2015	462.47	461.63	462.11	462.22	459.03	460.74	459.93
MW-57[1]	591690	369811	462.90	NA	448.90	443.90	5.00	14.00	19.00	14.00 - 19.00	461.14	4/13/2015	457.65	3/25/2014	NA	NA	NA	NA	NA	NA	NA
MW-57R	591693	369806	462.92	NA	447.92	442.92	5.00	15.00	20.00	15.00 - 20.00	462.26	7/20/2015	458.68	10/5/2015	462.26	461.26	462.04	462.07	458.68	460.73	459.70
MW-58[1]	591570	369907	462.71	NA	450.21	445.21	5.00	12.50	17.50	12.50 - 17.50	462.71	10/13/2014	461.01	1/12/2015	NA	NA	NA	NA	NA	NA	NA
MW-58R	591571	369898	465.98	NA	451.98	446.98	5.00	14.00	19.00	14.00 - 19.00	464.68	7/20/2015	461.64	5/2/2016	464.68	463.83	463.88	463.78	461.73	461.64	462.16
MW-60[1]	591710	370193	460.85	NA	448.85	443.85	5.00	12.00	17.00	12.00 - 17.00	458.07	10/13/2014	452.38	1/12/2015	NA	NA	NA	NA	NA	NA	NA
MW-60R	591710	370193	460.66	NA	450.16	445.16	5.00	10.50	15.50	10.50 - 15.50	458.55	10/5/2015	455.11	5/2/2016	458.19	458.55	456.36	456.02	457.96	455.11	457.39
MW-61[1]	592003	370175	459.61	NA	449.11	444.11	5.00	10.50	15.50	10.50 - 15.50	453.32	7/28/2014	448.21	3/5/2014	NA	NA	NA	NA	NA	NA	NA
MW-61R	591999	370175	459.31	NA	448.81	443.81	5.00	10.50	15.50	10.50 - 15.50	456.38	10/5/2015	451.85	1/6/2016	454.63	456.38	452.14	452.91	452.53	451.85	452.76
MW-62[1]	591791	369569	464.33	NA	448.83	443.83	5.00	15.50	20.50	15.50 - 20.50	464.03	1/12/2015	456.68	3/5/2014	NA	NA	NA	NA	NA	NA	NA
MW-62R	591790	369572	464.19	NA	449.19	444.19	5.00	15.00	20.00	15.00 - 20.00	461.72	7/20/2015	457.49	1/6/2016	461.72	461.19	460.32	460.46	458.53	457.49	458.84
MW-63[1]	591994	369560	463.87	NA	447.87	442.87	5.00	16.00	21.00	16.00 - 21.00	461.43	10/13/2014	455.05	3/25/2014	NA	NA	NA	NA	NA	NA	NA
MW-63R	591993	369559	463.94	NA	448.94	443.94	5.00	15.00	20.00	15.00 - 20.00	462.29	7/20/2015	458.56	5/2/2016	462.29	462.08	460.93	460.79	460.05	458.56	459.92
MW-65[3]	590980	369335	473.91	NA	454.41	444.41	10.00	19.50	29.50	19.50 - 29.50	473.91	1/12/2015	462.38	3/25/2014	465.70	465.25	464.78	464.55	473.91	462.38	462.87
MW-66	592280	369855	462.05	NA	449.45	444.45	5.00	12.60	17.60	12.60 - 17.60	460.24	7/20/2015	446.54	1/12/2015	460.24	460.00	458.69	458.74	NA	NA	NA
MW-67	592291	370027	459.01	NA	449.41	444.41	5.00	9.60	14.60	9.60 - 14.60	458.42	7/28/2014	449.31	10/13/2014	NA	NA	NA	NA	NA	NA	NA
MW-67R	592291	370022	459.16	NA	447.16	442.16	5.00	12.00	17.00	12.00 - 17.00	458.96	7/20/2015	456.44	5/2/2016	458.96	458.49	457.45	456.44	NA	NA	NA
MW-68	591173	369815	469.81	NA	455.81	445.81	10.00	14.00	24.00	14.00 - 24.00	465.23	1/12/2015	462.36	3/25/2014	465.23	465.07	464.79	464.59	462.40	462.36	462.94
RW-69[3]	591170	369678	470.89	NA	455.89	445.89	10.00	15.00	25.00	15.00 - 25.00	464.97	7/20/2015	462.00	3/25/2014	464.97	464.82	464.42	464.19	462.34	462.00	462.53
MW-70	591162	369693	471.53	NA	NA	NA	NA	NA	NA	NA	465.33	7/20/2015	462.38	3/25/2014	465.33	465.14	464.77	464.59	462.70	462.38	462.93
MW-71	591170	369695	471.35	NA	NA	NA	NA	NA	NA	NA	465.35	7/20/2015	461.93	3/25/2014	465.35	465.17	464.79	464.56	462.70	462.36	461.93
IW-72[3]	591056	369590	471.65	NA	456.65	446.65	10.00	15.00	25.00	15.00 - 25.00	465.19	7/20/2015	462.11	10/14/2013	465.19	465.12	464.63	464.30	462.60	462.22	462.77
IW-73	591060	369503	471.48	NA	NA	NA	NA	NA	NA	NA	465.29	7/20/2015	462.38	3/25/2014	465.29	465.24	464.79	464.54	462.73	462.38	462.92
IW-74[2,3]	591058	369545	472.06	NA	457.06	447.06	10.00	15.00	25.00	15.00 - 25.00	465.26	7/20/2015	462.30	10/14/2013	465.26	465.22	464.74	464.49	462.66	462.30	462.85
IW-75	591072	369605	472.17	NA	NA	NA	NA	NA	NA	NA	465.36	7/20/2015	462.37	3/25/2014	465.36	465.25	464.84	464.54	462.72	462.37	462.95
IW-76	591050	369426	472.26	NA	NA	NA	NA	NA	NA	NA	465.17	7/20/2015	462.21	3/25/2014	465.17	465.11	464.62	464.40	462.59	462.21	462.78
IW-77[2]	591027	369380	473.01	NA	453.01	443.01	10.00	20.00	30.00	20.00 - 30.00	465.37	7/20/2015	462.41	3/25/2014	465.37	465.27	464.81	464.55	462.81	462.41	462.98
IW-78	590984	369338	473.49	NA	NA	NA	NA	NA	NA	NA	465.38	7/20/2015	461.77	3/25/2014	465.38	465.23	464.80	464.55	461.77	462.37	462.87
IW-79	591018	369335	473.84	NA	NA	NA	NA	NA	NA	NA	465.39	7/20/2015	462.39	3/25/2014	465.39	465.28	464.80	464.54	462.80	462.39	462.94
IW-80[2,3]	591047	369343	473.30	NA	453.30	443.30	10.00	20.00	30.00	20.00 - 30.00	465.21	7/20/2015	462.28	3/25/2014	465.21	465.14	464.68	464.46	462.69	462.28	462.83
IW-101	590930	369201	475.70	NA	452.80	447.80	5.00	22.90	27.90	22.90-27.90	464.66	1/6/2016	463.50	5/2/2016	NA	NA	464.66	463.50	NA	NA	NA
IW-115	591007	369344	473.41	NA	454.31	449.31	5.00	19.10	24.10	19.10-24.10	464.64	1/6/2016	462.38	5/2/2016	NA	NA	464.64	464.44	462.38	462.41	462.49
IW-129	590989	368977	473.54	NA	448.99	443.99	5.00	24.55	29.55	24.55 - 29.55	463.08	NA	463.08	NA	NA	NA	NA	NA	NA	NA	NA
IW-130	590924	369186	475.58	NA	452.20	447.28	5.00	23.38	28.30	23.38 - 28.38	463.20	NA	463.20	NA	NA	NA	NA	NA	NA	NA	NA
IW-131	591006	369339	473.37	NA	453.65	448.65	5.00	19.72	24.72	19.72 - 24.72	463.21	NA	463.21	NA	NA	NA	NA	NA	NA	NA	NA
MW-81	590977	369395	473.54	NA	453.54	448.54	5.00	20.00	25.00	20.00-25.00	465.33	7/20/2015	462.35	1/12/2015	465.33	465.25	464.75	464.53	462.74	462.35	462.91
MW-82	591039	369406	473.60	NA	452.60	447.60	5.00	21.00	26.00	21.00-26.00	465.35	7/20/2015	462.36	1/12/2015	465.35	465.26	464.76	464.50	462.73	462.36	462.90
MW-83	590946	369211	475.48	NA	453.48	448.48	5.00	22.00	27.00	22.00-27.00	465.25	7/20/2015	462.32	1/12/2015	465.25	465.01	464.72	464.47	462.64	462.32	462.86
MW-84	590882	369194	475.53	NA	451.53	446.53	5.00	24.00	29.00	24.00-29.00	466.39	1/6/2016	462.23	1/12/2015	465.19	464.97	466.39	464.31	462.58	462.23	462.80
MW-85	590760	369018	474.41	NA	449.41	444.41	5.00	25.00	30.00	25.00-30.00	465.21	7/20/2015	462.24	1/12/2015	465.21	465.06	464.68	464.33	462.62	462.24	462.75
MW-86	590767	368995	473.19	NA	450.19	445.19	5.00	23.00	28.00	23.00-28.00	465.10	7/20/2015	462.19	1/12/2015	465.10	464.99	464.64	464.31	462.54	462.19	462.77
MW-87	592269	368835	470.78	NA	453.78	443.78	10.00	17.00	27.00	17.00-27.00	460.91	10/15/2015	458.04	4/13/2015	460.74	460.91	460.48	460.00	458.21	458.25	458.04
MW-88	592151	369043	468.89	NA	450.89	440.89	10.00	18.00	28.00	18.00-28.00	462.85	10/5/2015	458.47	4/13/2015	461.49	462.85	461.49	459.97	461.27	458.47	460.41
MW-89	592357	369059	466.91	NA	451.91	441.91	10.00	15.00	25.00	15.00-25.00	459.23	10/5/2015	456.80	1/12/2015	459.05	459.23	458.98	458.44	457.01	456.95	456.80

TABLE 3
SUMMARY OF MONITORING WELL STATIC WATER LEVEL MEASUREMENTS
Whirlpool Facility - Fort Smith, Arkansas

Location	Well Coordinates		TOC Elevation (ft)	Ground Surface (ft)	Top of Screen Elevation (ft)	Bottom of Screen Elevation (ft)	Screen Length (ft)	Top of screen Depth	Bottom of screen Depth	Screened Interval (ft)	Maximum Static Water Elevation	Maximum Elevation Date	Minimum Static Water Elevation	Minimum Elevation Date	Static Water Level Elevation (ft)						
	Easting (ft)	Northing (ft)													7/20/2015	10/5/2015	1/6/2016	5/2/2016	11/7/2016	4/25/2017	10/23/2017
MW-90	592157	369157	466.71	NA	451.71	441.71	10.00	15.00	25.00	15.00-25.00	463.26	10/5/2015	458.73	4/13/2015	460.67	463.26	462.13	460.73	462.66	458.73	464.46
MW-91	592371	368830	468.90	NA	453.90	443.90	10.00	15.00	25.00	15.00-25.00	460.19	10/5/2015	457.51	4/13/2015	460.11	460.19	459.79	459.32	457.60	457.71	457.51
MW-92	590778	368921	473.74	NA	453.74	443.74	10.00	20.00	30.00	20.00-30.00	465.29	7/20/2015	462.30	1/12/2015	465.29	465.17	464.89	464.43	462.73	462.30	462.82
MW-93	590908	368894	477.81	NA	452.81	442.81	10.00	25.00	35.00	25.00-35.00	465.12	7/20/2015	462.10	1/12/2015	465.12	465.08	464.57	464.27	462.58	462.10	462.69
MW-94	591015	368903	477.86	NA	452.86	442.86	10.00	25.00	35.00	25.00-35.00	464.97	7/20/2015	461.93	1/12/2015	464.97	464.94	464.42	464.11	462.41	461.93	462.47
MW-95	590981	368821	477.63	NA	452.63	442.63	10.00	25.00	35.00	25.00-35.00	465.01	7/20/2015	461.95	1/12/2015	465.01	464.98	464.45	464.13	462.49	461.95	462.54
MW-96	592775	369354	457.83	NA	447.83	442.83	5.00	10.00	15.00	10.00-15.00	451.69	5/2/2016	449.11	4/13/2015	449.73	449.84	450.60	451.69	449.24	449.11	451.72
MW-97	592687	369527	459.43	NA	447.93	442.93	5.00	11.50	16.50	11.50-16.50	451.22	1/6/2016	445.65	10/22/2014	449.53	450.55	450.84	450.70	450.47	451.22	451.23
MW-98	592840	369198	461.62	NA	446.62	441.62	10.00	15.00	20.00	15.00-20.00	451.39	5/2/2016	442.77	10/29/2014	449.86	449.35	450.70	451.04	449.72	451.39	445.27
MW-99	592554	368814	466.80	NA	448.30	443.30	5.00	18.50	23.50	18.50-23.50	459.89	7/20/2015	454.63	10/22/2014	459.89	459.87	459.51	459.06	NA	457.49	457.23
MW-172	590858	369002	472.94	NA	454.94	444.94	10.00	18.00	28.00	18.00-28.00	465.27	7/20/2015	461.26	5/2/2016	465.27	465.14	464.73	464.39	462.66	461.26	462.84
MW-173	591973	369624	463.56	NA	458.56	457.56	1.00	5.00	6.00	5.00-6.00	462.63	7/20/2015	457.61	4/13/2015	462.63	461.81	462.31	462.44	461.43	462.40	461.13
MW-174	591976	369644	463.45	NA	452.45	451.45	1.00	11.00	12.00	11.00-12.00	461.75	10/5/2015	453.10	4/13/2015	459.92	461.75	459.71	460.01	459.77	457.87	453.10
MW-175	591603	369655	464.17	NA	450.67	449.67	1.00	13.50	14.50	13.50-14.50	463.71	7/20/2015	456.06	4/13/2015	463.71	463.47	463.37	463.42	462.22	460.74	456.06
MW-176	591474	369675	465.24	NA	452.24	451.24	1.00	13.00	14.00	13.00-14.00	464.66	7/20/2015	461.99	4/13/2015	464.66	464.49	464.38	464.18	462.30	461.99	465.24
MW-177	591148	369698	471.50	NA	462.50	461.50	1.00	9.00	10.00	9.00-10.00	469.97	1/6/2016	461.78	10/5/2015	469.09	465.34	469.97	469.00	465.19	461.78	471.50
MW-178	590973	369232	475.40	NA	468.40	467.40	1.00	7.00	8.00	7.00-8.00	472.05	5/2/2016	470.38	10/5/2015	471.94	471.48	471.93	472.05	470.38	471.50	471.31
MW-179	590984	369232	475.39	NA	463.39	462.39	1.00	12.00	13.00	12.00-13.00	467.66	7/20/2015	462.70	4/13/2015	467.66	464.23	465.93	NA	466.80	463.14	467.80
MW-180	590996	369231	475.32	NA	469.32	468.32	1.00	6.00	7.00	6.00-7.00	471.93	5/2/2016	469.60	10/5/2015	471.69	471.46	471.81	471.93	469.60	470.89	471.12
MW-181	591156	369695	471.87	NA	465.87	464.87	1.00	6.00	7.00	6.00-7.00	469.37	1/6/2016	<464.87	11/7/2016	468.35	456.87	469.37	468.27	NA	NA	NA
MW-182	590403	367900	474.64	NA	453.64	443.64	10.00	21.00	31.00	21.00-31.00	461.60	10/5/2015	458.66	5/2/2016	NA	461.60	461.51	461.44	459.39	459.47	458.66
MW-183	592664	369246	462.42	NA	447.42	442.42	5.00	15.00	20.00	15.00-20.00	452.22	5/2/2016	450.11	10/5/2015	NA	450.11	450.50	451.36	450.20	452.22	453.47
MW-184	592646	369023	465.58	NA	446.58	441.58	5.00	19.00	24.00	19.00-24.00	458.42	10/5/2015	448.03	5/2/2016	NA	458.42	458.38	457.77	456.59	456.68	448.03
MW-185	592256	367995	473.86	NA	453.86	443.86	10.00	20.00	30.00	20.00-30.00	463.49	10/5/2015	459.29	5/2/2016	NA	463.49	462.66	462.53	459.29	459.31	459.30
MW-186	590124	367716	469.80	NA	451.80	441.80	10.00	18.00	28.00	18.00-28.00	457.44	5/2/2016	455.76	10/5/2015	NA	457.18	457.33	457.44	455.78	456.60	455.76
MW-187	590249	367588	477.42	NA	453.42	443.42	10.00	24.00	34.00	24.00-34.00	459.21	5/2/2016	457.30	10/5/2015	NA	459.06	459.15	459.21	457.42	457.89	457.30
MW-188	590646	367509	481.14	NA	455.14	445.14	10.00	26.00	36.00	26.00-36.00	462.10	10/5/2015	459.07	5/2/2016	NA	462.10	461.91	461.72	459.62	459.46	459.07
MW-189	590860	367666	485.59	NA	454.59	444.59	10.00	31.00	41.00	31.00-41.00	462.83	10/5/2015	459.45	5/2/2016	NA	462.83	462.44	462.26	459.98	459.67	459.45
MW-190	591325	367745	481.29	NA	454.29	444.29	10.00	27.00	37.00	27.00-37.00	463.27	10/5/2015	459.52	5/2/2016	NA	463.27	462.70	462.46	460.00	459.77	459.52
MW-191	591662	367732	476.85	NA	453.85	443.85	10.00	23.00	33.00	23.00-33.00	463.37	10/5/2015	459.51	5/2/2016	NA	463.37	462.72	462.47	459.92	459.74	459.51
MW-192	592078	367679	475.33	NA	454.33	444.33	10.00	21.00	31.00	21.00-31.00	463.42	10/5/2015	459.45	5/2/2016	NA	463.42	462.69	462.50	459.73	459.65	459.45
MW-193	592312	370289	455.26	NA	447.76	442.76	5.00	7.50	12.50	7.50-12.50	453.76	5/2/2016	451.25	10/5/2015	NA	451.25	453.30	453.76	NA	NA	NA
MW-194	592161	369791	462.47	NA	451.47	441.47	10.00	11.00	21.00	11.00-12.00	457.22	11/7/2016	457.10	11/7/2016	NA	NA	NA	NA	457.10	457.22	457.88
MW-195	592185	370025	459.36	NA	446.36	441.36	5.00	13.00	18.00	13.00-18.00	456.94	11/7/2016	455.78	11/7/2016	NA	NA	NA	NA	456.94	455.78	457.18
MW-196	592217	370132	457.63	NA	447.63	442.63	5.00	10.00	15.00	10.00-15.00	454.07	11/7/2016	452.30	11/7/2016	NA	NA	NA	NA	454.07	452.30	453.86
TMW-10	591973	370113	460.75	NA	450.25	445.25	5.00	10.50	15.50	10.50-15.50	456.19	1/6/2016	453.53	5/2/2016	NA	NA	455.53	454.95	456.19	453.53	455.99
TMW-11	591956	370078	460.20	NA	449.70	444.70	5.00	10.50	15.50	10.50-15.50	456.50	1/6/2016	453.72	5/2/2016	NA	NA	455.49	454.95	456.50	453.72	456.19
TMW-12	591873	369860	461.77	461.63	451.77	441.77	10.00	10.00	20.00	10.00-20.00	459.43	4/25/2017	458.33	10/23/2017	NA	NA	NA	NA	NA	459.43	458.33
TMW-13	592083	369870	460.10	460.27	447.10	442.10	5.00	13.00	18.00	13.00-18.00	457.59	4/25/2017	457.59	10/23/2017	NA	NA	NA	NA	NA	457.59	NA
TMW-14	591873	369736	461.89	462.46	450.89	440.89	10.00	11.00	21.00	11.00-21.00	458.78	4/25/2017	458.14	10/23/2017	NA	NA	NA	NA	NA	458.78	458.14
TMW-15	592032	369683	465.32	465.40	452.32	442.32	10.00	13.00	23.00	13.00-23.00	457.58	4/25/2017	457.58	10/23/2017	NA	NA	NA	NA	NA	457.58	NA
TMW-16	590180	367791	469.39	469.54	451.39	441.39	10.00	18.00	28.00	18.00-28.00	456.70	4/25/2017	456.30	10/23/2017	NA	NA	NA	NA	NA	456.70	456.30
TMW-17	590856	367810	484.05	483.74	451.55	441.55	10.00	32.50	42.50	32.50-42.50	459.53	4/25/2017	459.53	10/23/2017	NA	NA	NA	NA	NA	459.53	NA
TMW-18	590672	367598	478.79	478.54	453.79	443.79	10.00	25.00	35.00	25.00-35.00	459.45	4/25/2017	459.45	10/23/2017	NA	NA	NA	NA	NA	459.45	NA
TMW-19	590841	367569	484.99	485.26	451.99	441.99	10.00	33.00	43.00	33.00-43.00	459.26	10/23/2017	459.18	4/25/2017	NA	NA	NA	NA	NA	459.18	459.26
TMW-20	592210	369929	460.57	461.17	449.07	448.07	7.00	11.50	12.50	11.50-12.50	457.33	10/23/2017	457.33	10/23/2017	NA	NA	NA	NA	NA	NA	457.33
TMW-21	592082	369959	460.01	460.26	450.01	440.01	10.00	10.00	20.00	10.00-20.00	456.68	10/23/2017	456.68	10/23/2017	NA	NA	NA	NA	NA	NA	456.68
TMW-22	591985	369997	460.82	461.05	448.82	441.82	7.00	12.00	19.00	12.00-19.00	456.57	10/23/2017	456.57	10/23/2017	NA	NA	NA	NA	NA	NA	456.57
TMW-23	591874	370019	461.94	462.22	447.94	442.94	5.00	14.00	19.00	14.00-19.00	457.21	10/23/2017	457.21	10/23/2017	NA	NA	NA	NA	NA	NA	457.21
TMW-24	592006	369808	461.23	461.46	449.23	442.23	7.00	12.00	19.00	12.00-19.00	457.33	10/23/2017	457.33	10/23/2017	NA	NA	NA	NA	NA	NA	457.33
TMW-25	590283	367848	473.14	473.41	452.64	442.64	10.00	20.50	30.50	20.50-30.50	456.76	10/23/2017	456.76	10/23/2017	NA	NA	NA	NA	NA	NA	456.76
TMW-26	590115	367763	472.1	469.47	454.10	444.10	10.00	18.00	28.00	18.00-28.00	456.73	10/23/2017	456.73	10/23/2017	NA	NA	NA	NA	NA	NA	456.73

TABLE 3
SUMMARY OF MONITORING WELL STATIC WATER LEVEL MEASUREMENTS
Whirlpool Facility - Fort Smith, Arkansas

Location	Well Coordinates		TOC Elevation (ft)	Ground Surface (ft)	Top of Screen Elevation (ft)	Bottom of Screen Elevation (ft)	Screen Length (ft)	Top of screen Depth	Bottom of screen Depth	Screened Interval (ft)	Maximum Static Water Elevation	Maximum Elevation Date	Minimum Static Water Elevation	Minimum Elevation Date	Static Water Level Elevation (ft)						
	Easting (ft)	Northing (ft)													7/20/2015	10/5/2015	1/6/2016	5/2/2016	11/7/2016	4/25/2017	10/23/2017
TMW-27	590091	367871	467.45	468.03	451.45	441.45	10.00	16.00	26.00	16.00-26.00	456.03	10/23/2017	456.03	10/23/2017	NA	NA	NA	NA	NA	NA	456.03
TMW-28	590092	367956	468.27	468.85	451.27	441.27	10.00	17.00	27.00	17.00-27.00	NA	10/23/2017	NA	10/23/2017	NA	NA	NA	NA	NA	NA	NA
TMW-29	592211	369848	462.19	462.56	450.19	443.19	7.00	12.00	19.00	12.00-19.00	453.13	10/23/2017	453.13	10/23/2017	NA	NA	NA	NA	NA	NA	453.13
TMW-30	590113	367737	469.37	469.77	450.87	440.87	10.00	18.50	28.50	18.50-28.50	455.54	10/23/2017	455.54	10/23/2017	NA	NA	NA	NA	NA	NA	455.54

Notes:

ft = Feet
NA = Not available (not installed or abandoned/replaced)
nm = Not measured
1 = Construction diagram notes use of pre-packed stainless steel screen
2 = Construction diagram text and graphical representation differ on construction details. Graphical representation used to infer elevations
3 = Construction diagram notes presence of sedimentation sump below screened interval
Horizontal and vertical coordinates converted to Arkansas State Plane, North Zone (NAD83) and North American Vertical Datum of 1988 (NAVD88) based on in historic site file. Casing elevations for ITMW-1 through ITMW-21 and MW-22 extracted from 2011/2012 Annual Ground Water Monitoring Report dated June 28, 2012. information provided
Casing elevations for remaining wells extracted from survey data provided by Philip J. Leraris, PE, LS, dated May 12, 2009.
IW-129, IW-130, IW-131, and MW-81 to MW-99 surveyed during 2014.
Well screen intervals and depths adapted from monitoring well construction diagrams.

TABLE 4
SUMMARY OF FINAL WELL GROUNDWATER FIELD PARAMETERS MEASUREMENTS (October 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Well Casing Diameter (in)	Date Sampled	Water Level prior to Purging (ft btoc)	Total Depth of Well Casing (ft)	Set Tubing Depth (ft)	Time Sampled	Water Level after Purging (ft btoc)	Purge Volume (Gallons)	Purge Rate (ml/min)	Temperature (°C)	Specific Conductivity (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Ferrous Iron (mg/L)	Persulfate (mg/L)	Color
ITMW-1	4	10/25/2017	15.92	34.05	29.05	15:14	15.94	1.00	100	20.10	466	0.28	5.93	-15.2	0.38	N/A	N/A	Clear
ITMW-2	4	10/25/2017	12.63	27.00	22.00	14:15	12.67	1.00	100	23.33	467	0.45	5.97	-25.0	3.85	N/A	N/A	Clear
ITMW-3	4	NS	NS	NS	NS	NS	NS	NS	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS
ITMW-4	4	NS	NS	NS	NS	NS	NS	NS	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS
ITMW-5	4	10/25/2017	19.14	39.29	34.30	15:15	19.24	1.30	100	22.96	650	0.06	5.65	132.7	0.67	0.00	N/A	Clear
ITMW-6	4	NS	NS	NS	NS	NS	NS	NS	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS
ITMW-7	4	10/25/2017	22.83	36.98	32.00	12:30	22.91	1.30	100	21.21	847	0.11	4.80	232.6	0.52	0.07	N/A	Clear
ITMW-9	4	10/25/2017	22.50	34.95	27.75	9:55	22.47	2.50	85	20.58	524	0.20	6.11	176.5	2.02	0.00	N/A	Clear
ITMW-10	4	10/25/2017	21.25	36.82	31.30	11:50	21.33	1.30	100	20.00	904	0.11	5.76	212	0.16	N/A	N/A	Clear
ITMW-11	4	NS	NS	NS	NS	NS	NS	NS	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS
ITMW-12	4	NS	NS	NS	NS	NS	NS	NS	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS
ITMW-13	4	NS	NS	NS	NS	NS	NS	NS	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS
ITMW-14	4	NS	NS	NS	NS	NS	NS	NS	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS
ITMW-15	4	NS	NS	NS	NS	NS	NS	NS	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS
ITMW-16	4	10/25/2017	16.30	34.18	27.00	14:00	16.32	1.50	100	24.13	140	4.39	6.42	162.2	22.0	N/A	N/A	Barely Opaque/Clear
ITMW-17	4	NS	NS	NS	NS	NS	NS	NS	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS
ITMW-18	4	10/26/2017	10.71	29.50	24.50	9:45	10.76	1.20	100	17.62	5876	0.22	5.15	398.9	2.7	N/A	2400	Clear
ITMW-19	4	10/26/2017	13.27	33.23	29.50	9:10	13.48	1.50	100	15.93	7940	7.71	6.52	402.4	1.26	N/A	3900	Clear
ITMW-20	4	10/25/2017	15.03	31.03	26.00	10:05	15.36	1.50	100	19.01	422	0.63	5.41	769.4	2.74	0.00	N/A	Clear
ITMW-21	4	10/25/2017	13.82	32.99	28.00	11:05	14.04	1.00	100	19.27	2511	0.20	4.72	272.7	0.81	0.00	N/A	Clear
MW-22	4	10/25/2017	12.56	29.20	24.20	16:35	12.60	1.50	100	22.53	136	0.15	4.99	107.1	0.79	0.00	N/A	Clear
MW-23	4	NS	NS	NS	NS	NS	NS	NS	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-24	4	10/25/2017	13.42	32.51	25.00	15:00	13.40	1.00	100	25.31	2845	0.13	4.39	409.2	2.3	0.00	250	Clear
MW-25	4	10/26/2017	13.69	34.60	29.60	9:10	13.89	1.20	100	19.35	3252	0.33	6.30	2.8	24.7	1.50	5.60	Clear
MW-26	4	10/25/2017	15.75	35.14	29.90	16:00	14.90	1.00	100	22.46	1167	0.25	5.23	303.6	0.78	N/A	N/A	Clear
MW-27	2	10/25/2017	12.45	30.14	23.50	17:10	12.43	1.40	100	24.18	104	3.52	6.23	215.9	16.0	N/A	N/A	Clear
MW-28	2	10/25/2017	7.62	27.15	22.45	15:15	7.86	1.00	100	24.81	333	0.11	6.26	102.5	1.31	N/A	N/A	Clear
MW-29	2	10/25/2017	12.73	30.32	23.50	13:30	12.76	1.30	100	22.14	566	0.22	4.60	223.2	1.49	0.00	N/A	Clear
MW-30	4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-34R	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-35R	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-36R	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-37	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-38	2	10/26/2017	11.47	29.83	24.83	10:49	11.52	1.2	100	22.26	487	0.14	6.46	-26	1.56	3.3	N/A	Clear
MW-39R	2	10/25/2017	11.88	29.69	27.19	9:30	12.03	1.20	100	18.03	1254	0.25	5.23	51.5	6.29	N/A	N/A	Clear
MW-40R	2	10/24/2017	10.30	28.30	23.30	13:00	10.33	1.20	100	21.98	881	0.11	5.44	30.1	3.6	3.30	N/A	Clear
MW-41R	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-46R	2	10/24/2017	3.24	21.51	19.00	10:43	3.41	1.00	100	22.70	838	0.21	4.95	143.7	5.95	N/A	N/A	Clear
MW-50R	2	10/23/2017	7.92	18.24	15.75	17:10	11.65	2.50	100	22.35	1250	0.10	6.67	78.6	8.27	0.06	N/A	Clear
MW-55R	2	10/25/2017	2.62	20.96	19.96	16:36	3.58	1.00	75	20.97	927	0.14	5.71	-105	2.47	N/A	N/A	Clear
MW-56R	2	10/24/2017	3.50	19.79	18.79	16:00	4.48	1.50	100	20.26	705	0.14	5.92	55.7	1.21	N/A	N/A	Clear
MW-57R	2	10/24/2017	3.34	19.35	17.10	15:20	5.43	1.30	100	21.47	780	0.14	5.64	93.6	4.0	N/A	N/A	Clear
MW-58R	2	10/24/2017	4.56	21.88	19.30	12:20	5.35	2.00	100	20.56	766	0.29	5.07	185.7	3.11	1.08	N/A	Clear
MW-60R	2	10/24/2017	3.18	10.86	12.36	9:25	4.56	0.93	100	15.11	1353	1.52	6.88	-2.7	59.4	N/A	N/A	Clear
MW-61R	2	10/23/2017	6.53	15.28	12.78	16:52	7.31	3.50	100	23.90	1204	0.18	6.95	-119.3	19.6	3.30	N/A	Clear
MW-62R	2	10/24/2017	5.46	20.01	17.51	15:34	6.03	1.50	50	20.40	673	0.68	5.76	-25.8	4.88	N/A	N/A	Clear
MW-63R	2	10/23/2017	4.07	19.72	17.22	16:46	6.23	2.00	50	21.68	587	0.18	5.63	-46.90	14.9	N/A	N/A	Clear
MW-65	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-68	2	10/24/2017	6.98	20.35	15.35	17:08	7.11	1.75	100	18.51	1146	0.17	5.41	8.3	1.91	N/A	N/A	Clear
MW-70	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-71	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
RW-69	4	10/24/2017	8.50	28.11	23.00	9:40	8.53	2.50	95	19.18	859	0.25	5.15	200	1.11	0.00	N/A	Clear
IW-72	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

TABLE 4
SUMMARY OF FINAL WELL GROUNDWATER FIELD PARAMETERS MEASUREMENTS (October 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Well Casing Diameter (in)	Date Sampled	Water Level prior to Purging (ft btoc)	Total Depth of Well Casing (ft)	Set Tubing Depth (ft)	Time Sampled	Water Level after Purging (ft btoc)	Purge Volume (Gallons)	Purge Rate (ml/min)	Temperature (°C)	Specific Conductivity (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Ferrous Iron (mg/L)	Persulfate (mg/L)	Color
IW-73	2	10/23/2017	8.68	26.82	21.80	11:25	8.69	2.60	100	19.38	1051	0.07	5.32	46.6	1.96	1.29	N/A	Clear
IW-74	2	10/24/2017	10.15	28.70	23.70	16:55	10.18	1.80	100	20.09	3452	0.12	10.65	218.7	1.49	0.00	420	Clear
IW-75	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
IW-76	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
IW-77	2	10/24/2017	10.15	28.7	23.7	16:55	10.18	1.8	100	20.09	3452	0.12	10.65	218.7	1.49	0	420	Clear
IW-78	2	10/25/2017	10.69	29.30	24.00	8:50	10.70	1.30	100	18.13	5030	0.37	6.80	329.3	3.21	0.04	420	Clear
IW-79	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
IW-80	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-81	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-82	2	10/24/2017	10.90	25.98	23.50	15:25	10.88	1.60	100	20.55	2727	0.06	5.30	467.2	1.45	0.04	620	Clear
MW-83	2	10/25/2017	12.71	26.77	24.25	10:15	12.71	1.30	100	21.81	4175	1.27	6.72	263.3	1.47	N/A	350	Clear
MW-84	2	10/25/2017	12.76	25.19	22.70	12:10	12.81	1.60	100	24.05	8263	2.34	6.70	292.2	0.98	N/A	2240	Clear
MW-85	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-86	2	10/26/2017	10.22	27.78	25.28	11:20	10.33	1.00	100	22.61	5213	0.05	5.89	38.2	5.87	0.00	0	Clear
MW-87	2	10/26/2017	12.48	26.84	21.84	9:32	12.66	1.50	100	21.80	456	0.13	5.79	138.3	3.14	0.00	N/A	Clear
MW-88	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-89	2	10/26/2017	9.80	25.08	20.08	8:42	10.93	1.00	100	19.09	974	0.12	5.20	202.8	4.12	0.30	N/A	Clear
MW-90	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-91	2	10/25/2017	11.40	25.70	20.70	14:15	12.60	1.60	100	24.51	427	0.24	5.73	188.9	1.18	N/A	N/A	Clear
MW-92	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-93	2	10/26/2017	14.83	34.21	29.10	9:10	14.91	1.50	100	19.68	1038	0.47	5.12	216.6	2.18	0.00	N/A	Clear
MW-94	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-95	2	10/26/2017	14.93	34.14	29.00	10:20	14.93	1.30	100	19.77	1229	0.16	5.19	191.3	2.06	0.06	N/A	Clear
MW-96	2	10/25/2017	6.96	14.35	11.85	11:00	7.45	1.00	100	22.77	226	0.46	5.73	46.2	30.1	N/A	N/A	Clear
MW-97	2	10/25/2107	8.56	15.22	12.72	13:14	11.27	1.30	50	24.69	243	1.25	6.06	-16.0	6.06	N/A	N/A	Clear
MW-98	2	10/24/2017	9.89	19.65	16.15	12:36	13.83	1.50	50	21.37	142	1.70	6.49	-56.0	11.7	N/A	N/A	Clear
MW-99	2	10/24/2017	9.69	22.74	20.24	9:48	9.78	2.00	100	19.19	178	1.13	6.32	55.3	8.52	N/A	N/A	Clear
IW-101	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
IW-115	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-172	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-173	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-174	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-175	2	10/24/2017	7.05	14.51	14.00	16:40	13 (dry)	1.00	150	21.74	1589	1.01	11.29	-42.9	4.98	N/A	N/A	Clear
MW-176	2	10/24/2017	2.31	14.00	13.50	9:35	4.49	1.80	100	19.56	958	0.45	6.58	127.6	27.2	N/A	N/A	Clear
MW-177	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-178	2	10/25/2017	4.38	7.97	7.47	8:45	7.46 (dry)	0.80	75	24.21	281	2.50	7.19	78.4	2.32	N/A	N/A	Clear
MW-179	2	10/24/2017	7.61	12.79	12.29	8:15	12.11 (dry)	0.50	75	24.46	139	3.81	6.44	89.6	15.9	N/A	N/A	Turbid
MW-180	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-181	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-182	2	10/24/2017	15.70	31.09	26.09	15:05	15.74	1.00	100	17.79	779	0.21	5.68	85.4	9.6	N/A	N/A	Clear
MW-183	2	10/25/2017	11.31	18.59	16.09	9:51	13.56	1.75	75	18.69	207	0.81	6.25	33.0	3.18	N/A	N/A	Clear
MW-184	2	10/24/2017	9.25	23.55	18.55	10:57	10.07	1.25	100	19.61	141	0.34	6.18	13.6	20.7	N/A	N/A	Clear
MW-185	2	10/24/2017	14.72	29.28	24.28	15:20	14.74	0.70	100	23.90	246	0.61	6.16	60.6	5.86	N/A	N/A	Clear
MW-186	2	10/24/2017	14.12	27.80	22.80	10:40	14.45	1.10	100	17.75	777	0.26	6.00	53.8	0.51	N/A	N/A	Clear
MW-187	2	10/24/2017	20.20	30.25	27.25	12:00	20.31	1.20	100	19.23	620	0.15	5.99	96.0	4.71	N/A	N/A	Clear
MW-188	2	10/24/2017	22.10	34.58	29.60	13:05	22.16	1.40	100	18.44	759	0.20	6.15	97.0	9.51	N/A	N/A	Clear
MW-189	2	10/25/2017	26.16	40.85	35.85	12:25	26.18	1.20	100	21.27	997	0.28	5.87	-46.3	2.4	N/A	N/A	Clear
MW-190	2	10/25/2017	21.70	36.10	31.10	14:18	21.83	1.50	100	23.77	3518	3.13	12.24	-128.5	4.91	N/A	N/A	Clear
MW-191	2	10/25/2017	17.27	33.20	30.70	15:38	17.22	1.20	100	24.40	153	0.61	6.01	-24.7	14.9	N/A	N/A	Clear

TABLE 4
SUMMARY OF FINAL WELL GROUNDWATER FIELD PARAMETERS MEASUREMENTS (October 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Well Casing Diameter (in)	Date Sampled	Water Level prior to Purging (ft btoc)	Total Depth of Well Casing (ft)	Set Tubing Depth (ft)	Time Sampled	Water Level after Purging (ft btoc)	Purge Volume (Gallons)	Purge Rate (ml/min)	Temperature (°C)	Specific Conductivity (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Ferrous Iron (mg/L)	Persulfate (mg/L)	Color
MW-192	2	10/25/2017	15.78	30.19	27.69	17:00	15.80	1.30	100	24.33	189	0.31	5.17	-38.9	9.2	N/A	N/A	Clear
MW-194	2	10/23/2017	4.41	21.30	16.30	16:12	4.50	0.80	100	23.58	660	0.15	5.9	53.7	40.3	N/A	N/A	Clear
MW-195	2	10/23/2017	3.90	17.13	14.50	16:30	6.40	1.00	90	23.33	86	0.91	6.75	69.3	1.2	N/A	N/A	Clear
MW-196	2	10/24/2017	3.79	15.00	12.50	9:35	9.74	1.60	100	22.70	1859	0.25	6.93	-8.8	3.5	0.51	N/A	Clear
TMW-10	2	10/24/2017	4.93	15.19	12.70	14:50	6.70	3.10	200	21.59	904	0.18	6.33	55.1	2.98	0.08	N/A	Clear
TMW-11	2	10/23/2017	4.00	15.13	12.60	16:00	6.78	2.10	100	22.99	1510	0.07	7.07	-137.9	14.0	3.3	N/A	light gray tint
TMW-12	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TMW-14	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TMW-16	2	10/24/2017	13.23	28.00	23.00	10:58	13.28	0.80	100	18.07	2258	0.19	5.84	117.7	8.39	N/A	N/A	Clear
TMW-19	2	10/24/2017	25.77	43.00	38.00	9:40	26.11	1.60	100	18.05	694	0.21	6.51	-64.2	15.2	N/A	N/A	Clear
TMW-20	2	10/23/2017	3.90	17.90	14.00	17:20	4.40	2.00	100	22.62	1574	0.74	6.77	-79.8	4.16	N/A	N/A	Clear
TMW-21	2	10/24/2017	3.36	19.70	14.70	14:26	4.13	1.70	100	19.93	810	0.60	6.12	22.4	2.91	N/A	N/A	Clear
TMW-22	2	10/24/2017	4.35	19.30	15.80	16:50	8.49	1.60	100	19.88	932	1.35	6.33	-62.0	2.01	N/A	N/A	Clear
TMW-23	2	10/25/2017	4.85	20.00	17.50	10:47	6.26	0.80	100	19.18	990	1.82	6.64	-10.9	8.48	N/A	N/A	Clear
TMW-24	2	10/24/2017	4.01	19.50	16.00	12:50	4.29	1.40	100	21.91	830	0.15	5.95	94.1	5.81	N/A	N/A	Clear
TMW-25	2	10/25/2017	16.18	30.50	25.50	16:45	16.31	1.30	100	19.13	1049	0.13	5.96	134.2	13.0	N/A	N/A	Clear
TMW-26	2	10/24/2017	16.84	28.60	23.60	12:48	16.92	1.20	100	19.27	983	0.24	6.17	13.8	8.04	N/A	N/A	Clear
TMW-27	2	10/25/2017	11.28	26.40	21.40	15:35	11.46	1.40	100	20.35	308	0.22	5.65	115.8	5.98	N/A	N/A	Clear
TMW-29	2	10/23/2017	8.92	19.00	15.50	15:25	12.55	1.00	50	24.70	1161	1.43	6.76	-7.8	32.2	N/A	N/A	Clear
TMW-30	2	10/24/2017	13.95	28.80	23.80	16:58	18.41	1.40	65	17.54	909	0.32	6.93	-379.5	115	N/A	N/A	Clear

Notes:

ft btoc = Feet below top of casing
in = Inches
ORP = Oxidation reduction potential
DO = Dissolved oxygen
(°C) = Degrees Celcius
mV = Millivolts
NS = Well not sampled
mL/min = Milliliters per minute
mg/L = Milligrams per liter
NTUs = Nephelometric turbidity units
NM = Not measured
(µS/cm) = Microsiemens per centimeter

All wells gauged using electronic water level meter and purged using peristaltic pumps.
Tubing inlet depths based on estimated distance from total depth.

TABLE 5
SUMMARY OF VERTICAL HYDRAULIC GRADIENT
Whirlpool Facility - Fort Smith, Arkansas

Location/ Well Pairs	Middle of Screen Elevation[1] (ft)								Static Water Level Elevation (ft)								Vertical Hydraulic Gradient[2] (ft/ft)							
	4/13/2015	7/20/2015	10/5/2015	1/6/2016	5/2/2016	11/7/2016	4/25/2017	10/23/2017	4/13/2015	7/20/2015	10/5/2015	1/6/2016	5/2/2016	11/7/2016	4/25/2017	10/23/2017	4/13/2015	7/20/2015	10/5/2015	1/6/2016	5/2/2016	11/7/2016	4/25/2017	10/23/2017
Shallow Well MW-70 and MW-177																								
MW-177	462.00	462.00	462.00	462.00	462.00	462.00	462.00	462.00	466.94	469.09	465.34	469.97	469.00	465.19	461.78	NM								
MW-70	451.53	451.53	451.53	451.53	451.53	451.53	451.53	451.53	464.17	465.33	465.15	464.77	464.59	462.70	462.38	462.93								
MW-177/MW-70																	-0.26	-0.36	-0.02	-0.50	-0.42	-0.24	0.06	NM
Shallow Well MW-176 and MW46R[4]																								
MW-176	451.74	451.74	451.74	451.74	451.74	451.74	451.74	451.74	463.81	464.66	464.49	464.38	464.18	462.30	461.99	462.93								
MW-46R	446.69	446.69	446.69	446.69	446.69	446.69	446.69	446.69	462.85	464.88	464.67	464.40	464.21	462.34	462.03	462.55								
MW-176/MW-46R																	-0.19	0.04	0.04	0.004	0.005	0.01	0.01	-0.08
Shallow Well MW-175																								
MW-175	450.17	450.17	450.17	450.17	450.17	450.17	450.17	450.17	460.25	463.71	463.47	463.37	463.42	462.22	460.74	456.06								
Ave. of MW-46R & MW-56/56R	446.46	445.43	445.43	445.43	445.43	445.43	445.43	445.43	461.54	463.68	463.15	463.26	463.21	460.68	461.38	461.24								
MW-175/Ave. of MW-46R & MW-56/56R																	0.35	-0.007	-0.07	-0.02	-0.04	-0.32	0.14	1.09
Shallow Wells MW-173 and MW-174																								
MW-174	451.95	451.95	451.95	451.95	451.95	451.95	451.95	451.95	457.67	459.92	461.75	459.71	460.01	459.77	457.87	453.10								
MW-63/MW-63R	445.37	446.44	446.44	446.44	446.44	446.44	446.44	446.44	459.36	462.29	462.08	460.93	460.79	460.05	458.56	459.92								
MW-174/MW-63																	0.26	0.43	0.06	0.22	0.14	0.05	0.13	1.24
Shallow Wells MW-178, MW-179 and MW-180																								
MW-178	467.90	467.90	467.90	467.90	467.90	467.90	467.90	467.90	472.29	471.94	471.48	471.93	472.05	470.38	471.50	471.31								
MW-83	450.98	450.98	450.98	450.98	450.98	450.98	450.98	450.98	464.02	465.25	465.01	464.72	464.47	462.64	462.32	462.86								
MW-178/MW-83																	-0.49	-0.40	-0.38	-0.43	-0.45	-0.46	-0.54	-0.50

Notes:
ft = Feet
[1] MW-56R and MW-63R were installed in June 2015
[2] Negative gradient indicates downward gradient
[3] Reference elevations used in vertical gradient calculations were changed from ground surface to top of casing for the First Quarter 2016 Annual Groundwater Monitoring Report.
[4] Static water level measurements for MWs 176 & 46R were taken on 10/24/2017 at approximately 8:30am and 10:00am, respectively, during well sampling activities.
NM = Measurement not completed

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	ITMW-1	ITMW-2	ITMW-5	ITMW-7	ITMW-9	ITMW-10	ITMW-16	ITMW-18	ITMW-18
Field Sample ID		ITMW-1-201710	ITMW-2-201710	ITMW-5-201710	ITMW-07-201710	ITMW-9-201710	ITMW-10-201710	ITMW-16-201710	ITMW-18-201710	FD-07-201710
VOC		60256510006	60256510005	60256510013	60256510011	60256510034	60256510031	60256510030	60256590006	60256590006
Sample Date		10/25/2017	10/25/2017	10/25/2017	10/25/2017	10/25/2017	10/25/2017	10/25/2017	10/26/2017	10/26/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments										Field Duplicate
Volatile Organic Compounds										
Acetone	12000	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	25.3 (1.9)	20.2 (1.9)
Benzene	5	U (0.060)	U (0.060)	0.10 J (0.060)	0.11 J (0.060)	0.65 J (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)
Bromoform	80	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.07)
Bromomethane	7	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	20.7 (0.16)	23.9 (0.16)
2-Butanone	4900	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	720	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
Carbon Tetrachloride	5	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)
Chlorobenzene	100	U (0.21)	U (0.21)	U (0.21)	2.2 (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
Chloroethane	12000	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Chloroform	80	U (0.14)	U (0.14)	0.50 J (0.14)	U (0.14)	0.31 J (0.14)	U (0.14)	U (0.14)	1.0 (0.14)	0.96 J (0.14)
Chloromethane	190	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	8.4 (0.080)	7.0 (0.080)
Dibromochloromethane	80	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
1,1-Dichloroethane	2.4	U (0.050)	U (0.050)	2.0 (0.050)	U (0.050)	4.6 (0.050)	1.0 (0.050)	U (0.050)	0.73 J (0.050)	0.74 J (0.050)
1,2-Dichloroethane	5	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	7	U (0.20)	U (0.20)	6.0 (0.20)	U (0.20)	7.4 (0.20)	1.2 (0.20)	U (0.20)	U (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	3.8 (0.080)	0.29 J (0.080)	38.2 (0.080)	7.5 (0.080)	60.8 (0.080)	13.3 (0.080)	U (0.080)	0.47 J (0.080)	0.50J (0.080)
trans-1,2-Dichloroethene	100	U (0.20)	U (0.20)	0.42 J (0.20)	U (0.20)	0.74 J (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
4-Methyl-2-pentanone	1000	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Methylene Chloride	5	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	1.1 (0.15)	0.93 (0.15)
1,1,2,2-Tetrachloroethane	0.066	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	0.35 J (0.15)	0.31 J (0.15)
Tetrachloroethene	5	U (0.10)	0.76 J (0.10)	1.4 (0.10)	U (0.10)	1.4 (0.10)	0.29 J (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	1000	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	0.28 J (0.17)	U (0.17)	U (0.17)	U (0.17)
1,1,1-Trichloroethane	200	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	0.18 J (0.11)	0.19 J (0.11)
1,1,2-Trichloroethane	5	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
Trichloroethene	5	8.9 (0.85)	0.34 J (0.85)	1470 (0.85)	23.4 (0.17)	797 (0.17)	72.9 (0.17)	U (0.17)	15.0 (0.17)	16.0 (0.17)
Vinyl Chloride	2	U (0.13)	U (0.13)	1.6 (0.13)	0.20 J (0.13)	1.7 (0.13)	0.82 J (0.13)	U (0.13)	U (0.13)	U (0.13)
Metals										
Iron	NE	NM	NM	NM	NM	37.2 J (50.0)	NM	NM	NM	NM
Manganese	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Gases										
Acetylene	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Methane	NE	NM	NM	NM	NM	29 (0.02)	NM	NM	NM	NM
Ethane	NE	NM	NM	NM	NM	0.12 (0.007)	NM	NM	NM	NM
Ethene	NE	NM	NM	NM	NM	U (0.005)	NM	NM	NM	NM
Hydrogen (H2) [nM][4*]	NE	NM	NM	NM	NM	1.6 (0.16)	NM	NM	NM	NM

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	ITMW-19	MW-22	MW-24	MW-25	MW-25	MW-27	MW-28	MW-38	MW-83
Field Sample ID		ITMW-19-201710	MW-22-201710	MW-24-201710	MW-25-201710	FD-08-201710	MW-27-201710	MW-28-201710	MW-38-201710	MW-83-201710
VOC		60256590012	60256510014	60256510033	60256590005	60256590007	60256510032	60256510017	60256590002	60256510016
Sample Date		10/26/2017	10/25/2017	10/25/2017	10/26/2017	10/26/2017	10/25/2017	10/25/2017	10/26/2017	10/25/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments						Field Duplicate				
Volatile Organic Compounds										
Acetone	12000	15.0 (1.9)	U (1.9)	30.4 (1.9)	116 (1.9)	122 (1.9)	U (1.9)	U (1.9)	U (1.9)	11.5 (1.9)
Benzene	5	U (0.060)	U (0.060)	U (0.060)	0.43 J (0.060)	0.45 J (0.060)	U (0.060)	U (0.060)	0.18 J (0.060)	U (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)	U (0.19)	2.5 (0.19)	2.5 (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)
Bromoform	80	0.80 J (0.070)	U (0.070)	15.0 (0.070)	0.97 J (0.070)	0.70 J (0.070)	U (0.070)	U (0.070)	U (0.070)	1.2 (0.070)
Bromomethane	7	0.45 J (0.16)	U (0.16)	2.2 J (0.16)	0.75 J (0.16)	1.1 J (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
2-Butanone	4900	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	720	U (0.12)	U (0.12)	U (0.12)	3.7 J (0.12)	3.9 J (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
Carbon Tetrachloride	5	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)
Chlorobenzene	100	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	0.36 J (0.21)	U (0.21)
Chloroethane	12000	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Chloroform	80	0.71 J (0.14)	U (0.14)	U (0.14)	49.6 (0.14)	49.8 (0.14)	U (0.14)	U (0.14)	0.29 J (0.14)	U (0.14)
Chloromethane	190	0.79 J (0.080)	U (0.080)	3.1 (0.080)	5.2 (0.080)	4.9 (0.080)	U (0.080)	U (0.080)	U (0.080)	2.6 (0.080)
Dibromochloromethane	80	U (0.21)	U (0.21)	0.70 J (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
1,1-Dichloroethane	2.4	U (0.050)	U (0.050)	U (0.050)	7.2 (0.050)	7.5 (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	5	U (0.12)	U (0.12)	U (0.12)	0.29 J (0.12)	0.33 J (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	7	U (0.20)	U (0.20)	U (0.20)	U (200)	U (200)	U (0.20)	U (0.20)	16.8 (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	0.52 J (0.080)	U (0.080)	U (0.080)	22900 (80.0)	20900 (80.0)	U (0.080)	U (0.080)	823 (4.0)	U (0.080)
trans-1,2-Dichloroethene	100	U (0.20)	U (0.20)	U (0.20)	436 J (200)	494 J (200)	U (0.20)	U (0.20)	6.1 (0.20)	U (0.20)
4-Methyl-2-pentanone	1000	U (0.42)	U (0.42)	U (0.42)	1.1 J (0.42)	1.2 J (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Methylene Chloride	5	U (0.15)	U (0.15)	U (0.15)	19.1 (0.15)	19.0 (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
1,1,2,2-Tetrachloroethane	0.066	U (0.15)	U (0.15)	U (0.15)	184 (0.15)	196 (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	5	0.27 J (0.10)	U (0.10)	U (0.10)	63.4 (0.10)	63.8 (0.10)	U (0.10)	U (0.10)	0.50 J (0.10)	U (0.10)
Toluene	1000	U (0.17)	U (0.17)	U (0.17)	9.5 (0.17)	9.2 (0.17)	U (0.17)	U (0.17)	0.27 J (0.17)	U (0.17)
1,1,1-Trichloroethane	200	U (0.11)	U (0.11)	U (0.11)	27.3 (0.11)	27.5 (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)
1,1,2-Trichloroethane	5	U (0.20)	U (0.20)	U (0.20)	4.5 (0.20)	4.3 (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
Trichloroethene	5	165 (0.17)	U (0.17)	20.9 (0.17)	97400 (170)	95900 (170)	0.41 J (0.17)	U (0.17)	2240 (8.5)	4.8 (0.17)
Vinyl Chloride	2	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)
Metals										
Iron	NE	NM	NM	NM	4810 (50.0)	NM	NM	NM	4370 (50.0)	NM
Manganese	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Gases										
Acetylene	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Methane	NE	NM	NM	NM	86 (0.02)	NM	NM	NM	26 (0.02)	NM
Ethane	NE	NM	NM	NM	18 (0.007)	NM	NM	NM	0.69 (0.007)	NM
Ethene	NE	NM	NM	NM	2.1 (0.005)	NM	NM	NM	22 (0.005)	NM
Hydrogen (H2) [nM][4*]	NE	NM	NM	NM	83 (1.3)	NM	NM	NM	1.4	NM

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-84	MW-86	MW-87	MW-89	MW-91	MW-93	MW-95	MW-178	MW-178
Field Sample ID		MW-84-201710	MW-86-201710	MW-87-201710	MW-89-201710	MW-91-201710	MW-93-201710	MW-95-201710	MW-178-201710	FD-06-201710
VOC		60256510015	60256590014	60256590011	60256590001	60256510018	60256590003	60256590004	60256510019	60256510020
Sample Date		10/25/2017	10/26/2017	10/26/2017	10/26/2017	10/25/2017	10/26/2017	10/26/2017	10/25/2017	10/25/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments										Field Duplicate
Volatile Organic Compounds										
Acetone	12000	16.0 (1.9)	32.7 (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	2.0 J (1.9)
Benzene	5	U (0.060)	0.35 J (0.060)	U (0.060)	U (0.060)	U (0.060)	0.14 J (0.060)	0.11 J (0.060)	0.14 J (0.060)	0.15 J (0.060)
Bromodichloromethane	80	U (0.19)	3.3 (0.19)	U (0.19)	U (0.19)	U (0.19)	U(0.19)	U (0.19)	U (0.19)	U (0.19)
Bromoform	80	8.4 (0.070)	7.1 (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)
Bromomethane	7	U (0.16)	0.50 J (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	0.55 J (0.16)	U (0.16)	U (0.16)
2-Butanone	4900	U (0.59)	3.9 J (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	720	U (0.12)	5.3 (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
Carbon Tetrachloride	5	U (0.18)	1.2 (0.18)	U (0.18)	U (0.18)	U (0.18)	0.36 J (0.18)	0.43 J (0.18)	U (0.18)	U (0.18)
Chlorobenzene	100	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
Chloroethane	12000	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Chloroform	80	0.20 J (0.14)	27.1 (0.14)	U (0.14)	U (0.14)	0.19 J (0.14)	4.1 (0.14)	5.4 (0.14)	U (0.14)	U (0.14)
Chloromethane	190	3.2 (0.080)	2.7 (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	0.12 J (0.080)	U (0.080)
Dibromochloromethane	80	0.38 J (0.21)	0.84 J (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
1,1-Dichloroethane	2.4	U (0.050)	4.4 (0.050)	1.6 (0.050)	U (0.050)	1.7 (0.050)	U (0.050)	0.45 J (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	5	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	7	U (0.20)	58.0 (0.20)	5.7 (0.20)	U (0.20)	4.8 (0.20)	26.0 (0.20)	47.3 (0.20)	U (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	U (0.080)	2210 (80.0)	36.4 (0.080)	0.48 J (0.080)	36.4 (0.080)	111 (0.080)	198 (0.080)	0.97 J (0.080)	0.96 J (0.080)
trans-1,2-Dichloroethene	100	U (0.20)	U (200)	0.89J (0.20)	U (0.20)	0.48 J (0.20)	5.3 (0.20)	4.2 (0.20)	U (0.20)	U (0.20)
4-Methyl-2-pentanone	1000	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Methylene Chloride	5	U (0.15)	5.4 (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	1.2 (0.15)	U (0.15)	U (0.15)
1,1,2,2-Tetrachloroethane	0.066	U (0.15)	116 (0.15)	U (0.15)	U (0.15)	U (0.15)	0.30 J (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	5	U (0.10)	49.7 (0.10)	6.1 (0.10)	U (0.10)	3.2 (0.10)	7.3 (0.10)	8.9 (0.10)	U (0.10)	U (0.10)
Toluene	1000	U (0.17)	3.8 (0.17)	U (0.42)	U (0.42)	U (0.42)	0.20 (0.17)	U (0.17)	U (0.17)	U (0.17)
1,1,1-Trichloroethane	200	U (0.11)	135 (0.11)	U (0.15)	U (0.15)	U (0.15)	0.23 J (0.11)	0.74 J (0.11)	U (0.11)	U (0.11)
1,1,2-Trichloroethane	5	U (0.20)	3.2 (0.20)	U (0.15)	U (0.15)	U (0.15)	1.1 (0.20)	1.9 (0.20)	U (0.20)	U (0.20)
Trichloroethene	5	0.98 J (0.17)	61300 (170)	486 (3.4)	11.3 (0.17)	534 (1.7)	16600 (34.0)	23900 (34.0)	3.9 (0.17)	3.6 (0.17)
Vinyl Chloride	2	U (0.13)	U (0.13)	U (0.13)	U (0.13)	0.27 J (0.13)	9.1 (0.13)	51.2 (0.13)	U (0.13)	U (0.13)
Metals										
Iron	NE	NM	848 (50.0)	122 (50.0)	239 (50.0)	NM	NM	72.6 (50.0)	NM	NM
Manganese	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Gases										
Acetylene	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Methane	NE	NM	50 (0.02)	1.1 (0.02)	5.4 (0.02)	NM	NM	4.6 (0.02)	NM	NM
Ethane	NE	NM	4.9 (0.007)	U (0.007)	U (0.007)	NM	NM	0.5 (0.007)	NM	NM
Ethene	NE	NM	0.82 (0.005)	0.10 (0.005)	0.66 (0.005)	NM	NM	0.25 (0.005)	NM	NM
Hydrogen (H2) [nM][4*]	NE	NM	200 (1.3)	1.4 (0.16)	2.1 (0.16)	NM	NM	1.7 (0.16)	NM	NM

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-179	ITMW-20	ITMW-21	MW-26	MW-29	MW-39R	MW-39R	MW-40R	MW-50R
Field Sample ID		MW-179-201710	ITMW-20-201710	ITMW-21-201710	MW-26-201710	MW-29-201710	MW-39R-201710	FD-05-201710	MW-40R-201710	MW-50R-201710
VOC		60256590010	60256510009	60256510010	60256510035	60256510012	60256510021	60256510022	60225365021	60256266010
Sample Date		10/26/2017	10/25/2017	10/25/2017	10/25/2017	10/25/2017	10/25/2017	10/25/2017	10/24/2017	10/23/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments								Field Duplicate		
Volatile Organic Compounds										
Acetone	12000	2.2 J (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)
Benzene	5	U (0.060)	U (0.060)	U (0.060)	U (0.060)	0.11 J (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)
Bromoform	80	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)
Bromomethane	7	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
2-Butanone	4900	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	720	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
Carbon Tetrachloride	5	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)
Chlorobenzene	100	U (0.21)	U (0.21)	U (0.21)	U (0.21)	4.5 (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
Chloroethane	12000	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Chloroform	80	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Chloromethane	190	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)
Dibromochloromethane	80	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
1,1-Dichloroethane	2.4	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	5	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	7	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	0.35 J (0.080)	U (0.080)	0.25 J (0.080)	U (0.080)	0.16 J (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)
trans-1,2-Dichloroethene	100	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
4-Methyl-2-pentanone	1000	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Methylene Chloride	5	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
1,1,2,2-Tetrachloroethane	0.066	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	5	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	1000	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
1,1,1-Trichloroethane	200	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)
1,1,2-Trichloroethane	5	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
Trichloroethene	5	10.7 (0.17)	U (0.17)	7.9 (0.17)	U (0.17)	0.19 J (0.17)	U (0.17)	U (0.17)	0.31 J (0.17)	0.26 J (0.17)
Vinyl Chloride	2	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)
Metals										
Iron	NE	NM	NM	NM	NM	NM	NM	NM	NM	919 (50.0)
Manganese	NE	NM	NM	NM	NM	NM	NM	NM	NM	17.3 (5.0)
Gases										
Acetylene	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Methane	NE	NM	NM	NM	NM	NM	NM	NM	NM	660 (0.02)
Ethane	NE	NM	NM	NM	NM	NM	NM	NM	NM	0.39 (0.007)
Ethene	NE	NM	NM	NM	NM	NM	NM	NM	NM	U (0.005)
Hydrogen (H2) [nM][4*]	NE	NM	NM	NM	NM	NM	NM	NM	NM	1.4 (0.16)

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-55R	MW-60R	MW-61R	MW-63R	MW-68	MW-96	MW-97	MW-98	MW-99
Field Sample ID		MW-55R-201710	MW-60R-201710	MW-61R-201710	MW-63R-201710	MW-68-201710	MW-96-201710	MW-97-201710	MW-98-201710	MW-99-201710
VOC		60256510007	60256365001	60256266011	60256266001	60256365006	60256510002	60256510003	60256365025	60256365024
Sample Date		10/25/2017	10/24/2017	10/25/2017	10/23/2017	10/24/2017	10/25/2017	10/25/2017	10/24/2017	10/24/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments										
Volatile Organic Compounds										
Acetone	12000	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	2.7 (1.9)	U (1.9)
Benzene	5	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)
Bromoform	80	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)
Bromomethane	7	U (0.16)	0.53 J (0.16)	U (0.16)	U (0.16)	0.28 J (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
2-Butanone	4900	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	720	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
Carbon Tetrachloride	5	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)
Chlorobenzene	100	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
Chloroethane	12000	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Chloroform	80	U (0.14)	U (0.14)	U (0.14)	0.15 J (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Chloromethane	190	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)
Dibromochloromethane	80	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
1,1-Dichloroethane	2.4	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	5	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	7	0.28 J (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	0.77 J (0.080)	U (0.080)	2.1 (0.080)	0.85 J (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)
trans-1,2-Dichloroethene	100	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
4-Methyl-2-pentanone	1000	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Methylene Chloride	5	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
1,1,2,2-Tetrachloroethane	0.066	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	5	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	1000	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
1,1,1-Trichloroethane	200	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)
1,1,2-Trichloroethane	5	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
Trichloroethene	5	10.9 (0.17)	0.83 J (0.17)	2.9 (0.17)	4.4 (0.17)	0.31 J (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
Vinyl Chloride	2	0.15 J (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)
Metals										
Iron	NE	NM	NM	12000 (50.0)	NM	NM	NM	NM	NM	NM
Manganese	NE	NM	NM	1120 (5.0)	NM	NM	NM	NM	NM	NM
Gases										
Acetylene	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Methane	NE	NM	NM	14000 (0.02)	NM	NM	NM	NM	NM	NM
Ethane	NE	NM	NM	0.71 (0.007)	NM	NM	NM	NM	NM	NM
Ethene	NE	NM	NM	0.16 (0.005)	NM	NM	NM	NM	NM	NM
Hydrogen (H2) [nM][4*]	NE	NM	NM	1.3 (0.16)	NM	NM	NM	NM	NM	NM

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-183	MW-184	MW-185	MW-186	MW-186	MW-187	MW-188	MW-189	MW-190
Field Sample ID		MW-183-201710	MW-184-201710	MW-185-201710	MW-186-201710	FD-04-201710	MW-187-201710	MW-188-201710	MW-189-201710	MW-190-201710
VOC		60256510004	60256365026	60256365013	60256365028	60256365029	60256365030	60256365031	60256510025	60256510026
Sample Date		10/25/2017	10/24/2017	10/24/2017	10/24/2017	10/24/2017	10/24/2017	10/24/2017	10/25/2017	10/25/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments						Field Duplicate				
Volatile Organic Compounds										
Acetone	12000	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	2.6 J (1.9)
Benzene	5	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)
Bromoform	80	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)
Bromomethane	7	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
2-Butanone	4900	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	720	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
Carbon Tetrachloride	5	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)
Chlorobenzene	100	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
Chloroethane	12000	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Chloroform	80	0.16 J (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Chloromethane	190	U (0.080)	U (0.080)	U (0.080)	0.17 J (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	0.13 J (0.080)
Dibromochloromethane	80	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
1,1-Dichloroethane	2.4	U (0.050)	U (0.050)	U (0.050)	1.1 (0.050)	1.1 (0.050)	U (0.050)	U (0.050)	1.8 (0.050)	U (0.050)
1,2-Dichloroethane	5	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	7	U (0.20)	U (0.20)	U (0.20)	0.55 J (0.20)	0.45 J (0.20)	U (0.20)	U (0.20)	1.5 (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	0.24 J (0.080)	U (0.080)	U (0.080)	4.1 (0.080)	3.8 (0.080)	0.73 J (0.080)	U (0.080)	9.5 (0.080)	U (0.080)
trans-1,2-Dichloroethene	100	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
4-Methyl-2-pentanone	1000	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Methylene Chloride	5	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
1,1,2,2-Tetrachloroethane	0.066	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	5	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	1000	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
1,1,1-Trichloroethane	200	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)
1,1,2-Trichloroethane	5	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
Trichloroethene	5	2.8 (0.17)	U (0.17)	12.7 (0.17)	7.8 (0.17)	7.8 (0.17)	0.65 J (0.17)	U (0.17)	195 (0.17)	0.94 J (0.17)
Vinyl Chloride	2	U (0.13)	U (0.13)	U (0.13)	0.14 J (0.13)	0.16 J (0.13)	U (0.13)	U (0.13)	0.40 J (0.13)	U (0.13)
Metals										
Iron	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Manganese	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Gases										
Acetylene	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Methane	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Ethane	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Ethene	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Hydrogen (H2) [nM][4*]	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-191	MW-192	MW-194	MW-195	MW-196	IW-73	IW-77	IW-78	MW-46R
Field Sample ID		MW-191-201710	MW-192-201710	MW-194-201710	MW-195-201710	MW-196-201710	IW-73-201710	IW-77-201710	IW-78-201710	MW-46R-201710
VOC		60256510024	60256510027	60256266002	60256266005	60256365023	60256365018	60256365022	60256510008	60256365015
Sample Date		10/25/2017	10/25/2017	10/23/2017	10/23/2017	10/24/2017	10/24/2017	10/24/2017	10/25/2017	10/24/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments										
Volatile Organic Compounds										
Acetone	12000	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	13.7 (1.9)	9.1 J (1.9)	U (1.9)
Benzene	5	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	0.10 J (0.060)	U (0.060)	U (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)
Bromoform	80	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	0.39 J (0.070)	1.8 (0.070)	U (0.070)
Bromomethane	7	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
2-Butanone	4900	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	720	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
Carbon Tetrachloride	5	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)
Chlorobenzene	100	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
Chloroethane	12000	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Chloroform	80	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	0.17 J (0.14)	U (0.14)	U (0.14)
Chloromethane	190	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	1.0 (0.080)	6.2 (0.080)	U (0.080)
Dibromochloromethane	80	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
1,1-Dichloroethane	2.4	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	5	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	7	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	0.39 J (0.20)	U (0.20)	U (0.20)	1.2 (0.20)
cis-1,2-Dichloroethene	70	U (0.080)	U (0.080)	1.1 (0.080)	U (0.080)	U (0.080)	3.3 (0.080)	2.9 (0.080)	0.16 J (0.080)	10.7 (0.080)
trans-1,2-Dichloroethene	100	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	0.49 J (0.20)	U (0.20)	0.32 J (0.20)
4-Methyl-2-pentanone	1000	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Methylene Chloride	5	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
1,1,2,2-Tetrachloroethane	0.066	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	5	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	1000	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
1,1,1-Trichloroethane	200	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)
1,1,2-Trichloroethane	5	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
Trichloroethene	5	U (0.17)	0.25 J (0.17)	15.4 (0.17)	U (0.17)	U (0.17)	126 (0.17)	161 (0.17)	7.0 (0.17)	408 (0.17)
Vinyl Chloride	2	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	0.51 J (0.13)
Metals										
Iron	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Manganese	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Gases										
Acetylene	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Methane	NE	NM	NM	NM	NM	NM	5.2 (0.02)	NM	NM	NM
Ethane	NE	NM	NM	NM	NM	NM	U (0.007)	NM	NM	NM
Ethene	NE	NM	NM	NM	NM	NM	U (0.005)	NM	NM	NM
Hydrogen (H2) [nM][4*]	NE	NM	NM	NM	NM	NM	1.5 (0.16)	NM	NM	NM

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-56R	MW-57R	MW-58R	MW-62R	MW-62R	MW-82	MW-82	MW-175	MW-176
Field Sample ID		MW-56R-201710	MW-57R-201710	MW-58R-201710	MW-62-201710	FD-02-201710	MW-82-201710	FD-03-201710	MW-175-201710	MW-176-201710
VOC		60256365009	60256365008	60256365017	60256510001	60256365007	60256365019	60256365020	60256365010	60256365014
Sample Date		10/24/2017	10/24/2017	10/24/2017	10/25/2017	10/24/2017	10/24/2017	10/24/2017	10/24/2017	10/24/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments						Field Duplicate		Field Duplicate		
Volatile Organic Compounds										
Acetone	12000	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	14.7 (1.9)	14.1 (1.9)	U (1.9)	U (1.9)
Benzene	5	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	0.18 J (0.060)	0.18 J (0.060)	0.12 J (0.060)	0.11 J (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)
Bromoform	80	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	1.0 (0.070)	1.1 (0.070)	U (0.070)	U (0.070)
Bromomethane	7	0.53 J (0.16)	0.37 J (0.16)	U (0.16)	U (0.16)	U (0.16)	0.76 J (0.16)	0.81 J (0.16)	0.38 J (0.16)	U (0.16)
2-Butanone	4900	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	3.2 J (0.59)	U (0.59)
Carbon Disulfide	720	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
Carbon Tetrachloride	5	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)
Chlorobenzene	100	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
Chloroethane	12000	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Chloroform	80	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Chloromethane	190	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	3.5 (0.080)	3.3 (0.080)	U (0.080)	U (0.080)
Dibromochloromethane	80	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
1,1-Dichloroethane	2.4	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	5	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	7	2.7 (0.20)	2.1 (0.20)	1.9 (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	3.3 (0.20)
cis-1,2-Dichloroethene	70	33.8 (0.080)	17.5 (0.080)	10.0 (0.080)	0.17 J (0.080)	U (0.080)	0.80 J (0.080)	0.80 J (0.080)	0.27 J (0.080)	187 (0.080)
trans-1,2-Dichloroethene	100	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	1.3 (0.20)
4-Methyl-2-pentanone	1000	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Methylene Chloride	5	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
1,1,2,2-Tetrachloroethane	0.066	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	5	U (0.10)	U (0.10)	0.13 J (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	1000	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
1,1,1-Trichloroethane	200	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)
1,1,2-Trichloroethane	5	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
Trichloroethene	5	815 (0.17)	441 (0.17)	360 (0.17)	0.38 J (0.17)	U (0.17)	34.3 (0.17)	34.1 (0.17)	72.2 (0.17)	281 (34.0)
Vinyl Chloride	2	U (0.13)	U (0.13)	0.65 J (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	0.29 J (0.13)
Metals										
Iron	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Manganese	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Gases										
Acetylene	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Methane	NE	NM	NM	NM	34 (0.02)	NM	NM	NM	NM	NM
Ethane	NE	NM	NM	NM	U (0.007)	NM	NM	NM	NM	NM
Ethene	NE	NM	NM	NM	0.44 (0.005)	NM	NM	NM	NM	NM
Hydrogen (H2) [nM][4*]	NE	NM	NM	NM	1.3 (0.16)	NM	NM	NM	NM	NM

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-182	RW-69	TMW-10	TMW-11	TMW-16	TMW-19	TMW-20	TMW-20	TMW-21
Field Sample ID		MW-182-201710	RW-69-201710	TMW-10-201710	TMW-11-201710	TMW-16-201710	TMW-19-201710	TMW-20-201710	FD-01-201710	TMW-21-201717
VOC		60256365004	60256365016	60256365032	60256266009	60256365002	60256365027	60256266006	60256266007	60256365011
Sample Date		10/24/2017	10/24/2017	10/24/2017	10/23/2017	10/24/2017	10/24/2017	10/23/2017	10/23/2017	10/24/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments									Field Duplicate	
Volatile Organic Compounds										
Acetone	12000	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)
Benzene	5	0.15 J (0.060)	U (0.060)	U (0.060)	0.11 J (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)
Bromoform	80	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)
Bromomethane	7	0.38 J (0.16)	U (0.16)	U (0.16)	U (0.16)	0.69 J (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
2-Butanone	4900	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	720	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
Carbon Tetrachloride	5	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)
Chlorobenzene	100	3.2 (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
Chloroethane	12000	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Chloroform	80	U (0.14)	U (0.14)	U (0.14)	U (0.14)	1.5 (0.14)	0.31 J (0.14)	U (0.14)	U (0.14)	U (0.14)
Chloromethane	190	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)
Dibromochloromethane	80	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
1,1-Dichloroethane	2.4	U (0.050)	U (0.050)	U (0.050)	U (0.050)	0.39 J (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	5	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	7	U (0.20)	0.74 J (0.20)	0.22 J (0.20)	U (0.20)	1.6 (0.20)	U (0.20)	U (0.20)	U (0.20)	1.3 (0.20)
cis-1,2-Dichloroethene	70	5.7 (0.080)	5.2 (0.080)	4.5 (0.080)	1.7 (0.080)	10.4 (0.080)	U (0.080)	U (0.080)	U (0.080)	9.2 (0.080)
trans-1,2-Dichloroethene	100	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
4-Methyl-2-pentanone	1000	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Methylene Chloride	5	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
1,1,2,2-Tetrachloroethane	0.066	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	5	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	1000	U (0.17)	U (0.17)	U (0.17)	0.47 J (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
1,1,1-Trichloroethane	200	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)
1,1,2-Trichloroethane	5	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
Trichloroethene	5	92.2 (0.17)	159 (0.17)	89.5 (0.17)	0.62 J (0.17)	956 (1.7)	U (0.17)	U (0.17)	U (0.17)	461 (0.17)
Vinyl Chloride	2	U (0.13)	0.21 J (0.13)	0.91 J (0.13)	0.70 J (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)
Metals										
Iron	NE	NM	276 (50.0)	276 (50.0)	NM	NM	NM	NM	NM	NM
Manganese	NE	NM	NM	37.8 (5.0)	NM	NM	NM	NM	NM	NM
Gases										
Acetylene	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Methane	NE	NM	21 (0.02)	410 (0.02)	16000 (0.02)	NM	NM	NM	NM	NM
Ethane	NE	NM	U (0.007)	U (0.007)	0.48 (0.007)	NM	NM	NM	NM	NM
Ethene	NE	NM	0.27 (0.005)	0.54 (0.005)	1.4 (0.005)	NM	NM	NM	NM	NM
Hydrogen (H2) [nM][4*]	NE	NM	1.7 (0.16)	1.9 (0.16)	1.7 (0.16)	NM	NM	NM	NM	NM

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	TMW-22	TMW-23	TMW-24	TMW-25	TMW-26	TMW-27	TMW-29	TMW-30
Field Sample ID		TMW-22-201710	TMW-23-201710	TMW-24-201710	TMW-25-201710	TMW-26-201410	TMW-27-201710	TMW-29-201710	TMW-30-201710
VOC		60256365033	60256510023	60256365012	60256510029	60256365003	60256510028	60256266003	60256365005
Sample Date		10/24/2017	10/25/2017	10/24/2017	10/25/2017	10/24/2017	10/25/2017	10/24/2017	10/24/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments									
Volatile Organic Compounds									
Acetone	12000	149 (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)
Benzene	5	U (0.060)	U (0.060)	U (0.060)	0.10 J (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)
Bromoform	80	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)
Bromomethane	7	U (0.16)	U (0.16)	0.21 J (0.16)	U (0.16)	0.75J (0.16)	U (0.16)	U (0.16)	1.3 J (0.16)
2-Butanone	4900	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	720	1.2 J (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	1.0 J (0.12)
Carbon Tetrachloride	5	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)
Chlorobenzene	100	U (0.21)	U (0.21)	U (0.21)	2.3 (0.21)	U(0.21)	U (0.21)	U (0.21)	U (0.21)
Chloroethane	12000	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Chloroform	80	U (0.14)	U (0.14)	U (0.14)	0.28 J (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Chloromethane	190	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	0.16 J (0.080)	U (0.080)
Dibromochloromethane	80	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
1,1-Dichloroethane	2.4	U (0.050)	U (0.050)	U (0.050)	U (0.050)	0.22J (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	5	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	7	0.87 J (0.20)	U (0.20)	1.4 (0.20)	0.33 J (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	9.8 (0.080)	0.89 J (0.080)	8.1 (0.080)	11.2 (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)
trans-1,2-Dichloroethene	100	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
4-Methyl-2-pentanone	1000	1.3 J (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Methylene Chloride	5	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
1,1,2,2-Tetrachloroethane	0.066	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	5	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	1000	U (0.17)	U (0.17)	0.27 J (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
1,1,1-Trichloroethane	200	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)
1,1,2-Trichloroethane	5	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
Trichloroethene	5	486 (0.17)	62.2 (0.17)	385 (0.17)	245 (0.17)	36.3 (0.17)	U (0.17)	U (0.17)	0.55 J (0.17)
Vinyl Chloride	2	U (0.13)	U (0.13)	U (0.13)	0.41 J (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)
Metals									
Iron	NE	NM	NM	NM	NM	NM	NM	NM	NM
Manganese	NE	NM	NM	NM	NM	NM	NM	NM	NM
Gases									
Acetylene	NE	NM	NM	NM	NM	NM	NM	NM	NM
Methane	NE	NM	NM	NM	NM	NM	NM	NM	NM
Ethane	NE	NM	NM	NM	NM	NM	NM	NM	NM
Ethene	NE	NM	NM	NM	NM	NM	NM	NM	NM
Hydrogen (H2) [nM][4*]	NE	NM	NM	NM	NM	NM	NM	NM	NM

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	ITMW-1	ITMW-2	ITMW-5	ITMW-7	ITMW-9	ITMW-10	ITMW-16	ITMW-18	ITMW-18
Field Sample ID		ITMW-1-201710	ITMW-2-201710	ITMW-5-201710	ITMW-07-201710	ITMW-9-201710	ITMW-10-201710	ITMW-16-201710	ITMW-18-201710	FD-07-201710
VOC		60256510006	60256510005	60256510013	60256510011	60256510034	60256510031	60256510030	60256590006	60256590006
Sample Date		10/25/2017	10/25/2017	10/25/2017	10/25/2017	10/25/2017	10/25/2017	10/25/2017	10/26/2017	10/26/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments										Field Duplicate
Monitored Natural Attenuation Parameters										
Total Alkalinity	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Ammonia	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Bicarbonate Alkalinity	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Organic Carbon (total)	NE	NM	NM	NM	NM	2800 B (1000)	NM	NM	NM	NM
Chloride	NE	NM	NM	NM	NM	74800 (10000)	NM	NM	NM	NM
Nitrogen	NE	NM	NM	NM	NM	3700 J (100)	NM	NM	NM	NM
Nitrogen, Nitrate (As N)	NE	NM	NM	NM	NM	3400 (100)	NM	NM	NM	NM
Nitrogen, Nitrite	NE	NM	NM	NM	NM	270 J (100)	NM	NM	NM	NM
Sulfide (total)	NE	NM	NM	NM	NM	U (50)	NM	NM	NM	NM
Sulfate	NE	NM	NM	NM	NM	33500 (10000)	NM	NM	NM	NM
Molecular Analyses										
BAV1 Vinyl Chloride Reductase [cells/mL]	NE	NM	NM	NM	NM	U (0.7)	NM	NM	NM	NM
Dehalocaccoides (DHC) [cells/mL]	NE	NM	NM	NM	NM	U (0.7)	NM	NM	NM	NM
tceA Reductase [cells/mL]	NE	NM	NM	NM	NM	U (0.7)	NM	NM	NM	NM
Vinyl Chloride Reductase (vrcA) [cells/mL]	NE	NM	NM	NM	NM	U (0.7)	NM	NM	NM	NM

Notes:

1 All concentrations are presented in µg/L except

2 Only compounds with at least one detection are shown.

3 Concentrations that exceed the Remedial Action Levels per ADEQ RADD Issued Dec 2013 are double underlined.

U = Not detected
J = Estimated concentration
B = Analyte was detected in the associated
( ) = Method detection limit for VOCs; reporting
RADD = Remedial action decision document
ADEQ = Arkansas Department of Environmental Quality
VOC = Volatile organic compounds
µg/L = Micrograms per Liter
mL = Milliliters

Onsite Wells
Offsite Wells
Plume Boundary Wells

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	ITMW-19	MW-22	MW-24	MW-25	MW-25	MW-27	MW-28	MW-38	MW-83
Field Sample ID		ITMW-19-201710	MW-22-201710	MW-24-201710	MW-25-201710	FD-08-201710	MW-27-201710	MW-28-201710	MW-38-201710	MW-83-201710
VOC		60256590012	60256510014	60256510033	60256590005	60256590007	60256510032	60256510017	60256590002	60256510016
Sample Date		10/26/2017	10/25/2017	10/25/2017	10/26/2017	10/26/2017	10/25/2017	10/25/2017	10/26/2017	10/25/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments						Field Duplicate				
Monitored Natural Attenuation Parameters										
Total Alkalinity	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Ammonia	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Bicarbonate Alkalinity	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Organic Carbon (total)	NE	NM	NM	NM	2400 B (1000)	NM	NM	NM	1700 B (1000)	NM
Chloride	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Nitrogen	NE	NM	NM	NM	U (100)	NM	NM	NM	U (100)	NM
Nitrogen, Nitrate (As N)	NE	NM	NM	NM	U (100)	NM	NM	NM	U (100)	NM
Nitrogen, Nitrite	NE	NM	NM	NM	U (100)	NM	NM	NM	U (100)	NM
Sulfide (total)	NE	NM	NM	NM	U (50)	NM	NM	NM	U (50)	NM
Sulfate	NE	NM	NM	NM	652000 (50000)	NM	NM	NM	28200 (2000)	NM
Molecular Analyses										
BAV1 Vinyl Chloride Reductase [cells/mL]	NE	NM	NM	NM	U (0.8)	NM	NM	NM	192 (0.5)	NM
Dehalocaccoides (DHC) [cells/mL]	NE	NM	NM	NM	U (0.8)	NM	NM	NM	47.9 (0.5)	NM
tceA Reductase [cells/mL]	NE	NM	NM	NM	U (0.8)	NM	NM	NM	U (0.5)	NM
Vinyl Chloride Reductase (vrcA) [cells/mL]	NE	NM	NM	NM	U (0.8)	NM	NM	NM	U (0.5)	NM

Notes:

1 All concentrations are presented in µg/L except

2 Only compounds with at least one detection are shown.

3 Concentrations that exceed the Remedial Action Levels per ADEQ RADD Issued Dec 2013 are double underlined.

U = Not detected
J = Estimated concentration
B = Analyte was detected in the associated
( ) = Method detection limit for VOCs; reporting
RADD = Remedial action decision document
ADEQ = Arkansas Department of Environmental Quality
VOC = Volatile organic compounds
µg/L = Micrograms per Liter
mL = Milliliters

Onsite Wells
Offsite Wells
Plume Boundary Wells

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-84	MW-86	MW-87	MW-89	MW-91	MW-93	MW-95	MW-178	MW-178
Field Sample ID		MW-84-201710	MW-86-201710	MW-87-201710	MW-89-201710	MW-91-201710	MW-93-201710	MW-95-201710	MW-178-201710	FD-06-201710
VOC		60256510015	60256590014	60256590011	60256590001	60256510018	60256590003	60256590004	60256510019	60256510020
Sample Date		10/25/2017	10/26/2017	10/26/2017	10/26/2017	10/25/2017	10/26/2017	10/26/2017	10/25/2017	10/25/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments										Field Duplicate
Monitored Natural Attenuation Parameters										
Total Alkalinity	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Ammonia	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Bicarbonate Alkalinity	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Organic Carbon (total)	NE	NM	3700 B (1000)	650 U (1000)	1800 B (1000)	NM	NM	350 U (1000)	NM	NM
Chloride	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Nitrogen	NE	NM	440 (100)	2800 (100)	105000 (5000)	NM	NM	1000 (100)	NM	NM
Nitrogen, Nitrate (As N)	NE	NM	440 (100)	2800 (100)	104000 (5000)	NM	NM	1000 J (100)	NM	NM
Nitrogen, Nitrite	NE	NM	U (100)	U (100)	U (5000)	NM	NM	UJ (100)	NM	NM
Sulfide (total)	NE	NM	U (50)	U (50)	U (50)	NM	NM	U (50)	NM	NM
Sulfate	NE	NM	1660000 (200000)	12400 (1000)	4200 (1000)	NM	NM	3000 (1000)	NM	NM
Molecular Analyses										
BAV1 Vinyl Chloride Reductase [cells/mL]	NE	NM	U (0.5)	U (0.5)	U (0.5)	NM	NM	U (0.5)	NM	NM
Dehalococcoides (DHC) [cells/mL]	NE	NM	U (0.5)	U (0.5)	U (0.5)	NM	NM	U (0.5)	NM	NM
tceA Reductase [cells/mL]	NE	NM	U (0.5)	U (0.5)	U (0.5)	NM	NM	U (0.5)	NM	NM
Vinyl Chloride Reductase (vrcA) [cells/mL]	NE	NM	U (0.5)	U (0.5)	U (0.5)	NM	NM	U (0.5)	NM	NM

Notes:

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Onsite Wells
Offsite Wells
Plume Boundary Wells

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-179	ITMW-20	ITMW-21	MW-26	MW-29	MW-39R	MW-39R	MW-40R	MW-50R
Field Sample ID		MW-179-201710	ITMW-20-201710	ITMW-21-201710	MW-26-201710	MW-29-201710	MW-39R-201710	FD-05-201710	MW-40R-201710	MW-50R-201710
VOC		60256590010	60256510009	60256510010	60256510035	60256510012	60256510021	60256510022	60225365021	60256266010
Sample Date		10/26/2017	10/25/2017	10/25/2017	10/25/2017	10/25/2017	10/25/2017	10/25/2017	10/24/2017	10/23/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments								Field Duplicate		
Monitored Natural Attenuation Parameters										
Total Alkalinity	NE	NM	NM	NM	NM	NM	NM	NM	NM	250000 (20000)
Ammonia	NE	NM	NM	NM	NM	NM	NM	NM	NM	U (100)
Bicarbonate Alkalinity	NE	NM	NM	NM	NM	NM	NM	NM	NM	250000 (20000)
Organic Carbon (total)	NE	NM	NM	NM	NM	NM	NM	NM	NM	330 J (1000)
Chloride	NE	NM	NM	NM	NM	NM	NM	NM	NM	224000 (20000)
Nitrogen	NE	NM	NM	NM	NM	NM	NM	NM	NM	U (100)
Nitrogen, Nitrate (As N)	NE	NM	NM	NM	NM	NM	NM	NM	NM	U (100)
Nitrogen, Nitrite	NE	NM	NM	NM	NM	NM	NM	NM	NM	U (100)
Sulfide (total)	NE	NM	NM	NM	NM	NM	NM	NM	NM	7 J (50)
Sulfate	NE	NM	NM	NM	NM	NM	NM	NM	NM	17100 (1000)
Molecular Analyses										
BAV1 Vinyl Chloride Reductase [cells/mL]	NE	NM	NM	NM	NM	NM	NM	NM	NM	U (1)
Dehalococcoides (DHC) [cells/mL]	NE	NM	NM	NM	NM	NM	NM	NM	NM	U (1)
tceA Reductase [cells/mL]	NE	NM	NM	NM	NM	NM	NM	NM	NM	U (1)
Vinyl Chloride Reductase (vrcA) [cells/mL]	NE	NM	NM	NM	NM	NM	NM	NM	NM	U (1)

Notes:

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Onsite Wells
Offsite Wells
Plume Boundary Wells

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-55R	MW-60R	MW-61R	MW-63R	MW-68	MW-96	MW-97	MW-98	MW-99
Field Sample ID		MW-55R-201710	MW-60R-201710	MW-61R-201710	MW-63R-201710	MW-68-201710	MW-96-201710	MW-97-201710	MW-98-201710	MW-99-201710
VOC		60256510007	60256365001	60256266011	60256266001	60256365006	60256510002	60256510003	60256365025	60256365024
Sample Date		10/25/2017	10/24/2017	10/25/2017	10/23/2017	10/24/2017	10/25/2017	10/25/2017	10/24/2017	10/24/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments										
Monitored Natural Attenuation Parameters										
Total Alkalinity	NE	NM	NM	411000 (20000)	NM	NM	NM	NM	NM	NM
Ammonia	NE	NM	NM	870 (100)	NM	NM	NM	NM	NM	NM
Bicarbonate Alkalinity	NE	NM	NM	411000 (20000)	NM	NM	NM	NM	NM	NM
Organic Carbon (total)	NE	NM	NM	1200 (1000)	NM	NM	NM	NM	NM	NM
Chloride	NE	NM	NM	96500 (10000)	NM	NM	NM	NM	NM	NM
Nitrogen	NE	NM	NM	U (100)	NM	NM	NM	NM	NM	NM
Nitrogen, Nitrate (As N)	NE	NM	NM	U (100)	NM	NM	NM	NM	NM	NM
Nitrogen, Nitrite	NE	NM	NM	UJ (100)	NM	NM	NM	NM	NM	NM
Sulfide (total)	NE	NM	NM	21 J (50)	NM	NM	NM	NM	NM	NM
Sulfate	NE	NM	NM	8900 (1000)	NM	NM	NM	NM	NM	NM
Molecular Analyses										
BAV1 Vinyl Chloride Reductase [cells/mL]	NE	NM	NM	U (1.1)	NM	NM	NM	NM	NM	NM
Dehalococcoides (DHC) [cells/mL]	NE	NM	NM	U (1.1)	NM	NM	NM	NM	NM	NM
tceA Reductase [cells/mL]	NE	NM	NM	U (1.1)	NM	NM	NM	NM	NM	NM
Vinyl Chloride Reductase (vrcA) [cells/mL]	NE	NM	NM	U (1.1)	NM	NM	NM	NM	NM	NM

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Onsite Wells
Offsite Wells
Plume Boundary Wells

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-183	MW-184	MW-185	MW-186	MW-186	MW-187	MW-188	MW-189	MW-190
Field Sample ID		MW-183-201710	MW-184-201710	MW-185-201710	MW-186-201710	FD-04-201710	MW-187-201710	MW-188-201710	MW-189-201710	MW-190-201710
VOC		60256510004	60256365026	60256365013	60256365028	60256365029	60256365030	60256365031	60256510025	60256510026
Sample Date		10/25/2017	10/24/2017	10/24/2017	10/24/2017	10/24/2017	10/24/2017	10/24/2017	10/25/2017	10/25/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments						Field Duplicate				
Monitored Natural Attenuation Parameters										
Total Alkalinity	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Ammonia	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Bicarbonate Alkalinity	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Organic Carbon (total)	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Chloride	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Nitrogen	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Nitrogen, Nitrate (As N)	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Nitrogen, Nitrite	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Sulfide (total)	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Sulfate	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Molecular Analyses										
BAV1 Vinyl Chloride Reductase [cells/mL]	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Dehalococcoides (DHC) [cells/mL]	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
tceA Reductase [cells/mL]	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Vinyl Chloride Reductase (vrcA) [cells/mL]	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM

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Onsite Wells
Offsite Wells
Plume Boundary Wells

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-191	MW-192	MW-194	MW-195	MW-196	IW-73	IW-77	IW-78	MW-46R
Field Sample ID		MW-191-201710	MW-192-201710	MW-194-201710	MW-195-201710	MW-196-201710	IW-73-201710	IW-77-201710	IW-78-201710	MW-46R-201710
VOC		60256510024	60256510027	60256266002	60256266005	60256365023	60256365018	60256365022	60256510008	60256365015
Sample Date		10/25/2017	10/25/2017	10/23/2017	10/23/2017	10/24/2017	10/24/2017	10/24/2017	10/25/2017	10/24/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments										
Monitored Natural Attenuation Parameters										
Total Alkalinity	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Ammonia	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Bicarbonate Alkalinity	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Organic Carbon (total)	NE	NM	NM	NM	NM	NM	280 J (1000)	NM	NM	NM
Chloride	NE	NM	NM	NM	NM	NM	284000 (20000)	NM	NM	NM
Nitrogen	NE	NM	NM	NM	NM	NM	U (100)	NM	NM	NM
Nitrogen, Nitrate (As N)	NE	NM	NM	NM	NM	NM	U (100)	NM	NM	NM
Nitrogen, Nitrite	NE	NM	NM	NM	NM	NM	U (100)	NM	NM	NM
Sulfide (total)	NE	NM	NM	NM	NM	NM	U (50)	NM	NM	NM
Sulfate	NE	NM	NM	NM	NM	NM	14400 (1000)	NM	NM	NM
Molecular Analyses										
BAV1 Vinyl Chloride Reductase [cells/mL]	NE	NM	NM	NM	NM	NM	U (1)	NM	NM	NM
Dehalococcoides (DHC) [cells/mL]	NE	NM	NM	NM	NM	NM	2.3 (1)	NM	NM	NM
tceA Reductase [cells/mL]	NE	NM	NM	NM	NM	NM	U (1)	NM	NM	NM
Vinyl Chloride Reductase (vrcA) [cells/mL]	NE	NM	NM	NM	NM	NM	U (1)	NM	NM	NM

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Onsite Wells
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Plume Boundary Wells

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-56R	MW-57R	MW-58R	MW-62R	MW-62R	MW-82	MW-82	MW-175	MW-176
Field Sample ID		MW-56R-201710	MW-57R-201710	MW-58R-201710	MW-62-201710	FD-02-201710	MW-82-201710	FD-03-201710	MW-175-201710	MW-176-201710
VOC		60256365009	60256365008	60256365017	60256510001	60256365007	60256365019	60256365020	60256365010	60256365014
Sample Date		10/24/2017	10/24/2017	10/24/2017	10/25/2017	10/24/2017	10/24/2017	10/24/2017	10/24/2017	10/24/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments						Field Duplicate		Field Duplicate		
Monitored Natural Attenuation Parameters										
Total Alkalinity	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Ammonia	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Bicarbonate Alkalinity	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Organic Carbon (total)	NE	NM	NM	160 J (1000)	NM	NM	NM	NM	NM	NM
Chloride	NE	NM	NM	235000 (20000)	NM	NM	NM	NM	NM	NM
Nitrogen	NE	NM	NM	U (100)	NM	NM	NM	NM	NM	NM
Nitrogen, Nitrate (As N)	NE	NM	NM	U (100)	NM	NM	NM	NM	NM	NM
Nitrogen, Nitrite	NE	NM	NM	U (100)	NM	NM	NM	NM	NM	NM
Sulfide (total)	NE	NM	NM	U (50)	NM	NM	NM	NM	NM	NM
Sulfate	NE	NM	NM	1400 (1000)	NM	NM	NM	NM	NM	NM
Molecular Analyses										
BAV1 Vinyl Chloride Reductase [cells/mL]	NE	NM	NM	U (0.5)	NM	NM	NM	NM	NM	NM
Dehalococcoides (DHC) [cells/mL]	NE	NM	NM	U (0.5)	NM	NM	NM	NM	NM	NM
tceA Reductase [cells/mL]	NE	NM	NM	U (0.5)	NM	NM	NM	NM	NM	NM
Vinyl Chloride Reductase (vrcA) [cells/mL]	NE	NM	NM	U (0.5)	NM	NM	NM	NM	NM	NM

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Onsite Wells
Offsite Wells
Plume Boundary Wells

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-182	RW-69	TMW-10	TMW-11	TMW-16	TMW-19	TMW-20	TMW-20	TMW-21
Field Sample ID		MW-182-201710	RW-69-201710	TMW-10-201710	TMW-11-201710	TMW-16-201710	TMW-19-201710	TMW-20-201710	FD-01-201710	TMW-21-201717
VOC		60256365004	60256365016	60256365032	60256266009	60256365002	60256365027	60256266006	60256266007	60256365011
Sample Date		10/24/2017	10/24/2017	10/24/2017	10/23/2017	10/24/2017	10/24/2017	10/23/2017	10/23/2017	10/24/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments									Field Duplicate	
Monitored Natural Attenuation Parameters										
Total Alkalinity	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Ammonia	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Bicarbonate Alkalinity	NE	NM	NM	NM	NM	NM	NM	NM	NM	NM
Organic Carbon (total)	NE	NM	230 J (1000)	260 J (1000)	NM	NM	NM	NM	NM	NM
Chloride	NE	NM	272000 (20000)	167000 (10000)	NM	NM	NM	NM	NM	NM
Nitrogen	NE	NM	U (100)	U (100)	NM	NM	NM	NM	NM	NM
Nitrogen, Nitrate (As N)	NE	NM	U (100)	U (100)	NM	NM	NM	NM	NM	NM
Nitrogen, Nitrite	NE	NM	U (100)	U (100)	NM	NM	NM	NM	NM	NM
Sulfide (total)	NE	NM	U (50)	U (50)	NM	NM	NM	NM	NM	NM
Sulfate	NE	NM	1700 (1000)	2000 (1000)	NM	NM	NM	NM	NM	NM
Molecular Analyses										
BAV1 Vinyl Chloride Reductase [cells/mL]	NE	NM	U (0.5)	U (0.6)	U (1)	NM	NM	NM	NM	NM
Dehalococcoides (DHC) [cells/mL]	NE	NM	0.7 (0.5)	555 (0.6)	100 (1)	NM	NM	NM	NM	NM
tceA Reductase [cells/mL]	NE	NM	U (0.5)	537 (0.6)	396 (1)	NM	NM	NM	NM	NM
Vinyl Chloride Reductase (vrcA) [cells/mL]	NE	NM	0.1 J (0.5)	786 (0.6)	263 (1)	NM	NM	NM	NM	NM

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Onsite Wells
Offsite Wells
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TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(OCTOBER 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	TMW-22	TMW-23	TMW-24	TMW-25	TMW-26	TMW-27	TMW-29	TMW-30
Field Sample ID		TMW-22-201710	TMW-23-201710	TMW-24-201710	TMW-25-201710	TMW-26-201410	TMW-27-201710	TMW-29-201710	TMW-30-201710
VOC		60256365033	60256510023	60256365012	60256510029	60256365003	60256510028	60256266003	60256365005
Sample Date		10/24/2017	10/25/2017	10/24/2017	10/25/2017	10/24/2017	10/25/2017	10/24/2017	10/24/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments									
Monitored Natural Attenuation Parameters									
Total Alkalinity	NE	NM	NM	NM	NM	NM	NM	NM	NM
Ammonia	NE	NM	NM	NM	NM	NM	NM	NM	NM
Bicarbonate Alkalinity	NE	NM	NM	NM	NM	NM	NM	NM	NM
Organic Carbon (total)	NE	NM	NM	NM	NM	NM	NM	NM	NM
Chloride	NE	NM	NM	NM	NM	NM	NM	NM	NM
Nitrogen	NE	NM	NM	NM	NM	NM	NM	NM	NM
Nitrogen, Nitrate (As N)	NE	NM	NM	NM	NM	NM	NM	NM	NM
Nitrogen, Nitrite	NE	NM	NM	NM	NM	NM	NM	NM	NM
Sulfide (total)	NE	NM	NM	NM	NM	NM	NM	NM	NM
Sulfate	NE	NM	NM	NM	NM	NM	NM	NM	NM
Molecular Analyses									
BAV1 Vinyl Chloride Reductase [cells/mL]	NE	NM	NM	NM	NM	NM	NM	NM	NM
Dehalococcoides (DHC) [cells/mL]	NE	NM	NM	NM	NM	NM	NM	NM	NM
tceA Reductase [cells/mL]	NE	NM	NM	NM	NM	NM	NM	NM	NM
Vinyl Chloride Reductase (vrcA) [cells/mL]	NE	NM	NM	NM	NM	NM	NM	NM	NM

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Onsite Wells
Offsite Wells
Plume Boundary Wells

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-1	ITMW-1-19891101	11/1/1989	< ND		< ND
ITMW-1	ITMW-1-19900101	1/1/1990	< ND		< ND
ITMW-1	ITMW-1-19931101	11/1/1993	10		< ND
ITMW-1	ITMW-1-19961201	12/1/1996	21		< ND
ITMW-1	ITMW-1-19990201	2/1/1999	37	< ND	< ND
ITMW-1	ITMW-1-20000301	3/1/2000	125	8	< ND
ITMW-1	ITMW-1-20000919	9/19/2000	30.7	7.45	< 10 U
ITMW-1	ITMW-1-20010327	3/27/2001	30	6	< 10 U
ITMW-1	ITMW-1-20010911	9/11/2001	27	9	< 10 U
ITMW-1	ITMW-1-20020910	9/10/2002	35	9	< 10 U
ITMW-1	ITMW-1-20030227	2/27/2003	29.6	7.14	< 10 U
ITMW-1	ITMW-1-20030923	9/23/2003	25	12	< 10 U
ITMW-1	ITMW-1-20040413	4/13/2004	42.2	11.1	< 10 U
ITMW-1	ITMW-1-20040921	9/21/2004	26	16.7	< 10 U
ITMW-1	ITMW-1-20040921-FD	9/21/2004	26.1	15.8	< 10 U
ITMW-1	ITMW-1-20050928	9/28/2005	34.7	11.3	< 10 U
ITMW-1	ITMW-1-20061014	10/14/2006	20	11	< 10 UJ
ITMW-1	ITMW-1-20070920	9/20/2007	18	13	< 10 U
ITMW-1	ITMW-1-20081209	12/9/2008	14	7.3	< 5 U
ITMW-1	ITMW-1-20111027	10/27/2011	17	8.2	< 5 U
ITMW-1	ITMW-1-20120418	4/18/2012	32	13	< 5 U
ITMW-1	ITMW-1-20121019	10/19/2012	10	8.3	< 0.11 U
ITMW-1	ITMW-1-20130424	4/24/2013	26	9.1	< 0.11 U
ITMW-1	ITMW-1-101513	10/15/2013	7.2	5.8	< 0.11 U
ITMW-1	ITMW-1-201403	3/8/2014	23.4	8.9	< 0.13 U
ITMW-1	ITMW-1-201405	5/13/2014	21.3	8.7	< 0.13 U
ITMW-1	DUP-5-201407	7/30/2014	9.2	5.7	< 0.50 U
ITMW-1	ITMW-1-201407	7/30/2014	8.9	5.4	< 0.50 U
ITMW-1	ITMW-1-201410	10/15/2014	6.1	4.5 J	< 0.50 U
ITMW-1	ITMW-1-201501	1/14/2015	22.7	9.7	< 0.50 U
ITMW-1	ITMW-1-201504	4/15/2015	19.2	9.7	< 0.50 U
ITMW-1	ITMW-1-201507	7/22/2015	10.5	5.3	< 0.13 U
ITMW-1	ITMW-1-201510	10/7/2015	7.8	4.4	< 0.13 U
ITMW-1	ITMW-1-201601	1/13/2016	19.9	8.9	< 0.13 U
ITMW-1	DUP-05-201605	5/5/2016	17.6	8.1	< 0.13 U
ITMW-1	ITMW-1-201605	5/5/2016	17.2	8	< 0.13 U
ITMW-1	DUP-04-201611	11/10/2016	7	3.4	< 0.13 U
ITMW-1	ITMW-1-201611	11/10/2016	7.6	3.1	< 0.13 U
ITMW-1	ITMW-1-201710	10/25/2017	8.9	3.8	< 0.13 U
ITMW-2	ITMW-2-19891001	10/1/1989	< ND		< ND
ITMW-2	ITMW-2-19891101	11/1/1989	< ND		< ND
ITMW-2	ITMW-2-19900101	1/1/1990	< ND		< ND
ITMW-2	ITMW-2-19900101-FD	1/1/1990	< ND		< ND
ITMW-2	ITMW-2-19910301	3/1/1991	< ND		< ND
ITMW-2	ITMW-2-19931101	11/1/1993	4		< ND
ITMW-2	ITMW-2-19961201	12/1/1996	3.4		< ND
ITMW-2	ITMW-2-20000301	3/1/2000	< ND	< ND	< ND
ITMW-2	ITMW-2-20000919	9/19/2000	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20010327	3/27/2001	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20010913	9/13/2001	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20020911	9/11/2002	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20030227	2/27/2003	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20030923	9/23/2003	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20040413	4/13/2004	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20040413-FD	4/13/2004	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20040921	9/21/2004	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20040921-FD	9/21/2004	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20050929	9/29/2005	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20061014	10/14/2006	4 J	< 5 U	< 10 U
ITMW-2	ITMW-2-20070920	9/20/2007	< 5 U	< 5 U	< 10 U
ITMW-2	ITMW-2-20081209	12/9/2008	< 5 U	< 5 U	< 5 U
ITMW-2	ITMW-2-20101103	11/3/2010	< 5 U	< 5 U	< 5 U
ITMW-2	ITMW-2-20111026	10/26/2011	< 5 U	< 5 U	< 5 U
ITMW-2	ITMW-2-20120417	4/17/2012	< 5 U	< 5 U	< 5 U
ITMW-2	ITMW-2-20121017	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-2	ITMW-2-20130424	4/24/2013	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-2	ITMW-2-101413	10/14/2013	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-2	ITMW-2-201403	3/6/2014	0.23 J	0.4 J	< 0.13 U
ITMW-2	ITMW-2-201403-FD	3/6/2014	0.28 J	0.51 J	< 0.13 U
ITMW-2	ITMW-2-201405	5/13/2014	< 0.17 U	< 0.080 U	< 0.13 U
ITMW-2	ITMW-2-201407	7/30/2014	< 0.50 U	< 0.50 U	< 0.50 U
ITMW-2	ITMW-2-201410	10/15/2014	< 0.50 U	< 0.50 U	< 0.50 U
ITMW-2	ITMW-2-201501	1/13/2015	< 0.50 U	< 0.50 U	< 0.50 U
ITMW-2	ITMW-2-201504	4/15/2015	< 0.50 U	< 0.50 U	< 0.50 U
ITMW-2	ITMW-2-201507	7/22/2015	0.24 J	0.26 J	< 0.13 U
ITMW-2	ITMW-2-201510	10/6/2015	0.22 J	0.21 J	< 0.13 U
ITMW-2	ITMW-2-201601	1/12/2016	0.21 J	0.42 J	< 0.13 U
ITMW-2	ITMW-2-201605	5/5/2016	0.25 J	0.29 J	< 0.13 U
ITMW-2	ITMW-2-201611	11/9/2016	< 0.17 U	< 0.080 U	< 0.13 U
ITMW-2	ITMW-2-201710	10/25/2017	0.34 J	0.29 J	< 0.13 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-3	ITMW-3-19891001	10/1/1989	< ND		< ND
ITMW-3	ITMW-3-19900101	1/1/1990	< ND		< ND
ITMW-3	ITMW-3-19931101	11/1/1993	3		< ND
ITMW-3	ITMW-3-19961201	12/1/1996	1.7		< ND
ITMW-3	ITMW-3-19990201	2/1/1999	< ND	< ND	< ND
ITMW-3	ITMW-30-20000301-FD	3/1/2000	< ND	< ND	< ND
ITMW-3	ITMW-3-20000301	3/1/2000	< ND	< ND	< ND
ITMW-3	ITMW-3-20000919	9/19/2000	< 5 U	< 5 U	< 10 U
ITMW-3	ITMW-3-20010327	3/27/2001	< 5 U	< 5 U	< 10 U
ITMW-3	ITMW-3-20010911	9/11/2001	< 5 U	< 5 U	< 10 U
ITMW-3	ITMW-3-20020910	9/10/2002	15	< 5 U	< 10 U
ITMW-3	ITMW-3-20030227	2/27/2003	< 5 U	< 5 U	< 10 U
ITMW-3	ITMW-3-20030923	9/23/2003	< 5 U	< 5 U	< 10 U
ITMW-3	ITMW-3-20040413	4/13/2004	< 5 U	< 5 U	< 10 U
ITMW-3	ITMW-3-20040921	9/21/2004	< 5 U	< 5 U	< 10 U
ITMW-3	ITMW-3-20050928	9/28/2005	< 5 U	< 5 U	< 10 U
ITMW-3	ITMW-3-20061014	10/14/2006	< 5 U	< 5 U	< 10 UJ
ITMW-3	ITMW-3-20070920	9/20/2007	< 5 U	< 5 U	< 10 U
ITMW-3	ITMW-3-20081209	12/9/2008	< 5 U	< 5 U	< 5 U
ITMW-3	ITMW-3-20101104	11/4/2010	190	3.9 J	< 5 U
ITMW-3	ITMW-3-20111027	10/27/2011	4.1 J	< 5 U	< 5 U
ITMW-3	ITMW-3-20120417	4/17/2012	< 5 U	< 5 U	< 5 U
ITMW-3	ITMW-3-20121017	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-3	ITMW-3-20130423	4/23/2013	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-3	ITMW-3-101513	10/15/2013	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-4	ITMW-4-19891001	10/1/1989	< ND		< ND
ITMW-4	ITMW-4-19891101	11/1/1989	< ND		< ND
ITMW-4	ITMW-4-19900101	1/1/1990	< ND		< ND
ITMW-4	ITMW-4-19931101	11/1/1993	< ND		< ND
ITMW-4	ITMW-4-19961201	12/1/1996	75		< ND
ITMW-4	ITMW-4-19990201	2/1/1999	93	54	< ND
ITMW-4	ITMW-4-20000301	3/1/2000	22	16	< ND
ITMW-4	ITMW-4-20000920	9/20/2000	13.9	10.6	< 10 U
ITMW-4	ITMW-4-20010328	3/28/2001	9	< 5 U	< 10 U
ITMW-4	ITMW-4-20010913	9/13/2001	6	8	< 10 U
ITMW-4	ITMW-4-20020910	9/10/2002	9	< 5 U	< 10 U
ITMW-4	ITMW-4-20030228	2/28/2003	< 5 U	< 5 U	< 10 U
ITMW-4	ITMW-4-20030923	9/23/2003	< 5 U	< 5 U	< 10 U
ITMW-4	ITMW-4-20040414	4/14/2004	< 5 U	< 5 U	< 10 U
ITMW-4	ITMW-4-20040922	9/22/2004	< 5 U	< 5 U	< 10 U
ITMW-4	ITMW-4-20050927	9/27/2005	< 5 U	< 5 U	< 10 U
ITMW-4	ITMW-4-20061011	10/11/2006	6	8	< 10 U
ITMW-4	ITMW-4-20070920	9/20/2007	5 J	5 J	< 10 U
ITMW-4	ITMW-4-20081209	12/9/2008	< 5 U	3.2 J	< 5 U
ITMW-4	ITMW-4-20111025	10/25/2011	4.8 J	5.1	< 5 U
ITMW-4	ITMW-4-20121017	10/17/2012	3.3 J	4.5 J	7.9
ITMW-4	ITMW-4-101413	10/14/2013	3.7 J	6.1	< 0.11 U
ITMW-4	ITMW-4-201403	3/6/2014	1.4 J	2 J	0.19 J
ITMW-4	ITMW-4-201405	5/13/2014	2 J	2.1 J	0.18 J
ITMW-4	ITMW-4-201407	7/30/2014	2.8 J	4.6 J	< 0.50 U
ITMW-4	ITMW-4-201410	10/16/2014	3.4 J	4.9 J	< 0.50 U
ITMW-4	ITMW-4-201501	1/13/2015	1.7	2.3	< 0.50 U
ITMW-4	ITMW-4-201504	4/14/2015	1.6	2.6	0.84 J
ITMW-4	ITMW-4-201507	7/22/2015	2	2.6	0.17 J
ITMW-4	ITMW-4-201510	10/7/2015	2.3	2.8	0.23 J
ITMW-4	ITMW-4-201601	1/12/2016	1.5	2.5	< 0.13 U
ITMW-4	ITMW-4-201605	5/5/2016	1.3	< 0.080 U	0.15 J
ITMW-5	ITMW-5-19891001	10/1/1989	< ND		< ND
ITMW-5	ITMW-5-19900101	1/1/1990	< ND		< ND
ITMW-5	ITMW-5-19961201	12/1/1996	21		< ND
ITMW-5	ITMW-5-19990201	2/1/1999	86	39	< ND
ITMW-5	ITMW-5-20000301	3/1/2000	73	59	< ND
ITMW-5	ITMW-5-20000920	9/20/2000	85	64.4	< 10 U
ITMW-5	ITMW-5-20010328	3/28/2001	100	46	< 10 U
ITMW-5	ITMW-5-20010913	9/13/2001	72	64	< 10 U
ITMW-5	ITMW-5-20020910	9/10/2002	108	72	< 10 U
ITMW-5	ITMW-5-20030228	2/28/2003	90.4	68.7	< 10 U
ITMW-5	ITMW-5-20030924	9/24/2003	97.3	73.7	< 10 U
ITMW-5	ITMW-5-20040414	4/14/2004	83.9	55.4	< 10 U
ITMW-5	ITMW-5-20040922	9/22/2004	105	75.8	< 10 U
ITMW-5	ITMW-5-20050406	4/6/2005	93.2	72.6	< 10 U
ITMW-5	ITMW-5-20050406-FD	4/6/2005	87	71	< 10 U
ITMW-5	ITMW-5-20050928	9/28/2005	79	53.5	< 10 U
ITMW-5	ITMW-5-20050928-FD	9/28/2005	82.1	54.4	< 10 U
ITMW-5	ITMW-5-20060314	3/14/2006	92	66.1	< 10 U
ITMW-5	ITMW-5-20060314-FD	3/14/2006	98.4	66.1	< 10 U
ITMW-5	ITMW-5-20061010	10/10/2006	110	51	4 J
ITMW-5	ITMW-5-20070418	4/18/2007	115	39.3	< 10 U
ITMW-5	ITMW-5-20070920	9/20/2007	120	49	4 J
ITMW-5	ITMW-5-20080429	4/29/2008	120 0	43 0	< 10 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-5	ITMW-5-20081209	12/9/2008	200 E	42	< 5 U
ITMW-5	ITMW-5-20090427	4/27/2009	160	34	< 5 U
ITMW-5	ITMW-5-20100511	5/11/2010	190 EF	40	< 5 U
ITMW-5	ITMW-5-20101106	11/6/2010	350	50	< 5 U
ITMW-5	ITMW-5-20110322	3/22/2011	370	39	< 5 U
ITMW-5	ITMW-5-20111025	10/25/2011	150	35	< 5 U
ITMW-5	ITMW-5-20120417	4/17/2012	290	26	< 5 U
ITMW-5	ITMW-5-20121018	10/18/2012	260	33	0.64 J
ITMW-5	ITMW-5-20130425	4/25/2013	220	20	0.50 J
ITMW-5	ITMW-5-101613	10/16/2013	260	27	0.55 J
ITMW-5	DUP-06-201611	11/10/2016	441	33.5	1.5 J
ITMW-5	ITMW-5-201611	11/10/2016	507	38.9	2.8 J
ITMW-5	DUP-06-201704	4/28/2017	664	27.8	0.82 J
ITMW-5	ITMW-5-201704	4/28/2017	608	30.7	0.93 J
ITMW-5	ITMW-5-201710	10/25/2017	1470	38.2	1.6
ITMW-6	ITMW-6-19891001	10/1/1989	< ND		< ND
ITMW-6	ITMW-6-19900101	1/1/1990	< ND		< ND
ITMW-6	ITMW-6-19961201	12/1/1996	6.8		< ND
ITMW-6	ITMW-6-19970501	5/1/1997	7	< ND	< ND
ITMW-6	ITMW-6-19990201	2/1/1999	25	< ND	< ND
ITMW-6	ITMW-6-19990201-FD	2/1/1999	6	< ND	< ND
ITMW-6	ITMW-6-20000301	3/1/2000	< ND	< ND	< ND
ITMW-6	ITMW-6-20000920	9/20/2000	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20010328	3/28/2001	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20010913	9/13/2001	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20020910	9/10/2002	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20020910-FD	9/10/2002	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20030227	2/27/2003	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20030924	9/24/2003	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20040414	4/14/2004	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20040922	9/22/2004	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20050928	9/28/2005	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20061011	10/11/2006	< 5 U	4 J	< 10 U
ITMW-6	ITMW-6-20070920	9/20/2007	< 5 U	< 5 U	< 10 U
ITMW-6	ITMW-6-20081210	12/10/2008	< 5 U	< 5 U	< 5 U
ITMW-6	ITMW-6-20091028	10/28/2009	< 5 U	2.1 J	< 5 U
ITMW-6	ITMW-6-20100510	5/10/2010	< 5 U	1.9 J	< 5 U
ITMW-6	ITMW-6-20111025	10/25/2011	< 5 U	2.4 J	< 5 U
ITMW-6	ITMW-6-20111025-FD	10/25/2011	< 5 U	2.7 J	< 5 U
ITMW-6	ITMW-6-20120417	4/17/2012	< 5 U	2.9 J	< 5 U
ITMW-6	ITMW-6-20121017	10/17/2012	< 1.6 U	3.1 J	< 0.11 U
ITMW-6	ITMW-6-20130422	4/22/2013	< 1.6 U	2.1 J	0.33 J
ITMW-6	ITMW-6-101413	10/14/2013	3.4 J	5.5	0.18 J
ITMW-6	ITMW-6-201403	3/6/2014	2.7 J	4.9 J	0.18 J
ITMW-6	ITMW-6-201405	5/13/2014	3.6 J	5.3	0.17 J
ITMW-6	ITMW-6-201407	7/30/2014	4.4 J	6.7	< 0.50 U
ITMW-6	ITMW-6-201410	10/15/2014	3.1 J	5.2	< 0.50 U
ITMW-6	ITMW-6-201501	1/13/2015	3.7	5.7	< 0.50 U
ITMW-6	ITMW-6-201504	4/14/2015	3.7	5.3 J	< 0.50 U
ITMW-6	ITMW-6-201507	7/22/2015	4.7	6.3	0.31 J
ITMW-6	ITMW-6-201510	10/7/2015	3.1	5.5	0.21 J
ITMW-6	ITMW-6-201601	1/12/2016	4.2	6.2	0.32 J
ITMW-6	ITMW-6-201605	5/5/2016	4.4	5.3	0.22 J
ITMW-7	ITMW-7-19891101	11/1/1989	< ND		< ND
ITMW-7	ITMW-7-19900101	1/1/1990	< ND		< ND
ITMW-7	ITMW-7-19961201	12/1/1996	290		3
ITMW-7	ITMW-7-19970501	5/1/1997	380	180	< ND
ITMW-7	ITMW-7-19990201	2/1/1999	< ND	< ND	< ND
ITMW-7	ITMW-7-19990601	6/1/1999	320	144	< ND
ITMW-7	ITMW-7-19990601-FD	6/1/1999	300	140	< ND
ITMW-7	ITMW-7-20000301	3/1/2000	262	100	< ND
ITMW-7	ITMW-7-20000301-FD	3/1/2000	207	92	< ND
ITMW-7	ITMW-7-20000919	9/19/2000	207	100	< 10 U
ITMW-7	ITMW-7-20000921-FD	9/21/2000	109	< 5 U	< 10 U
ITMW-7	ITMW-7-20010328	3/28/2001	161	66	< 10 U
ITMW-7	ITMW-7-20010913	9/13/2001	139	68	< 10 U
ITMW-7	ITMW-7-20020910	9/10/2002	137	56	< 10 U
ITMW-7	ITMW-7-20020910-FD	9/10/2002	128	54	< 10 U
ITMW-7	ITMW-7-20030227	2/27/2003	172	92.5	< 10 U
ITMW-7	ITMW-7-20030924	9/24/2003	125	57.3	< 10 U
ITMW-7	ITMW-7-20040414	4/14/2004	201	80.7	< 10 U
ITMW-7	ITMW-7-20040922	9/22/2004	132	48.4	< 10 U
ITMW-7	ITMW-7-20050407	4/7/2005	122	39	< 10 U
ITMW-7	ITMW-7-20050928	9/28/2005	100	30.5	< 10 U
ITMW-7	ITMW-7-20060314	3/14/2006	153	59.5	< 10 U
ITMW-7	ITMW-7-20061010	10/10/2006	140	44	1 J
ITMW-7	ITMW-7-20070417	4/17/2007	83	29.4	< 10 U
ITMW-7	ITMW-7-20070921	9/21/2007	72	22	< 10 U
ITMW-7	ITMW-7-20080430	4/30/2008	70 0	18 0	< 10 U
ITMW-7	ITMW-7-20081211	12/11/2008	66	19	< 5 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-7	ITMW-7-20090427	4/27/2009	87	26	< 5 U
ITMW-7	ITMW-7-20091028	10/28/2009	60	20	< 5 U
ITMW-7	ITMW-7-20100510	5/10/2010	73	18	< 5 U
ITMW-7	ITMW-7-20110323	3/23/2011	225 EF	93.2	56.5
ITMW-7	ITMW-7-20111025	10/25/2011	99	26	< 5 U
ITMW-7	ITMW-7-20120418	4/18/2012	100	20	< 5 U
ITMW-7	ITMW-7-20121018	10/18/2012	63	17	< 0.11 U
ITMW-7	ITMW-7-20130425	4/25/2013	69	16	0.27 J
ITMW-7	ITMW-7-101713	10/17/2013	47	12	< 0.11 U
ITMW-7	ITMW-7-201403	3/8/2014	37.4	10	0.24 J
ITMW-7	ITMW-7-201405	5/14/2014	37	11.1	0.22 J
ITMW-7	ITMW-7-201407	7/30/2014	36.7	11.2	< 0.50 U
ITMW-7	ITMW-7-201410	10/15/2014	33.7	10.3	< 0.50 U
ITMW-7	ITMW-7-201501	1/14/2015	34.7	10.5	< 0.50 U
ITMW-7	ITMW-7-201504	4/14/2015	29.3	9.2	< 0.50 U
ITMW-7	ITMW-7-201507	7/22/2015	26.4	8.3	0.19 J
ITMW-7	ITMW-7-201510	10/8/2015	27.6	8.8	0.19 J
ITMW-7	ITMW-7-201601	1/13/2016	44.2	13	0.23 J
ITMW-7	DUP-06-201605	5/5/2016	33.9	9	0.18 J
ITMW-7	ITMW-7-201605	5/5/2016	33.8	8.7	< 0.13 U
ITMW-7	ITMW-7-201611	11/10/2016	33.2	10	0.26 J
ITMW-7	ITMW-07-201704	4/27/2017	29.2	9.3	0.14 J
ITMW-7	ITMW-07-201710	10/25/2017	23.4	7.5	0.20 J
ITMW-9	ITMW-9-19900101	1/1/1990	< ND		< ND
ITMW-9	ITMW-9-19961201	12/1/1996	230		< ND
ITMW-9	ITMW-9-19970501	5/1/1997	7	< ND	< ND
ITMW-9	ITMW-9-19990201	2/1/1999	40	24	< ND
ITMW-9	ITMW-9-20000301	3/1/2000	69	45	< ND
ITMW-9	ITMW-9-20000920	9/20/2000	57.3	14.3	< 10 U
ITMW-9	ITMW-9-20000920-FD	9/20/2000	54.8	14	< 10 U
ITMW-9	ITMW-9-20010328	3/28/2001	40	12	< 10 U
ITMW-9	ITMW-9-20010913	9/13/2001	40	12	< 10 U
ITMW-9	ITMW-9-20020910	9/10/2002	61	21	< 10 U
ITMW-9	ITMW-9-20030228	2/28/2003	54.2	37.2	< 10 U
ITMW-9	ITMW-9-20030923	9/23/2003	91	49.5	< 10 U
ITMW-9	ITMW-9-20030923-FD	9/23/2003	97.6	53.9	< 10 U
ITMW-9	ITMW-9-20040414	4/14/2004	71.8	38.8	< 10 U
ITMW-9	ITMW-9-20040922	9/22/2004	80.7	21.1	< 10 U
ITMW-9	ITMW-9-20050406	4/6/2005	79	30.4	< 10 U
ITMW-9	ITMW-9-20050927	9/27/2005	98.8	54.6	< 10 U
ITMW-9	ITMW-9-20060314	3/14/2006	101	78.7	< 10 U
ITMW-9	ITMW-9-20061011	10/11/2006	110	77	6 J
ITMW-9	ITMW-9-20070417	4/17/2007	79	39.6	< 10 U
ITMW-9	ITMW-9-20070920	9/20/2007	76	26	< 10 U
ITMW-9	ITMW-9-20080428	4/28/2008	82 0	37 0	< 10 U
ITMW-9	ITMW-9-20081209	12/9/2008	90	62	< 5 U
ITMW-9	ITMW-9-20090427	4/27/2009	110	51	< 5 U
ITMW-9	ITMW-9-20091027	10/27/2009	120	67	5.7
ITMW-9	ITMW-9-20091027-FD	10/27/2009	120	71	6.1
ITMW-9	ITMW-9-20100511	5/11/2010	130	38	< 5 U
ITMW-9	ITMW-9-20110322	3/22/2011	120	48	2.4 J
ITMW-9	ITMW-9-20111025	10/25/2011	90	57	< 5 U
ITMW-9	ITMW-9-20120417	4/17/2012	150	50	2.5 J
ITMW-9	ITMW-9-20121018	10/18/2012	120	53	5.2
ITMW-9	ITMW-9-20130424	4/24/2013	140	44	1.6 J
ITMW-9	ITMW-9-101713	10/17/2013	83	42	16
ITMW-9	ITMW-9-201403	3/8/2014	112	40.4	0.41 J
ITMW-9	ITMW-9-201405	5/14/2014	113	42.2	0.64 J
ITMW-9	DUP-6-201407	7/30/2014	143	43.9	0.54 J
ITMW-9	ITMW-9-201407	7/30/2014	141	44.4	0.53 J
ITMW-9	DUP-02-201410	10/15/2014	75.3	38.8	1.7 J
ITMW-9	ITMW-9-201410	10/15/2014	76.9	39.1	1.8 J
ITMW-9	DUP-02-201501	1/13/2015	89.4	39.1	1.4
ITMW-9	ITMW-9-201501	1/13/2015	89.6	39.1	1.4
ITMW-9	ITMW-9-201504	4/15/2015	100	35.4	< 0.50 U
ITMW-9	ITMW-9-201507	7/21/2015	142	35.5	0.40 J
ITMW-9	DUP-09-201510	10/7/2015	55.2	26.8	1.1
ITMW-9	ITMW-9-201510	10/7/2015	55.6	26.6	1.0
ITMW-9	DUP-04-201601	1/13/2016	91.3	34.1	1.1
ITMW-9	ITMW-9-201601	1/13/2016	92.4	35.3	1.1
ITMW-9	ITMW-9-201605	5/5/2016	97.3	31.6	0.48 J
ITMW-9	ITMW-9-201611	11/8/2016	2550	73 J	0.17 J
ITMW-9	ITMW-9-201612	12/14/2016	193	40.1	1
ITMW-9	ITMW-9-201710	10/25/2017	797	60.8	1.7
ITMW-10	ITMW-10-19900101	1/1/1990	< ND		< ND
ITMW-10	ITMW-10-19961201	12/1/1996	4		< ND
ITMW-10	ITMW-10-19990201	2/1/1999	25	13	< ND
ITMW-10	ITMW-10-20000301	3/1/2000	23	17	< ND
ITMW-10	ITMW-10-20000920	9/20/2000	18.1	15.9	< 10 U
ITMW-10	ITMW-10-20010328	3/28/2001	40	21	< 10 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-10	ITMW-10-20010913	9/13/2001	29	28	< 10 U
ITMW-10	ITMW-10-20010913-FD	9/13/2001	30	27	< 10 U
ITMW-10	ITMW-10-20020910	9/10/2002	55	38	< 10 U
ITMW-10	ITMW-10-20030228	2/28/2003	57.6	50.9	< 10 U
ITMW-10	ITMW-10-20030716	7/16/2003	55.3	49.2	< 10 U
ITMW-10	ITMW-10-20030923	9/23/2003	65.9	56.5	< 10 U
ITMW-10	ITMW-10-20040414	4/14/2004	80	57.4	< 10 U
ITMW-10	ITMW-10-20040922	9/22/2004	59.6	50	< 10 U
ITMW-10	ITMW-10-20050406	4/6/2005	72.1	57.7	< 10 U
ITMW-10	ITMW-10-20050928	9/28/2005	57.6	41.6	< 10 U
ITMW-10	ITMW-10-20060314	3/14/2006	82	67.2	< 10 U
ITMW-10	ITMW-10-20061010	10/10/2006	88	54	5 J
ITMW-10	ITMW-10-20070417	4/17/2007	76	52.4	< 10 U
ITMW-10	ITMW-10-20070920	9/20/2007	67	48	5 J
ITMW-10	ITMW-10-20080428	4/28/2008	61 0	46 0	< 10 U
ITMW-10	ITMW-10-20081209	12/9/2008	78	50	< 5 U
ITMW-10	ITMW-10-20090427	4/27/2009	87	52	4.4 J
ITMW-10	ITMW-10-20091027	10/27/2009	110	50	4.2 J
ITMW-10	ITMW-10-20100511	5/11/2010	85	46	2.4 J
ITMW-10	ITMW-10-20110322	3/22/2011	92	42	2.7 J
ITMW-10	ITMW-10-20111025	10/25/2011	94	39	2.5 J
ITMW-10	ITMW-10-20121018	10/18/2012	100	37	2.5
ITMW-10	ITMW-10-101513	10/15/2013	100	32	3.1
ITMW-10	ITMW-10-201403	3/6/2014	166	32.3	1.2 J
ITMW-10	ITMW-10-201405	5/14/2014	184	32.4	1.4 J
ITMW-10	ITMW-10-201407	7/30/2014	273	38.3	1.8 J
ITMW-10	ITMW-10-201410	10/15/2014	243	32.3	1.7 J
ITMW-10	ITMW-10-201501	1/14/2015	403	38.9	1.4
ITMW-10	ITMW-10-201504	4/15/2015	258	34.8	0.98 J
ITMW-10	DUP-08-201504	4/16/2015	303	36.1	1.2
ITMW-10	DUP-01-201507	7/22/2015	501	36.7	1.5
ITMW-10	ITMW-10-201507	7/22/2015	504	36.2	1.3
ITMW-10	DUP-04-201510	10/7/2015	445	37.9	1.6
ITMW-10	ITMW-10-201510	10/7/2015	437	37.5	1.5
ITMW-10	DUP-01-201601	1/13/2016	735	45.5	1.7
ITMW-10	ITMW-10-201601	1/13/2016	761	44.4	1.6
ITMW-10	DUP-01-201605	5/5/2016	673	34	1.1
ITMW-10	ITMW-10-201605	5/5/2016	743	36.6	1.1
ITMW-10	ITMW-10-201611	11/10/2016	113	12.5	0.52 J
ITMW-10	ITMW-10-201704	4/28/2017	132	18.3	0.71 J
ITMW-10	ITMW-10-201710	10/25/2017	72.9	13.3	0.82 J
ITMW-11	ITMW-11-19900101	1/1/1990	19000		180
ITMW-11	ITMW-11-19901101	11/1/1990	4700		93
ITMW-11	ITMW-11-19910201	2/1/1991	3400		< ND
ITMW-11	ITMW-11-19931101	11/1/1993	2300		43
ITMW-11	ITMW-11-19961201	12/1/1996	510		< ND
ITMW-11	ITMW-11-19990201	2/1/1999	650	10	< ND
ITMW-11	ITMW-11-20000301	3/1/2000	3370	206	< ND
ITMW-11	ITMW-11-20000919	9/19/2000	8030	327	11.7
ITMW-11	ITMW-11-20010327	3/27/2001	7000	200	< 10 U
ITMW-11	ITMW-11-20010913	9/13/2001	6000	183	< 10 U
ITMW-11	ITMW-11-20011120	11/20/2001	< 5 U	< 5 U	< 10 U
ITMW-11	ITMW-11L-20020909	9/9/2002	7100	206	10
ITMW-11	ITMW-11T-20020909	9/9/2002	800	72	< 10 U
ITMW-11	ITMW-11-20030226	2/26/2003	4110	346	58.8
ITMW-11	ITMW-11-20030226-FD	2/26/2003	3630	306	60.7
ITMW-11	ITMW-11-20030924	9/24/2003	3990	269	11.8
ITMW-11	ITMW-11-20040413	4/13/2004	3160	240	37.8
ITMW-11	ITMW-11-20040921	9/21/2004	3450	204	< 10 U
ITMW-11	ITMW-11-20050407	4/7/2005	4210	282	66.7
ITMW-11	ITMW-11-20050929	9/29/2005	3910	199	18
ITMW-11	ITMW-11-20060316	3/16/2006	14600	1290	482
ITMW-11	ITMW-11-20060316-FD	3/16/2006	12800	1210	381
ITMW-11	ITMW-11-20061013	10/13/2006	8000	340	47
ITMW-11	ITMW-11-20070419	4/19/2007	3970	199	< 200 U
ITMW-11	ITMW-11-20070921	9/21/2007	7600	180	21
ITMW-11	ITMW-11-20080430	4/30/2008	4500 0	210 0	58 0
ITMW-11	ITMW-11-20081210	12/10/2008	5800	190	27
ITMW-11	ITMW-11-20090427	4/27/2009	2500	200	24
ITMW-11	ITMW-11-20100511	5/11/2010	6200	290	45
ITMW-11	ITMW-11-20100511-FD	5/11/2010	6200	290	28
ITMW-11	ITMW-11-20110323	3/23/2011	9700	520	130
ITMW-11	ITMW-11-20111026	10/26/2011	8800	310	16
ITMW-11	ITMW-11-20121019	10/19/2012	1400	34	2.4
ITMW-11	ITMW-11-101713	10/17/2013	180	8.7	2.9
ITMW-11	ITMW-11-201403	3/8/2014	2980	187 M1	22.5
ITMW-11	DUP-4-201405	5/15/2014	1470	107	4.9
ITMW-11	ITMW-11-201405	5/15/2014	1590	99.5	5.5
ITMW-11	ITMW-11-201407	7/31/2014	7380	156	6.9
ITMW-11	ITMW-11-201410	10/15/2014	2050	70.4	3.5

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-11	ITMW-11-20141204	12/4/2014	1530	55	6.4
ITMW-11	ITMW-11-201501	1/15/2015	68.3	9.8	1.9
ITMW-11	ITMW-11-201504	4/15/2015	< 0.50 U	< 0.50 U	< 0.50 U
ITMW-11	ITMW-11-201507	7/22/2015	33.2	5.9	< 0.13 U
ITMW-11	ITMW-11-201510	10/7/2015	721	57.9	0.96 J
ITMW-11	DUP-03-201601	1/13/2016	2100	199	65.3
ITMW-11	ITMW-11-201601	1/13/2016	605	100	13.1
ITMW-11	ITMW-11-201605	5/5/2016	4630	173	11.2
ITMW-12	ITMW-12-19901101	11/1/1990	2400		140
ITMW-12	ITMW-12-19910201	2/1/1991	2100		< ND
ITMW-12	ITMW-12-19931101	11/1/1993	2500		35
ITMW-12	ITMW-12-19961201	12/1/1996	1200		< ND
ITMW-12	ITMW-12-19990201	2/1/1999	3100	480	34
ITMW-12	ITMW-12-20000301	3/1/2000	3110	320	19
ITMW-12	ITMW-12-20000919	9/19/2000	3350	180	12
ITMW-12	ITMW-12-20010327	3/27/2001	3900	200	20
ITMW-12	ITMW-12-20010913	9/13/2001	3100	159	< 10 U
ITMW-12	ITMW-12-20011120	11/20/2001	2400	300	20
ITMW-12	ITMW-12-20020911	9/11/2002	4200	300	< 10 U
ITMW-12	ITMW-12-20030226	2/26/2003	3460	287	< 10 U
ITMW-12	ITMW-12-20030226-FD	2/26/2003	3940	308	< 10 U
ITMW-12	ITMW-12-20030924	9/24/2003	2920	242	< 10 U
ITMW-12	ITMW-12-20040413	4/13/2004	2410	245	< 10 U
ITMW-12	ITMW-12-20040921	9/21/2004	1780	238	< 10 U
ITMW-12	ITMW-12-20050929	9/29/2005	2120	273	< 10 U
ITMW-12	ITMW-12-20061013	10/13/2006	3500	310	9 J
ITMW-12	ITMW-12-20070921	9/21/2007	2100	220	< 10 U
ITMW-12	ITMW-12-20081209	12/9/2008	1500	180	< 5 U
ITMW-12	ITMW-12-20111026	10/26/2011	1600	230	1.8 J
ITMW-12	ITMW-12-20121019	10/19/2012	2500	200	3.6
ITMW-12	ITMW-12-101713	10/17/2013	2300	190	3.2
ITMW-12	ITMW-12-20131017-FD	10/17/2013	2300	160	4.1
ITMW-12	ITMW-12-201403	3/8/2014	1910	148	3.4
ITMW-12	ITMW-12-201403-FD	3/8/2014	2400	207	3.4
ITMW-12	ITMW-12-201405	5/14/2014	2740	164	14.0
ITMW-12	ITMW-12-201407	7/31/2014	2710	173	13.6
ITMW-12	DUP-04-201410	10/15/2014	2950	192	3.7
ITMW-12	ITMW-12-201410	10/15/2014	2570	188	3.5
ITMW-12	ITMW-12-20141204	12/4/2014	468	51.1	0.88 J
ITMW-12	DUP-04-201501	1/15/2015	59.3	4.8	< 0.50 U
ITMW-12	ITMW-12-201501	1/15/2015	57.1	4.2	< 0.50 U
ITMW-12	ITMW-12-201504	4/15/2015	2260	149	< 0.13 U
ITMW-12	ITMW-12-201507	7/23/2015	652	46.2	0.58 J
ITMW-12	ITMW-12-201510	10/7/2015	314	34.6	0.42 J
ITMW-12	ITMW-12-201601	1/13/2016	465	70.5	< 0.13 U
ITMW-12	ITMW-12-201605	5/5/2016	675	78.9	< 0.13 U
ITMW-13	ITMW-13-19901101	11/1/1990	34		18
ITMW-13	ITMW-13-19910201	2/1/1991	32		35
ITMW-13	ITMW-13-19931101	11/1/1993			29
ITMW-13	ITMW-13-19961201	12/1/1996	36		36
ITMW-13	ITMW-13-19990201	2/1/1999	36	140	48
ITMW-13	ITMW-13-20000301	3/1/2000	37	121	53
ITMW-13	ITMW-13-20000919	9/19/2000	22.4	112	50.5
ITMW-13	ITMW-13-20010328	3/28/2001	44	92	40
ITMW-13	ITMW-13-20010913	9/13/2001	35	111	80
ITMW-13	ITMW-13L-20020909	9/9/2002	99	110	10
ITMW-13	ITMW-13T-20020909	9/9/2002	81	86	20
ITMW-13	ITMW-13-20030226	2/26/2003	70.2	85.5	< 10 U
ITMW-13	ITMW-13-20030924	9/24/2003	159	130	< 10 U
ITMW-13	ITMW-13-20040413	4/13/2004	48.4	87.2	< 10 U
ITMW-13	ITMW-13-20040921	9/21/2004	25.5	71.6	< 10 U
ITMW-13	ITMW-13-20050407	4/7/2005	71.8	103	< 10 U
ITMW-13	ITMW-13-20050930	9/30/2005	72.7	114	17.9
ITMW-13	ITMW-13-20060316	3/16/2006	141	187	< 10 U
ITMW-13	ITMW-13-20061014	10/14/2006	100	150	17
ITMW-13	ITMW-13-20070418	4/18/2007	83.1	78	4.3 J
ITMW-13	ITMW-13-20070920	9/20/2007	28	40	< 10 U
ITMW-13	ITMW-13-20080429	4/29/2008	69 0	72 0	< 10 U
ITMW-13	ITMW-13-20081210	12/10/2008	26	23	< 5 U
ITMW-13	ITMW-13-20090427	4/27/2009	79	78	< 5 U
ITMW-13	ITMW-13-20091027	10/27/2009	18	22	< 5 U
ITMW-13	ITMW-13-20100512	5/12/2010	97	72	< 5 U
ITMW-13	ITMW-13-20110323	3/23/2011	130	83	< 5 U
ITMW-13	ITMW-13-20111027	10/27/2011	65	41	< 5 U
ITMW-13	ITMW-13-20111027-FD	10/27/2011	64	40	< 5 U
ITMW-13	ITMW-13-20120419	4/19/2012	97	63	< 5 U
ITMW-13	ITMW-13-20121018	10/18/2012	400	260	1.0 J
ITMW-13	ITMW-13-20130425	4/25/2013	86	52	0.14 J
ITMW-13	ITMW-13-101613	10/16/2013	150	74	< 0.11 U
ITMW-13	ITMW-13-201403	3/8/2014	69.3	45.3	< 0.13 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-13	ITMW-13-201405	5/14/2014	54	34.7	0.17 J
ITMW-13	ITMW-13-201407	7/30/2014	36.5	27.5	< 0.50 U
ITMW-13	ITMW-13-201410	10/15/2014	40.8	25.9	< 0.50 U
ITMW-13	ITMW-13-201501	1/14/2015	45.8	28.5	< 0.50 U
ITMW-13	DUP-03-201504	4/15/2015	47.7	26.7	< 0.50 U
ITMW-13	ITMW-13-201504	4/15/2015	43.1	26.5	< 0.50 U
ITMW-13	DUP-02-201507	7/22/2015	36.1	20.8	0.17 J
ITMW-13	ITMW-13-201507	7/22/2015	37.3	20.1	0.18 J
ITMW-13	DUP-01-201510	10/7/2015	25.5	17.6	0.18 J
ITMW-13	ITMW-13-201510	10/7/2015	29.9	17.8	0.20 J
ITMW-13	DUP-02-201601	1/13/2016	51.6	26.1	< 0.13 U
ITMW-13	ITMW-13-201601	1/13/2016	47.6	26.7	0.17 J
ITMW-13	ITMW-13-201605	5/5/2016	41.9	20.8	0.17 J
ITMW-14	ITMW-14-19901101	11/1/1990	< ND		13
ITMW-14	ITMW-14-19910201	2/1/1991	< ND		< ND
ITMW-14	ITMW-14-19931101	11/1/1993	6		< ND
ITMW-14	ITMW-14-19961201	12/1/1996	< ND		< ND
ITMW-14	ITMW-14-19990201	2/1/1999	< ND	29	20
ITMW-14	ITMW-14-20000301	3/1/2000	< ND	24	12
ITMW-14	ITMW-14-20000919	9/19/2000	< 5 U	13.6	< 10 U
ITMW-14	ITMW-14-20010327	3/27/2001	< 5 U	24	10
ITMW-14	ITMW-14-20010913	9/13/2001	< 5 U	5	< 10 U
ITMW-14	ITMW-14-20020911	9/11/2002	41	6	< 10 U
ITMW-14	ITMW-14-20030226	2/26/2003	< 5 U	< 5 U	< 10 U
ITMW-14	ITMW-14-20030924	9/24/2003	< 5 U	< 5 U	< 10 U
ITMW-14	ITMW-14-20040413	4/13/2004	< 5 U	< 5 U	< 10 U
ITMW-14	ITMW-14-20040921	9/21/2004	< 5 U	< 5 U	< 10 U
ITMW-14	ITMW-14-20050930	9/30/2005	< 5 U	< 5 U	< 10 U
ITMW-14	ITMW-14-20061014	10/14/2006	4 J	8	< 10 UJ
ITMW-14	ITMW-14-20070921	9/21/2007	5 J	9	< 10 U
ITMW-14	ITMW-14-20081210	12/10/2008	5.7	9.3	< 5 U
ITMW-14	ITMW-14-20101104	11/4/2010	110	14	< 5 U
ITMW-14	ITMW-14-20111027	10/27/2011	6.3	11	< 5 U
ITMW-14	ITMW-14-20120419	4/19/2012	7.6	16	< 5 U
ITMW-14	ITMW-14-20121019	10/19/2012	5.4	11	< 0.11 U
ITMW-14	ITMW-14-20130425	4/25/2013	6.8	14	< 0.11 U
ITMW-14	ITMW-14-101613	10/16/2013	2.9 J	4.9 J	< 0.11 U
ITMW-14	ITMW-14-201403	3/8/2014	6.1	11.9	< 0.13 U
ITMW-14	ITMW-14-201405	5/14/2014	5.3	11.3	< 0.13 U
ITMW-14	ITMW-14-201407	7/30/2014	4 J	9.2	< 0.50 U
ITMW-14	ITMW-14-201410	10/15/2014	4.1 J	9.4	< 0.50 U
ITMW-14	ITMW-14-201501	1/14/2015	4.9	11.5	< 0.50 U
ITMW-14	ITMW-14-201504	4/15/2015	5	10.7	< 0.50 U
ITMW-14	ITMW-14-201507	7/22/2015	4.3	9.6	< 0.13 U
ITMW-14	ITMW-14-201510	10/7/2015	4.6	9.8	< 0.13 U
ITMW-14	ITMW-14-201601	1/12/2016	4.3	10	< 0.13 U
ITMW-14	ITMW-14-201605	5/5/2016	3.9	8.6	< 0.13 U
ITMW-15	ITMW-15-19901101	11/1/1990	2500		55
ITMW-15	ITMW-15-19910201	2/1/1991	1700		< ND
ITMW-15	ITMW-15-19910415	4/15/1991	2000		< ND
ITMW-15	ITMW-15-19910419	4/19/1991	2100		< ND
ITMW-15	ITMW-15-19910420	4/20/1991	2400		< ND
ITMW-15	ITMW-15-19931101	11/1/1993	4300		10
ITMW-15	ITMW-15-19961201	12/1/1996	240		< ND
ITMW-15	ITMW-15-19990201	2/1/1999	400	120	< ND
ITMW-15	ITMW-15-20000301	3/1/2000	339	97	< ND
ITMW-15	ITMW-15-20000919	9/19/2000	362	92.7	< 10 U
ITMW-15	ITMW-15-20000919-FD	9/19/2000	376	91	< 10 U
ITMW-15	ITMW-15-20010328	3/28/2001	290	57	< 10 U
ITMW-15	ITMW-15-20010913	9/13/2001	380	87	< 10 U
ITMW-15	ITMW-15-20010913-FD	9/13/2001	370	80	< 10 U
ITMW-15	ITMW-15-20011120	11/20/2001	157	30	< 10 U
ITMW-15	ITMW-15-20020911	9/11/2002	320	75	< 10 U
ITMW-15	ITMW-15-20030226	2/26/2003	301	98.7	< 10 U
ITMW-15	ITMW-15-20030925	9/25/2003	490	91.9	< 10 U
ITMW-15	ITMW-15-20040414	4/14/2004	334	126	< 10 U
ITMW-15	ITMW-15-20040921	9/21/2004	774	118	< 10 U
ITMW-15	ITMW-15-20050407	4/7/2005	685	133	< 10 U
ITMW-15	ITMW-15-20050929	9/29/2005	862	189	< 10 U
ITMW-15	ITMW-15-20060316	3/16/2006	908	183	12
ITMW-15	ITMW-15-20061013	10/13/2006	680	140	7 J
ITMW-15	ITMW-15-20070419	4/19/2007	591	110	8.5 J
ITMW-15	ITMW-15-20070921	9/21/2007	1000	190	27
ITMW-15	ITMW-15-20080429	4/29/2008	100 0	18 0	< 10 U
ITMW-15	ITMW-15-20081210	12/10/2008	1100	150	< 5 U
ITMW-15	ITMW-15-20090427	4/27/2009	2800	130	17
ITMW-15	ITMW-15-20100511	5/11/2010	2800	160	11
ITMW-15	ITMW-15-20111026	10/26/2011	1100	74	< 5 U
ITMW-15	ITMW-15-20121019	10/19/2012	240	14	1.1 J
ITMW-15	ITMW-15-101613	10/16/2013	2800	170	14

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-15	ITMW-15-201403	3/8/2014	1630	152	11.6
ITMW-15	DUP2-201405	5/14/2014	899	61.7	4.4
ITMW-15	ITMW-15-201405	5/14/2014	729	60.7	4.1
ITMW-15	DUP-4-201407	7/30/2014	1850	82.8	3.0
ITMW-15	ITMW-15-201407	7/30/2014	1820	82.5	3.1
ITMW-15	DUP-05-201410	10/16/2014	1660	66.4	1.8 J
ITMW-15	ITMW-15-201410	10/16/2014	1490	63	2.0
ITMW-15	ITMW-15-20141205	12/5/2014	63	< 0.50 U	< 0.50 U
ITMW-15	DUP-05-201501	1/15/2015	61.7	3.8	< 0.50 U
ITMW-15	ITMW-15-201501	1/15/2015	56.5	2.9	< 0.50 U
ITMW-15	ITMW-15-201504	4/15/2015	101	7.5	< 0.50 U
ITMW-15	ITMW-15-201507	7/22/2015	110	22.4	1.3
ITMW-15	ITMW-15-201510	10/8/2015	38.9	2.4	< 0.13 U
ITMW-15	ITMW-15-201601	1/13/2016	797	67	4.9
ITMW-15	ITMW-15-201605	5/5/2016	659	48.8	5.8
ITMW-16	ITMW-16-19910201	2/1/1991	31		< ND
ITMW-16	ITMW-16-19931101	11/1/1993	41		7
ITMW-16	ITMW-16-19961201	12/1/1996	< ND		< ND
ITMW-16	ITMW-16-19990201	2/1/1999	< ND	< ND	< ND
ITMW-16	ITMW-16-20000301	3/1/2000	7	< ND	< ND
ITMW-16	ITMW-16-20000921	9/21/2000	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20010326	3/26/2001	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20010913	9/13/2001	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20020911	9/11/2002	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20030227	2/27/2003	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20030925	9/25/2003	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20040415	4/15/2004	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20040923	9/23/2004	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20050929	9/29/2005	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20050929-FD	9/29/2005	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20061014	10/14/2006	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20070920	9/20/2007	< 5 U	< 5 U	< 10 U
ITMW-16	ITMW-16-20081210	12/10/2008	< 5 U	< 5 U	< 5 U
ITMW-16	ITMW-16-20101106	11/6/2010	17	< 5 U	< 5 U
ITMW-16	ITMW-16-20111027	10/27/2011	< 5 U	< 5 U	< 5 U
ITMW-16	ITMW-16-20120418	4/18/2012	< 5 U	< 5 U	< 5 U
ITMW-16	ITMW-16-20121018	10/18/2012	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-16	ITMW-16-20130424	4/24/2013	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-16	ITMW-16-101613	10/16/2013	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-16	ITMW-16-201403	3/7/2014	0.3 J	< 0.080 U	< 0.13 U
ITMW-16	ITMW-16-201405	5/13/2014	< 0.17 U	< 0.080 U	< 0.13 U
ITMW-16	ITMW-16-201407	7/30/2014	< 0.50 U	< 0.50 U	< 0.50 U
ITMW-16	ITMW-16-201410	10/15/2014	< 0.50 U	< 0.50 U	< 0.50 U
ITMW-16	ITMW-16-201501	1/14/2015	< 0.50 U	< 0.50 U	< 0.50 U
ITMW-16	ITMW-16-201504	4/14/2015	< 0.50 U	< 0.50 U	< 0.50 U
ITMW-16	ITMW-16-201507	7/22/2015	< 0.17 U	< 0.080 U	< 0.13 U
ITMW-16	ITMW-16-201510	10/7/2015	< 0.17 U	< 0.080 U	< 0.13 U
ITMW-16	ITMW-16-201601	1/13/2016	< 0.17 U	< 0.080 U	< 0.13 U
ITMW-16	ITMW-16-201605	5/5/2016	< 0.17 U	< 0.080 U	< 0.13 U
ITMW-16	ITMW-16-201611	11/9/2016	< 0.17 U	< 0.080 U	< 0.13 U
ITMW-16	ITMW-16-201710	10/25/2017	< 0.17 U	< 0.080 U	< 0.13 U
ITMW-17	ITMW-17-19910201	2/1/1991	21000		< ND
ITMW-17	ITMW-17-19910415	4/15/1991	21000		< ND
ITMW-17	ITMW-17-19910424	4/24/1991	21000		< ND
ITMW-17	ITMW-17-19931101	11/1/1993	18000		15
ITMW-17	ITMW-17-19961201	12/1/1996	9300		< ND
ITMW-17	ITMW-17-19990201	2/1/1999	11000	240	< ND
ITMW-17	ITMW-17-20000301	3/1/2000	6780	171	< ND
ITMW-17	ITMW-17-20000919	9/19/2000	5500	180	< 10 U
ITMW-17	ITMW-17-20010105	1/5/2001	8310	179	< 10 U
ITMW-17	ITMW-17-20010328	3/28/2001	6700	134	< 10 U
ITMW-17	ITMW-17-20010913	9/13/2001	6300	158	< 10 U
ITMW-17	ITMW-17-20020911	9/11/2002	6500	153	< 10 U
ITMW-17	ITMW-17-20030226	2/26/2003	4380	134	< 10 U
ITMW-17	ITMW-17-20030925	9/25/2003	6090	136	< 10 U
ITMW-17	ITMW-17-20040414	4/14/2004	5050	184	< 10 U
ITMW-17	ITMW-17-20040414-FD	4/14/2004	4920	182	< 10 U
ITMW-17	ITMW-17-20040921	9/21/2004	5760	156	< 10 U
ITMW-17	ITMW-17-20050407	4/7/2005	5750	156	< 10 U
ITMW-17	ITMW-17-20050929	9/29/2005	5460	111	< 10 U
ITMW-17	ITMW-17-20060315	3/15/2006	15900	211 E	26.3
ITMW-17	ITMW-17-20061012	10/12/2006	19000	220	21
ITMW-17	ITMW-17-20070418	4/18/2007	13000	298	< 10 U
ITMW-17	ITMW-17-20070921	9/21/2007	11000	210	3 J
ITMW-17	ITMW-17-20080429	4/29/2008	6200 0	140 0	< 10 U
ITMW-17	ITMW-17-20081210	12/10/2008	5600	130	< 5 U
ITMW-17	ITMW-17-20090427	4/27/2009	5200	130	< 5 U
ITMW-17	ITMW-17-20100511	5/11/2010	4500	85	< 5 U
ITMW-17	ITMW-17-20101104	11/4/2010	5400	110	< 5 U
ITMW-17	ITMW-17-20110322	3/22/2011	5300	100	< 5 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-17	ITMW-17-20111026	10/26/2011	4500	98	< 5 U
ITMW-17	ITMW-17-20120419	4/19/2012	4700	110	< 5 U
ITMW-17	ITMW-17-20121019	10/19/2012	3500	100	0.48 J
ITMW-17	ITMW-17-20130425	4/25/2013	5600	130	0.90 J
ITMW-17	ITMW-17-101713	10/17/2013	4800	79	< 0.11 U
ITMW-17	ITMW-17-201403	3/8/2014	3770	86.1	0.57 J
ITMW-17	ITMW-17-201403-FD	3/8/2014	4040	87.3	0.74 J
ITMW-17	DUP-3-201405	5/15/2014	3370	88.5	1.1 J
ITMW-17	ITMW-17-201405	5/15/2014	3630	82.9	1.3 J
ITMW-17	ITMW-17-201407	7/30/2014	2260	64.7	< 0.50 U
ITMW-17	ITMW-17-201410	10/16/2014	3510	70.5	3.2
ITMW-17	ITMW-17-20141205	12/5/2014	4630	210 J	7.7
ITMW-17	ITMW-17-201501	1/15/2015	3840	110	1.5
ITMW-17	ITMW-17-201504	4/15/2015	3920	142	< 0.13 U
ITMW-17	ITMW-17-201507	7/22/2015	5350	116	0.51 J
ITMW-17	ITMW-17-201510	10/8/2015	3970	77.2	2.5
ITMW-17	ITMW-17-201601	1/13/2016	2600	44.7	2.2
ITMW-17	ITMW-17-201605	5/5/2016	2720	77.7	< 6.5 U
ITMW-18	ITMW-18-19910201	2/1/1991	3700		< ND
ITMW-18	ITMW-18-19931101	11/1/1993	4500		6
ITMW-18	ITMW-18-19961201	12/1/1996	1600		< ND
ITMW-18	ITMW-18-19990201	2/1/1999	6300	480	< ND
ITMW-18	ITMW-18-20000301	3/1/2000	3560	401	< ND
ITMW-18	ITMW-18-20000919	9/19/2000	4080	409	< 10 U
ITMW-18	ITMW-18-20010327	3/27/2001	4000	400	< 10 U
ITMW-18	ITMW-18-20010327-FD	3/27/2001	4200	370	< 100 U
ITMW-18	ITMW-18-20010911	9/11/2001	4100	300	< 10 U
ITMW-18	ITMW-18-20020911	9/11/2002	6700	300	< 10 U
ITMW-18	ITMW-18-20030226	2/26/2003	5110	290	< 10 U
ITMW-18	ITMW-18-20030924	9/24/2003	7700	415	< 10 U
ITMW-18	ITMW-18-20040413	4/13/2004	7740	410	< 10 U
ITMW-18	ITMW-18-20040921	9/21/2004	7050	380	< 10 U
ITMW-18	ITMW-18-20050408	4/8/2005	7080	389	< 10 U
ITMW-18	ITMW-18-20050929	9/29/2005	4660	241	< 10 U
ITMW-18	ITMW-18-20060315	3/15/2006	5750	373	< 50 U
ITMW-18	ITMW-18-20061013	10/13/2006	6600	300	< 10 U
ITMW-18	ITMW-18-20070418	4/18/2007	15000	387	< 10 U
ITMW-18	ITMW-18-20070921	9/21/2007	8300	310	< 100 U
ITMW-18	ITMW-18-20080430	4/30/2008	9000 0	350 0	< 10 U
ITMW-18	ITMW-18-20081209	12/9/2008	7200	320	< 5 U
ITMW-18	ITMW-18-20090427	4/27/2009	7100	320	< 5 U
ITMW-18	ITMW-18-20091027	10/27/2009	7800	360	< 5 U
ITMW-18	ITMW-18-20100511	5/11/2010	11000	360	< 5 U
ITMW-18	ITMW-18-20111026	10/26/2011	8500	290	< 5 U
ITMW-18	ITMW-18-20120419	4/19/2012	9800	360	2.9 J
ITMW-18	ITMW-18-20121019	10/19/2012	7600	260	1.2 J
ITMW-18	ITMW-18-20130425	4/25/2013	7200	270	0.90 J
ITMW-18	ITMW-18-101713	10/17/2013	7000	280	0.64 J
ITMW-18	ITMW-18-201403	3/8/2014	9380	285	< 6.5 U
ITMW-18	ITMW-18-201403-FD	3/8/2014	8550	242 J	1.7 J
ITMW-18	DUP-5-201405	5/15/2014	2500	108	< 0.13 U
ITMW-18	ITMW-18-201405	5/15/2014	2940	101	< 0.13 U
ITMW-18	ITMW-18-201407	7/31/2014	5360	139	1.6 J
ITMW-18	ITMW-18-201410	10/15/2014	3540	68.5	< 0.50 U
ITMW-18	ITMW-18-20141204	12/4/2014	3690	74.3	< 0.50 U
ITMW-18	ITMW-18-201501	1/15/2015	488	26.5	< 0.50 U
ITMW-18	DUP-04-201504	4/16/2015	42.8	1.7	< 0.50 U
ITMW-18	ITMW-18-201504	4/16/2015	43.5	1.6	< 0.50 U
ITMW-18	DUP-07-201507	7/23/2015	24.7	0.81 J	< 0.13 U
ITMW-18	ITMW-18-201507	7/23/2015	22.9	0.69 J	< 0.13 U
ITMW-18	DUP-06-201510	10/8/2015	12.4	0.41 J	< 0.13 U
ITMW-18	ITMW-18-201510	10/8/2015	12.9	0.4 J	< 0.13 U
ITMW-18	ITMW-18-201601	1/13/2016	48.8	4.6	< 0.13 U
ITMW-18	ITMW-18-201605	5/5/2016	13.9	0.49 J	< 0.13 U
ITMW-18	ITMW-18-201611	11/9/2016	10.1	< 0.080 U	< 0.13 U
ITMW-18	ITMW-18-201710	10/26/2017	15.0	0.47 J	<0.13 U
ITMW-18	DUP-07-201710	10/26/2017	16.0	0.50 J	<0.13 U
ITMW-19	ITMW-19-19910201	2/1/1991	9900		< ND
ITMW-19	ITMW-19-19931101	11/1/1993	27000		7
ITMW-19	ITMW-19-19961201	12/1/1996	25000		< ND
ITMW-19	ITMW-19-19990201	2/1/1999	33000	150	< ND
ITMW-19	ITMW-19-20000301	3/1/2000	33100	128	< ND
ITMW-19	ITMW-19-20000919	9/19/2000	35700	197	< 10 U
ITMW-19	ITMW-19-20010105	1/5/2001	34000	166	< 10 U
ITMW-19	ITMW-19-20010328	3/28/2001	38000	119	< 10 U
ITMW-19	ITMW-19-20010913	9/13/2001	19000	132	< 10 U
ITMW-19	ITMW-19-20020911	9/11/2002	27000	167	< 10 U
ITMW-19	ITMW-19-20030226	2/26/2003	16200	126	< 10 U
ITMW-19	ITMW-19-20030924	9/24/2003	27300	186	< 10 U
ITMW-19	ITMW-19-20040413	4/13/2004	19400	186	< 10 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-19	ITMW-19-20040921	9/21/2004	20000	148	< 10 U
ITMW-19	ITMW-19-20050407	4/7/2005	18300	146	< 10 U
ITMW-19	ITMW-19-20050407-FD	4/7/2005	16200	145	< 10 U
ITMW-19	ITMW-19-20050929	9/29/2005	25700	144	< 10 U
ITMW-19	ITMW-19-20060315	3/15/2006	21300	177	< 100 U
ITMW-19	ITMW-19-20061012	10/12/2006	16000	150	2 J
ITMW-19	ITMW-19-20070418	4/18/2007	20000	131	< 10 U
ITMW-19	ITMW-19-20070921	9/21/2007	19000	110	< 200 U
ITMW-19	ITMW-19-20080429	4/29/2008	17000 0	98 0	< 100 U
ITMW-19	ITMW-19-20081210	12/10/2008	11000	93	< 5 U
ITMW-19	ITMW-19-20090427	4/27/2009	13000	100	< 5 U
ITMW-19	ITMW-19-20100511	5/11/2010	19000	130	< 5 U
ITMW-19	ITMW-19-20101104	11/4/2010	18000	140	< 5 U
ITMW-19	ITMW-19-20101104-FD	11/4/2010	19000	150	< 5 U
ITMW-19	ITMW-19-20110322	3/22/2011	16000	110	1 J
ITMW-19	ITMW-19-20111026	10/26/2011	17000	120	< 5 U
ITMW-19	ITMW-19-20120419	4/19/2012	18000	110	< 5 U
ITMW-19	ITMW-19-20120419-FD	4/19/2012	15000	110	< 5 U
ITMW-19	ITMW-19-20121019	10/19/2012	15000	110	0.89 J
ITMW-19	ITMW-19-20130425	4/25/2013	13000	110	0.57 J
ITMW-19	ITMW-19-101813	10/18/2013	16000	91 J	< 0.11 U
ITMW-19	ITMW-19-10182013-FD	10/18/2013	14000	100 J	< 0.11 U
ITMW-19	ITMW-19-201403	3/8/2014	8850	66.7	0.57 J
ITMW-19	ITMW-19-201403-FD	3/8/2014	8270	60.8 J	< 6.5 U
ITMW-19	DUP-6-201405	5/15/2014	15300 J	67.2	0.87 J
ITMW-19	ITMW-19-201405	5/15/2014	9780 J	65.8	0.85 J
ITMW-19	ITMW-19-201407	7/31/2014	13300	85.5	0.96 J
ITMW-19	ITMW-19-201410	10/16/2014	12800	76.7	1.9 J
ITMW-19	ITMW-19-20141205	12/5/2014	33.5	< 0.50 U	< 0.50 U
ITMW-19	ITMW-19-201501	1/15/2015	17.4	< 0.50 U	< 0.50 U
ITMW-19	ITMW-19-201504	4/15/2015	594	2.2	< 0.50 U
ITMW-19	ITMW-19-201507	7/23/2015	15.2	< 0.080 U	< 0.13 U
ITMW-19	ITMW-19-201510	10/8/2015	87.1	0.41 J	< 0.13 U
ITMW-19	ITMW-19-201601	1/13/2016	336	1.2	< 0.13 U
ITMW-19	ITMW-19-201605	5/5/2016	105	0.28 J	< 0.13 U
ITMW-19	ITMW-19-201611	11/9/2016	137	< 0.080 U	< 0.13 U
ITMW-19	ITMW-19-201710	10/26/2017	165	0.52 J	<0.13 U
ITMW-20	ITMW-20-19910301	3/1/1991	< ND		< ND
ITMW-20	ITMW-20-19931101	11/1/1993	< ND		< ND
ITMW-20	ITMW-20-19961201	12/1/1996	290		< ND
ITMW-20	ITMW-20-19970501	5/1/1997	< ND	< ND	< ND
ITMW-20	ITMW-20-19990201	2/1/1999	< ND	< ND	< ND
ITMW-20	ITMW-20-20000301	3/1/2000	< ND	< ND	< ND
ITMW-20	MW-20-20000921-FS	9/21/2000	< 5 U	< 5 U	< 10 U
ITMW-20	MW-20-20010327-FS	3/27/2001	< 5 U	< 5 U	< 10 U
ITMW-20	MW-20-20010911-FS	9/11/2001	21	< 5 U	< 10 U
ITMW-20	ITMW-20-20020910	9/10/2002	< 5 U	< 5 U	< 10 U
ITMW-20	ITMW-20-20030227	2/27/2003	< 5 U	< 5 U	< 10 U
ITMW-20	ITMW-20-20030924	9/24/2003	< 5 U	< 5 U	< 10 U
ITMW-20	ITMW-20-20040414	4/14/2004	< 5 U	< 5 U	< 10 U
ITMW-20	ITMW-20-20040922	9/22/2004	< 5 U	< 5 U	< 10 U
ITMW-20	ITMW-20-20050929	9/29/2005	< 5 U	< 5 U	< 10 U
ITMW-20	ITMW-20-20061012	10/12/2006	< 5 U	< 5 U	< 10 U
ITMW-20	ITMW-20-20070919	9/19/2007	< 5 U	< 5 U	< 10 U
ITMW-20	ITMW-20-20081210	12/10/2008	< 5 U	< 5 U	< 5 U
ITMW-20	ITMW-20-20091029	10/29/2009	< 5 U	< 5 U	< 5 U
ITMW-20	ITMW-20-20100512	5/12/2010	< 5 U	< 5 U	< 5 U
ITMW-20	ITMW-20-20101105	11/5/2010	15	< 5 U	< 5 U
ITMW-20	ITMW-20-20111026	10/26/2011	< 5 U	< 5 U	< 5 U
ITMW-20	ITMW-20-20111026-FD	10/26/2011	< 5 U	< 5 U	< 5 U
ITMW-20	ITMW-20-20120418	4/18/2012	< 5 U	< 5 U	< 5 U
ITMW-20	ITMW-20-20121018	10/18/2012	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-20	ITMW-20-20130423	4/23/2013	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-20	ITMW-20-101413	10/14/2013	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-20	ITMW-20-201403	3/5/2014	< 0.17 U	< 0.080 U	0.15 J
ITMW-20	ITMW-20-201405	5/12/2014	0.21 J	< 0.080 U	< 0.13 U
ITMW-20	ITMW-20-201407	7/30/2014	< 0.50 U	< 0.50 U	< 0.50 U
ITMW-20	ITMW-20-201410	10/15/2014	< 0.50 U	< 0.50 U	< 0.50 U
ITMW-20	ITMW-20-201501	1/12/2015	< 0.50 U	< 0.50 U	< 0.50
ITMW-20	ITMW-20-201504	4/13/2015	< 0.50 U	< 0.50 U	< 0.50
ITMW-20	ITMW-20-201507	7/22/2015	0.2 J	< 0.080 U	< 0.13 U
ITMW-20	ITMW-20-201510	10/7/2015	< 0.17 U	< 0.080 U	< 0.13 U
ITMW-20	ITMW-20-201601	1/12/2016	< 0.17 U	< 0.080 U	< 0.13 U
ITMW-20	ITMW-20-201605	5/2/2016	< 0.17	< 0.080 U	< 0.13 U
ITMW-20	ITMW-20-201611	11/9/2016	< 0.17 U	< 0.080 U	< 0.13 U
ITMW-20	ITMW-20-201704	4/26/2017	< 0.17 U	< 0.080 U	< 0.13 U
ITMW-20	ITMW-20-201710	10/25/2017	< 0.17 U	< 0.080 U	< 0.13 U
ITMW-21	ITMW-21-19910301	3/1/1991	21		< ND
ITMW-21	ITMW-21-19931101	11/1/1993	37		< ND
ITMW-21	ITMW-21-19961201	12/1/1996	150		< ND

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
ITMW-21	ITMW-21-19990201	2/1/1999	190	< ND	< ND
ITMW-21	ITMW-21-20000301	3/1/2000	196	< ND	< ND
ITMW-21	ITMW-21-20000919	9/19/2000	192	< 5 U	< 10 U
ITMW-21	ITMW-21-20010328	3/28/2001	123	< 5 U	< 10 U
ITMW-21	ITMW-21-20010913	9/13/2001	116	< 5 U	< 10 U
ITMW-21	ITMW-21-20020910	9/10/2002	13	< 5 U	< 10 U
ITMW-21	ITMW-21-20030226	2/26/2003	39.5	< 5 U	< 10 U
ITMW-21	ITMW-21-20030923	9/23/2003	9.09	< 5 U	< 10 U
ITMW-21	ITMW-21-20040414	4/14/2004	52.9	< 5 U	< 10 U
ITMW-21	ITMW-21-20040922	9/22/2004	7.8	< 5 U	< 10 U
ITMW-21	ITMW-21-20050928	9/28/2005	6.45	< 5 U	< 10 U
ITMW-21	ITMW-21-20061012	10/12/2006	9	< 5 U	< 10 U
ITMW-21	ITMW-21-20070921	9/21/2007	10	< 5 U	< 10 U
ITMW-21	ITMW-21-20081209	12/9/2008	15	< 5 U	< 5 U
ITMW-21	ITMW-21-20091027	10/27/2009	14	< 5 U	< 5 U
ITMW-21	ITMW-21-20101104	11/4/2010	1100	4.4 J	< 5 U
ITMW-21	ITMW-21-20110322	3/22/2011	24	< 5 U	< 5 U
ITMW-21	ITMW-21-20111025	10/25/2011	11	< 5 U	< 5 U
ITMW-21	ITMW-21-20120417	4/17/2012	30	< 5 U	< 5 U
ITMW-21	ITMW-21-20121019	10/19/2012	7.7	< 0.56 U	< 0.11 U
ITMW-21	ITMW-21-20130424	4/24/2013	18	< 0.56 U	< 0.11 U
ITMW-21	ITMW-21-101513	10/15/2013	20	< 0.56 U	< 0.11 U
ITMW-21	ITMW-21-201403	3/6/2014	14.8	< 0.080 U	< 0.13 U
ITMW-21	ITMW-21-201405	5/14/2014	17.6	< 0.080 U	< 0.13 U
ITMW-21	DUP-3-201407	7/30/2014	9.3	< 0.50 U	< 0.50 U
ITMW-21	ITMW-21-201407	7/30/2014	9.4	< 0.50 U	< 0.50 U
ITMW-21	ITMW-21-201410	10/15/2014	6	< 0.50 U	< 0.50 U
ITMW-21	ITMW-21-201501	1/14/2015	10.8	< 0.50 U	< 0.50 U
ITMW-21	ITMW-21-201504	4/14/2015	12.7	< 0.50 U	< 0.50 U
ITMW-21	ITMW-21-201507	7/22/2015	7.6	0.2 J	< 0.13 U
ITMW-21	ITMW-21-201510	10/8/2015	7.2	0.29 J	< 0.13 U
ITMW-21	ITMW-21-201601	1/13/2016	9.8	0.27 J	< 0.13 U
ITMW-21	ITMW-21-201605	5/5/2016	11.1	0.3 J	< 0.13 U
ITMW-21	ITMW-21-201611	11/9/2016	8.1	< 0.080 U	< 0.13 U
ITMW-21	ITMW-21-201704	4/28/2017	11.9	0.31 J	< 0.13 U
ITMW-21	ITMW-21-201710	10/25/2017	7.9	0.25 J	< 0.13 U
IW-72	IW-72-20090116	1/16/2009	27	< 5 U	< 5 U
IW-72	IW-72-20090423	4/23/2009	40	< 5 U	< 5 U
IW-72	IW-72-20090508	5/8/2009	40	< 5 U	< 5 U
IW-72	IW-72-20110303-FS	3/3/2011	3.1 J	< 0.56 U	< 0.85 U
IW-72	IW-72-20110519-FS	5/19/2011	< 1.6 U	< 0.56 U	
IW-72	IW-72-20111024	10/24/2011	< 5 U	< 5 U	< 5 U
IW-72	IW-72-20120417	4/17/2012	3.8 J	< 5 U	< 5 U
IW-72	IW-72-20121019	10/19/2012	< 1.6 U	< 0.56 U	< 0.11 U
IW-72	IW-72-20130424	4/24/2013	< 1.6 U	< 0.56 U	< 0.11 U
IW-72	IW-72-101513	10/15/2013	< 1.6 U	< 0.56 U	< 0.11 U
IW-72	IW-72-201403	3/6/2014	< 0.17 U	< 0.080 U	< 0.13 U
IW-72	IW-72-201405	5/12/2014	< 0.17 U	< 0.080 U	< 0.13 U
IW-72	IW-72-201407	7/29/2014	< 0.50 U	< 0.50 U	< 0.50 U
IW-72	IW-72-201410	10/13/2014	< 0.50 U	< 0.50 U	< 0.50 U
IW-72	IW-72-201501	1/12/2015	< 0.50 U	< 0.50 U	< 0.50 U
IW-72	IW-72-201504	4/15/2015	< 0.50 U	< 0.50 U	< 0.50 U
IW-72	IW-72-201507	7/20/2015	0.48 J	< 0.080 U	< 0.13 U
IW-72	IW-72-201510	10/6/2015	0.74 J	< 0.080 U	< 0.13 U
IW-72	IW-72-201601	1/12/2016	1.4	< 0.080 U	< 0.13 U
IW-72	IW-72-201605	5/3/2016	1.8	< 0.080 U	< 0.13 U
IW-73	IW-73-20090423	4/23/2009	400	16	< 5 U
IW-73	IW-73-20110519-FS	5/19/2011	160	3.6 J	
IW-73	IW-73-20111025	10/25/2011	250	4.9 J	< 5 U
IW-73	IW-73-20120417	4/17/2012	180	5.8	< 5 U
IW-73	IW-73-20121020	10/20/2012	170	7	< 0.11 U
IW-73	IW-73-20130424	4/24/2013	200	6.5	< 0.11 U
IW-73	IW-73-20130424-FD	4/24/2013	180	6.4	< 0.11 U
IW-73	IW-73-101513	10/15/2013	140	47	6.3
IW-73	IW-73-201403	3/7/2014	183	20.9	4.6
IW-73	IW-73-201405	5/14/2014	31.9	0.81 J	< 0.13 U
IW-73	IW-73-201407	7/29/2014	138	24.3	26.1
IW-73	IW-73-201410	10/14/2014	8.5	0.84 J	1.1 J
IW-73	IW-73-201501	1/14/2015	70.8	6.3	4.1
IW-73	IW-73-201504	4/15/2015	96.8	6.8	1.6
IW-73	IW-73-201507	7/21/2015	143	9	1.5
IW-73	IW-73-201510	10/6/2015	154	7.8	0.59 J
IW-73	IW-73-201601	1/12/2016	103	4.3	0.24 J
IW-73	IW-73-201605	5/4/2016	125	4.9	0.35 J
IW-73	DUP-01-201611	11/9/2016	116	2.8	0.21 J
IW-73	IW-73-201611	11/9/2016	113	2.5	0.16 J
IW-73	IW-73-201704	4/28/2017	108	3.8	< 0.13 U
IW-73	IW-73-201710	10/24/2017	126	3.3	< 0.13 U
IW-74	IW-74-20090423	4/23/2009	260	8.1	< 5 U
IW-74	IW-74-20110519-FS	5/19/2011	74	< 0.56 U	

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
IW-74	IW-74-20111025	10/25/2011	150	3.1 J	< 5 U
IW-74	IW-74-20120417	4/17/2012	130	2.4 J	< 5 U
IW-74	IW-74-20121020	10/20/2012	160	3.4 J	< 0.11 U
IW-74	IW-74-20130424	4/24/2013	160	4.8 J	< 0.11 U
IW-74	IW-74-101513	10/15/2013	190	5.7	< 0.11 U
IW-74	IW-74-201403	3/7/2014	135	4.3 J	1.5 J
IW-74	IW-74-201403-FD	3/7/2014	151	4.5 J	2.2
IW-74	IW-74-201405	5/14/2014	169	4.3 J	0.80 J
IW-74	IW-74-201407	7/29/2014	177	5.8	0.91 J
IW-74	DUP-01-201410	10/14/2014	143	3.3 J	< 0.50 U
IW-74	IW-74-201410	10/14/2014	144	3.3 J	< 0.50 U
IW-74	DUP-01-201501	1/14/2015	139	3.5	< 0.50 U
IW-74	IW-74-201501	1/14/2015	141	3.8	< 0.50 U
IW-74	DUP-05-201504	4/15/2015	153	4.8	< 0.50 U
IW-74	IW-74-201504	4/15/2015	147	5	< 0.50 U
IW-74	DUP-08-201507	7/21/2015	168	4.2	1.3
IW-74	IW-74-201507	7/21/2015	168	4.6	1.4
IW-74	DUP-10-201510	10/7/2015	122	3.8	0.33 J
IW-74	IW-74-201510	10/7/2015	121	3.8	0.36 J
IW-74	DUP-05-201601	1/12/2016	135	3.3	0.18 J
IW-74	IW-74-201601	1/12/2016	135	3.2	0.17 J
IW-74	DUP-07-201605	5/4/2016	108	3.2	0.42 J
IW-74	IW-74-201605	5/4/2016	122	3.5	0.44 J
IW-75	IW-75-20090116	1/16/2009	140	2.4 J	< 5 U
IW-75	IW-75-20111025	10/25/2011	< 5 U	< 5 U	< 5 U
IW-75	IW-75-20120417	4/17/2012	2.9 J	< 5 U	< 5 U
IW-75	IW-75-20121018	10/18/2012	< 1.6 U	< 0.56 U	< 0.11 U
IW-75	IW-75-101513	10/15/2013	< 1.6 U	< 0.56 U	< 0.11 U
IW-76	IW-76-20090423	4/23/2009	730	28	< 5 U
IW-76	IW-76-20090507	5/7/2009	460	28	< 5 U
IW-76	IW-76-20110304-FS	3/4/2011	380	11	< 0.85 U
IW-76	IW-76-20110523-FS	5/23/2011	460	12	
IW-76	IW-76-20111025	10/25/2011	130	2.2 J	< 5 U
IW-76	IW-76-20120417	4/17/2012	400	8.9	< 5 U
IW-76	IW-76-20121020	10/20/2012	610	16	< 0.11 U
IW-76	IW-76-20130424	4/24/2013	420	13	0.39 J
IW-76	IW-76-101513	10/15/2013	450	8.7	< 0.11 U
IW-76	IW-76-201403	3/8/2014	127	1.5 J	< 0.13 U
IW-76	IW-76-201405	5/14/2014	10.3	< 0.080 U	< 0.13 U
IW-76	IW-76-201407	7/29/2014	319	2.7 J	< 0.50
IW-76	IW-76-201410	10/15/2014	214	6.7	< 0.50 U
IW-76	IW-76-201501	1/14/2015	288	8.8	< 0.50 U
IW-76	IW-76-201504	4/15/2015	354	11.2	< 0.50 U
IW-76	IW-76-201507	7/21/2015	323	7.3	< 0.13 U
IW-76	IW-76-201510	10/6/2015	106	1.6	< 0.13 U
IW-76	IW-76-201601	1/12/2016	80.2 J	1.9	< 0.13 U
IW-76	IW-76-201605	5/4/2016	139 J	2.6	< 0.13 U
IW-77	IW-77-20090423	4/23/2009	570	20	< 5 U
IW-77	IW-77-20090507	5/7/2009	300	17	< 5 U
IW-77	IW-77-20090527	5/27/2009	250	13	< 5 U
IW-77	IW-77-20091028	10/28/2009	380	13	< 5 U
IW-77	IW-77-20091221-FS	12/21/2009	250	12	< 1.6 U
IW-77	IW-77-20100513	5/13/2010	260	11	< 5 U
IW-77	IW-77-20101105	11/5/2010	1400	41	< 5 U
IW-77	IW-77-20110304-FS	3/4/2011	430	14	< 0.85 U
IW-77	IW-77-20110523-FS	5/23/2011	440	15	
IW-77	IW-77-20111025	10/25/2011	1400	32	< 5 U
IW-77	IW-77-20120417	4/17/2012	510	23	< 5 U
IW-77	IW-77-20120417-FD	4/17/2012	520	20	< 5 U
IW-77	IW-77-20121019	10/19/2012	1000	32	0.65 J
IW-77	IW-77-20130424	4/24/2013	530	21	< 0.11 U
IW-77	IW-77-101613	10/16/2013	1000	39	1.6 J
IW-77	IW-77-20131016-FD	10/16/2013	990	39	0.49 J
IW-77	IW-77-201403	3/8/2014	546	24.4	0.22 J
IW-77	IW-77-201405	5/14/2014	1460	36	0.66 J
IW-77	20140709-GW-IW-77	7/9/2014	1200	21.1	< 0.50 U
IW-77	IW-77-201407	7/29/2014	1540	35.2	< 0.50 U
IW-77	IW-77-201410	10/15/2014	741	15.8	< 0.50 U
IW-77	IW-77-20141023	10/23/2014	554	11.9	< 0.50 U
IW-77	IW-77-201501	1/14/2015	201	4.8	< 0.50 U
IW-77	IW-77-201504	4/14/2015	153	2.9	< 0.50 U
IW-77	IW-77-201507	7/21/2015	130	2.4	< 0.13 U
IW-77	IW-77-201510	10/8/2015	24.3	0.54 J	< 0.13 U
IW-77	IW-77-201511	11/5/2015	95.1	1.1	< 0.13 U
IW-77	IW-77-201512	12/2/2015	87.8	1.3	< 0.13 U
IW-77	IW-77-201601	1/11/2016	95.3	1.3	< 0.13 U
IW-77	IW-77-201605	5/4/2016	101	1.7	< 0.13 U
IW-77	IW-77-201611	11/8/2016	137	2.1	< 0.13 U
IW-77	IW-77-201704	4/28/2017	113	1.8	< 0.13 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
IW-77	IW-77-201710	10/24/2017	161	2.9	< 0.13 U
IW-78	IW-78-20111025	10/25/2011	350	12	< 5 U
IW-78	IW-78-20120418	4/18/2012	120	2.3 J	< 5 U
IW-78	IW-78-20121020	10/20/2012	310	8.7	< 0.11 U
IW-78	IW-78-20130424	4/24/2013	7	< 0.56 U	< 0.11 U
IW-78	IW-78-101713	10/17/2013	190	4.6 J	< 0.11 U
IW-78	IW-78-201405	5/28/2014	255	6.2	< 0.13 U
IW-78	IW-78-201409	9/11/2014	39.6	1.2 J	< 0.50 U
IW-78	IW-78-201601	1/11/2016	1.5	< 0.080 U	< 0.13 U
IW-78	IW-78-201605	5/3/2016	1.3	< 0.080 U	< 0.13 U
IW-78	IW-78-201611	11/8/2016	2.6	< 0.080 U	< 0.13 U
IW-78	IW-78-201710	10/25/2017	7.0	0.16 J	< 0.13 U
IW-79	IW-79-20111025	10/25/2011	570	13	< 5 U
IW-79	IW-79-20120417	4/17/2012	430	2.1 J	< 5 U
IW-79	IW-79-20121020	10/20/2012	670	20	0.45 J
IW-79	IW-79-20121020-FD	10/20/2012	480	16	< 0.11 U
IW-79	IW-79-20130424	4/24/2013	420	9	< 0.11 U
IW-79	IW-79-101713	10/17/2013	440	12	< 0.11 U
IW-79	IW-79-201405	5/28/2014	426	6.9	< 0.13 U
IW-79	IW-79-201409	9/11/2014	105	1.8 J	< 0.50 U
IW-79	IW-79-201601	1/11/2016	70	1.4	< 0.13 U
IW-79	IW-79-201605	5/4/2016	55	1	< 0.13 U
IW-80	IW-80-20090423	4/23/2009	170	4 J	< 5 U
IW-80	IW-80-20090507	5/7/2009	69	< 5 U	< 5 U
IW-80	IW-80-20110519-FS	5/19/2011	27	< 0.56 U	
IW-80	IW-80-20111025	10/25/2011	9.7	< 5 U	< 5 U
IW-80	IW-80-20120417	4/17/2012	55	2.2 J	< 5 U
IW-80	IW-80-20121019	10/19/2012	48	< 0.56 U	< 0.11 U
IW-80	IW-80-20130424	4/24/2013	40	< 0.56 U	< 0.11 U
IW-80	IW-80-101713	10/17/2013	58	2.4 J	< 0.11 U
IW-80	IW-80-20131017-FD	10/17/2013	62	2.4 J	< 0.11 U
IW-80	IW-80-201403	3/8/2014	79.1 J	2.7 J	< 0.13 U
IW-80	IW-80-201405	5/13/2014	24.2	< 0.080 U	< 0.13 U
IW-80	IW-80-201407	7/30/2014	25.6	0.85 J	< 0.50 U
IW-80	IW-80-201410	10/14/2014	11.8	< 0.50 U	< 0.50 U
IW-80	IW-80-201501	1/13/2015	7.1	< 0.50 U	< 0.50 U
IW-80	IW-80-201504	4/14/2015	9.2	< 0.50 U	< 0.50 U
IW-80	IW-80-201507	7/21/2015	12.5	0.39 J	< 0.13 U
IW-80	IW-80-201510	10/6/2015	10.6	0.37 J	< 0.13 U
IW-80	IW-80-201511	11/5/2015	11	< 0.080 U	< 0.13 U
IW-80	IW-80-201512	12/2/2015	9	0.35 J	< 0.13 U
IW-80	IW-80-201601	1/7/2016	4.2	< 0.080 U	< 0.13 U
IW-80	IW-80-201605	5/3/2016	4.3	< 0.080 U	< 0.13 U
IW-101	IW-101-20140323	3/23/2014	314	7.5	0.21 J
IW-101	IW-101-20140430	4/30/2014	794	18.9	< 0.13 U
IW-101	IW-101-20140523	5/23/2014	509	11.2	< 0.13 U
IW-101	20140708-GW-IW-101	7/8/2014	150	4.5 J	< 0.50 U
IW-101	IW-101-201409	9/12/2014	139	3.4 J	< 0.50 U
IW-101	IW-101-201601	1/7/2016	42.9	1.1	< 0.13 U
IW-101	IW-101-201605	5/5/2016	20.3	0.54 J	< 0.13 U
IW-102	IW-102-20140323	3/23/2014	685	14.6	0.45 J
IW-102	IW-102-20140430	4/30/2014	239	5.4	< 0.13 U
IW-103	IW-103-20140323	3/23/2014	692	13.1	0.76 J
IW-103	IW-103-20140430	4/30/2014	729	22.8	0.83 J
IW-104	IW-104-20140323	3/23/2014	637	13.5	0.69 J
IW-104	IW-104-20140430	4/30/2014	527	12.6	< 0.13 U
IW-105	IW-105-20140323	3/23/2014	901	14.4	0.54 J
IW-105	IW-105-20140430	4/30/2014	185	4.9 J	< 0.13 U
IW-106	IW-106-20140323	3/23/2014	198	4.2 J	< 2 U
IW-106	IW-106-20140430	4/30/2014	163	6.8	< 0.13 U
IW-106	IW-106-20140523	5/23/2014	132	2.6 J	< 0.13 U
IW-107	IW-107-20140323	3/23/2014	198	4.3 J	0.14 J
IW-107	IW-107-20140430	4/30/2014	110	3.3 J	< 0.13 U
IW-108	IW-108-20140323	3/23/2014	1280	27.8	0.83 J
IW-108	IW-108-20140429	4/29/2014	72.1	4.1 J	< 0.13 U
IW-108	IW-108-20140523	5/23/2014	59	1.5 J	< 0.13 U
IW-109	IW-109-20140323	3/23/2014	362	7.4	0.23 J
IW-109	IW-109-20140429	4/29/2014	91.2	2.5 J	< 0.13 U
IW-109	IW-109-20140523	5/23/2014	110	1.9 J	< 0.13 U
IW-110	IW-110-20140323	3/23/2014	464	9.8	0.5 J
IW-110	IW-110	4/16/2014	397	9.4	0.17 J
IW-110	IW-110-20140430	4/30/2014	268	8.2	0.33 J
IW-111	IW-111-20140323	3/23/2014	704	14	0.63 J
IW-111	IW-111-20140429	4/29/2014	260	6.4	< 0.13 U
IW-112	IW-112-20140323	3/23/2014	219	4.9 J	0.23 J
IW-112	IW-112	4/16/2014	200	4.8 J	< 0.13 U
IW-112	IW-112-20140430	4/30/2014	104	3.8 J	< 0.13 U
IW-113	IW-113-20140324	3/24/2014	510	11.1	0.43 J
IW-113	IW-113	4/14/2014	435	8.7	< 0.13 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
IW-114	IW-114-20140324	3/24/2014	397	9.7	0.25 J
IW-114	IW-114	4/14/2014	336	8.1	< 0.13 U
IW-115	IW-115-20140324	3/24/2014	622	14	0.25 J
IW-115	IW-115-20140407	4/7/2014	455	9.1 J	< 1.3 U
IW-115	IW-115	4/14/2014	449	9.3	< 0.13 U
IW-115	IW-115-201405	5/28/2014	504	11.2	0.27 J
IW-115	20140709-GW-IW-115	7/9/2014	352	7.4	< 0.50 U
IW-115	IW-115-201409	9/11/2014	355	8	< 0.50 U
IW-115	IW-115-201601	1/11/2016	169	3.6	< 0.13 U
IW-115	IW-115-201605	5/4/2016	51.9	1.1	< 0.13 U
IW-116	IW-116-20140324	3/24/2014	486	10.9	0.33 J
IW-116	IW-116	4/15/2014	546	10.8	0.34 J
IW-117	IW-117-20140324	3/24/2014	384	9.1	0.23 J
IW-117	IW-117	4/15/2014	384	9.9	< 0.13 U
IW-118	IW-118-20140324	3/24/2014	496	11.6	0.34 J
IW-118	IW-118	4/15/2014	395	9.7	< 0.13 U
IW-118	IW-118-201405	5/28/2014	437	9.3	< 0.13 U
IW-119	IW-119-20140324	3/24/2014	524	11.5	0.33 J
IW-119	IW-119-20140407	4/7/2014	478	9.1 J	< 1.3 U
IW-119	IW-119	4/15/2014	509	11.3	< 0.13 U
IW-120	IW-120-20140324	3/24/2014	289	7.9	0.14 J
IW-120	IW-120	4/15/2014	390	10.2	< 0.13 U
IW-121	IW-121-20140324	3/24/2014	402	8.9 J	< 10 U
IW-121	IW-121	4/15/2014	445	11.7	< 0.13 U
IW-122	IW-122-20140324	3/24/2014	473	11.5	0.29 J
IW-122	IW-122	4/15/2014	384	10	< 0.13 U
IW-123	IW-123-20140324	3/24/2014	532	12.2	0.40 J
IW-123	IW-123-20140407	4/7/2014	539	8.8 J	< 1.3 U
IW-123	IW-123	4/15/2014	488	10	< 0.13 U
IW-124	IW-124-20140324	3/24/2014	455	6.8 J	< 10 U
IW-124	IW-124	4/15/2014	448	8.7	0.26 J
IW-125	IW-125-20140325	3/25/2014	2140	207	3.1
IW-125	IW-125-201405	5/29/2014	17.1	2.9 J	< 0.13 U
IW-125	IW-125-201409	9/11/2014	7.3	1 J	< 0.50 U
IW-126	IW-126-20140325	3/25/2014	2020	197	10.4
IW-126	IW-126-201405	5/29/2014	787	59.1	< 0.13 U
IW-127	IW-127-20140324	3/24/2014	3700	219 J	7.6
IW-127	IW-127-201405	5/29/2014	639	34.7	< 0.13 U
IW-127	IW-127-201409	9/11/2014	1020	38.5	2.6
IW-127	IW-127-20141204	12/4/2014	182	7.2	< 0.50 U
IW-128	IW-128-20140325	3/25/2014	2980	178	11.7
IW-128	IW-128-20140429	4/29/2014	1250	68.4	4.9
IW-128	IW-128-201405	5/29/2014	1190	62.7	< 0.13 U
IW-129	IW-129-20140325	3/25/2014	2540	192	< 0.13 U
IW-129	IW-129-201405	5/29/2014	25.8	1.8 J	< 0.13 U
IW-130	IW-130-20140323	3/23/2014	358	7.6 J	< 10 U
IW-130	IW-130-20140523	5/23/2014	75.5	0.78 J	< 0.13 U
IW-131	IW-131-20140324	3/24/2014	526	11.5	0.35 J
IW-131	IW-131-20140430	4/30/2014	318	8.5	0.31 J
IW-131	IW-131-201405	5/28/2014	443	8.8	0.30 J
IW-132	IW-132-20141023	10/23/2014	714	3.5 J	< 0.50 U
IW-135	IW-135-20141023	10/23/2014	3840	43.3	2.0
IW-141	IW-141-20141023	10/23/2014	368000	< 1000 U	82.6
IW-141	IW-141-20141205	12/5/2014	46300	232 E	31.0
IW-143	IW-143-20141023	10/23/2014	13100	44.8	2.5
IW-147	IW-147-20141023	10/23/2014	199000	1640 J	< 1000 U
IW-147	IW-147-20141205	12/5/2014	91600	1420 J	176
IW-152	IW-152-20141022	10/22/2014	17600	224 J	8.2
IW-152	IW-152-20141204	12/4/2014	< 0.50 U	< 0.50 U	< 0.50 U
IW-153	IW-153-20141023	10/23/2014	293	85.3	12.3
IW-153	IW-153-20141204	12/4/2014	1.6 J	< 0.50 U	< 0.50 U
IW-155	IW-155-20141023	10/23/2014	14600	36.4	5.8
IW-157	IW-157-20141023	10/23/2014	74200	712 J	195
IW-157	IW-157-20141205	12/5/2014	31700	391 E	66.8
IW-169	IW-169-20141022	10/22/2014	163	1.7 J	< 0.50 U
MW-22	MW-22-19961201	12/1/1996	< ND		< ND
MW-22	MW-22-19970501	5/1/1997	< ND	5	< ND
MW-22	MW-22-19990201	2/1/1999	< ND	5	< ND
MW-22	MW-22-20000301	3/1/2000	< ND	< ND	< ND
MW-22	MW-22-20000919	9/19/2000	< 5 U	< 5 U	< 10 U
MW-22	MW-22-20010327	3/27/2001	< 5 U	< 5 U	< 10 U
MW-22	MW-22-20010913	9/13/2001	< 5 U	< 5 U	< 10 U
MW-22	MW-22-20020910	9/10/2002	9	< 5 U	< 10 U
MW-22	MW-22-20030227	2/27/2003	< 5 U	< 5 U	< 10 U
MW-22	MW-22-20030923	9/23/2003	< 5 U	< 5 U	< 10 U
MW-22	MW-22-20030923-FD	9/23/2003	< 5 U	< 5 U	< 10 U
MW-22	MW-22-20040413	4/13/2004	< 5 U	< 5 U	< 10 U
MW-22	MW-22-20040921	9/21/2004	< 5 U	< 5 U	< 10 U
MW-22	MW-22-20050930	9/30/2005	< 5 U	< 5 U	< 10 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-22	MW-22-20061014	10/14/2006	< 5 U	< 5 U	< 10 UJ
MW-22	MW-22-20070920	9/20/2007	< 5 U	< 5 U	< 10 U
MW-22	MW-22-20081209	12/9/2008	< 5 U	< 5 U	< 5 U
MW-22	MW-22-20091027	10/27/2009	< 5 U	< 5 U	< 5 U
MW-22	MW-22-20101103	11/3/2010	< 5 U	< 5 U	< 5 U
MW-22	MW-22-20111027	10/27/2011	2.1 J	< 5 U	< 5 U
MW-22	MW-22-20120418	4/18/2012	< 5 U	< 5 U	< 5 U
MW-22	MW-22-20121017	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-22	MW-22-20130423	4/23/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-22	MW-22-101413	10/14/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-22	MW-22-201403	3/5/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-22	MW-22-201405	5/12/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-22	MW-22-201407	7/30/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-22	MW-22-201410	10/15/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-22	MW-22-201501	1/13/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-22	MW-22-201504	4/13/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-22	MW-22-201507	7/22/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-22	MW-22-201510	10/7/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-22	MW-22-201601	1/12/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-22	MW-22-201605	5/4/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-22	MW-22-201611	11/8/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-22	MW-22-201710	10/25/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-23	MW-23-19961201	12/1/1996	210		< ND
MW-23	MW-23-19970501	5/1/1997	2400		< ND
MW-23	MW-23-19990201	2/1/1999	350	10	< ND
MW-23	MW-23-19990201-FD	2/1/1999	440	10	< ND
MW-23	MW-23-20000301-FD	3/1/2000	147	< ND	< ND
MW-23	ITMW-23-20000921	9/21/2000	67	< 5 U	< 10 U
MW-23	ITMW-23-20010105	1/5/2001	137	< 5 U	< 10 U
MW-23	ITMW-23-20010326	3/26/2001	87	< 5 U	< 10 U
MW-23	ITMW-23-20010911	9/11/2001	23	< 5 U	< 10 U
MW-23	ITMW-23-20020911	9/11/2002	111	< 5 U	< 10 U
MW-23	MW-23-20020911-FD	9/11/2002	105	< 5 U	< 10 U
MW-23	ITMW-23-20030227	2/27/2003	54	< 5 U	< 10 U
MW-23	ITMW-23-20030925	9/25/2003	83.9	< 5 U	< 10 U
MW-23	ITMW-23-20040415	4/15/2004	70.3	< 5 U	< 10 U
MW-23	ITMW-23-20040922	9/22/2004	73.4	< 5 U	< 10 U
MW-23	ITMW-23-20050405	4/5/2005	55.5	< 5 U	< 10 U
MW-23	ITMW-23-20050929	9/29/2005	65.8	< 5 U	< 10 U
MW-23	ITMW-23-20060317	3/17/2006	47.1	< 5 U	< 10 U
MW-23	ITMW-23-20061014	10/14/2006	59	< 5 U	< 10 UJ
MW-23	ITMW-23-20070419	4/19/2007	39.9	9.79	< 10 U
MW-23	ITMW-23-20070919	9/19/2007	47	< 5 U	< 10 U
MW-23	ITMW-23-20080429	4/29/2008	29 0	< 5 U	< 10 U
MW-23	ITMW-23-20081210	12/10/2008	69	< 5 U	< 5 U
MW-23	ITMW-23-20090427	4/27/2009	32	< 5 U	< 5 U
MW-23	ITMW-23-20091029	10/29/2009	45	< 5 U	< 5 U
MW-23	ITMW-23-20100512	5/12/2010	52	< 5 U	< 5 U
MW-23	MW-23-20100512-FD	5/12/2010	55	< 5 U	< 5 U
MW-23	ITMW-23-20101105	11/5/2010	76	< 5 U	< 5 U
MW-23	ITMW-23-20110323	3/23/2011	46	< 5 U	< 5 U
MW-23	ITMW-23-20111027	10/27/2011	41	< 5 U	< 5 U
MW-23	ITMW-23-20120418	4/18/2012	36	< 5 U	< 5 U
MW-23	ITMW-23-20121019	10/19/2012	43	< 0.56 U	< 0.11 U
MW-23	ITMW-23-20130425	4/25/2013	20	< 0.56 U	< 0.11 U
MW-23	MW-23-101613	10/16/2013	54	< 0.56 U	< 0.11 U
MW-23	MW-23-20140522	5/22/2014	22.8	< 0.080 U	< 0.13 U
MW-23	20140708-GW-MW-23	7/8/2014	27.8	0.68 J	< 0.50 U
MW-23	MW-23-201409	9/12/2014	62.1	1.8 J	< 0.50 U
MW-23	MW-23-20141023	10/23/2014	189	3.5 J	< 0.50 U
MW-23	MW-23-201501	1/15/2015	115	2.2	< 0.50 U
MW-23	MW-23-201504	4/14/2015	57.5	1.1	< 0.50 U
MW-23	MW-23-201507	7/23/2015	37.8	0.95 J	< 0.13 U
MW-23	MW-23-201510	10/8/2015	0.65 J	< 0.080 U	< 0.13 U
MW-23	MW-23-201511	11/5/2015	0.4 J	< 0.080 U	< 0.13 U
MW-23	MW-23-201512	12/1/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-23	MW-23-201601	1/7/2016	0.48 J	< 0.080 U	< 0.13 U
MW-23	MW-23-201605	5/5/2016	0.9 J	< 0.080 U	< 0.13 U
MW-24	MW-24-19990201	2/1/1999	1400	49	< ND
MW-24	MW-24-20000301	3/1/2000	403	25	< ND
MW-24	MW-24-20000301-FD	3/1/2000	595	24	< ND
MW-24	MW-24-20000921	9/21/2000	128	11	< 10 U
MW-24	MW-24-20010105	1/5/2001	247	12	< 10 U
MW-24	MW-24-20010326	3/26/2001	330	11	< 10 U
MW-24	MW-24-20010911	9/11/2001	124	6	< 10 U
MW-24	MW-24-20020911	9/11/2002	199	6	< 10 U
MW-24	MW-24-20030227	2/27/2003	253	7.01	< 10 U
MW-24	MW-24-20030925	9/25/2003	155	< 5 U	< 10 U
MW-24	MW-24-20040415	4/15/2004	181	5.12	< 10 U
MW-24	MW-24-20040923	9/23/2004	116	< 5 U	< 10 U

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Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-24	MW-24-20050406	4/6/2005	152	6.04	< 10 U
MW-24	MW-24-20050929	9/29/2005	161	< 5 U	< 10 U
MW-24	MW-24-20060316	3/16/2006	347	7.57	< 10 U
MW-24	MW-24-20061014	10/14/2006	620	11	2 J
MW-24	MW-24-20070419	4/19/2007	196	11.6	< 10 U
MW-24	MW-24-20070920	9/20/2007	140	< 5 U	< 10 U
MW-24	MW-24-20070920-FD	9/20/2007	150	< 5 U	< 10 U
MW-24	MW-24-20080429	4/29/2008	150 0	3 J	< 10 U
MW-24	MW-24-20081210	12/10/2008	150	3.4 J	< 5 U
MW-24	MW-24-20081210-FD	12/10/2008	130	3.4 J	< 5 U
MW-24	MW-24-20090427	4/27/2009	120	< 5 U	< 5 U
MW-24	MW-24-20091029	10/29/2009	110	2.6 J	< 5 U
MW-24	MW-24-20100512	5/12/2010	150	4.3 J	< 5 U
MW-24	MW-24-20110323	3/23/2011	170	3.6 J	< 5 U
MW-24	MW-24-20111027	10/27/2011	170	1.9 J	< 5 U
MW-24	MW-24-20111027-FD	10/27/2011	170	1.4 J	< 5 U
MW-24	MW-24-20120418	4/18/2012	150	2.9 J	< 5 U
MW-24	MW-24-20121019	10/19/2012	190	3.7 J	< 0.11 U
MW-24	MW-24-20130425	4/25/2013	110	3.5 J	0.23 J
MW-24	MW-24-20140522	5/22/2014	79.7	1.2 J	< 0.13 U
MW-24	20140708-GW-MW-24	7/8/2014	102	1.4 J	< 0.50 U
MW-24	MW-24-201409	9/12/2014	55.7	0.66 J	< 0.50 U
MW-24	MW-24-20141023	10/23/2014	33.1	< 0.50 U	< 0.50 U
MW-24	MW-24-201501	1/15/2015	26.9	< 0.50 U	< 0.50 U
MW-24	MW-24-201504	4/16/2015	18.8	< 0.50 U	< 0.50 U
MW-24	MW-24-201507	7/23/2015	178	3.1	< 0.13 U
MW-24	MW-24-201510	10/8/2015	44.1	0.83 J	< 0.13 U
MW-24	MW-24-201511	11/5/2015	75.8	0.2 J	< 0.13 U
MW-24	MW-24-201512	12/2/2015	84.1	0.59 J	< 0.13 U
MW-24	MW-24-201601	1/7/2016	49.3	0.48 J	< 0.13 U
MW-24	MW-24-201605	5/4/2016	23.8 J	0.27 J	< 0.13 U
MW-24	MW-24-201611	11/8/2016	4.2	< 0.080 U	< 0.13 U
MW-24	MW-24-201710	10/25/2017	20.9	< 0.080 U	< 0.13 U
MW-25	MW-25-19990201	2/1/1999	29000	170	100
MW-25	MW-25-19990201-FD	2/1/1999	27000	180	110
MW-25	MW-25-19991201	12/1/1999	94500	< ND	< ND
MW-25	MW-25-20000301	3/1/2000	35900	245	63
MW-25	MW-25-20000921	9/21/2000	59000	300	50
MW-25	MW-25-20010328	3/28/2001	34000	117	60
MW-25	MW-25-20010913	9/13/2001	60000	300	< 200 U
MW-25	MW-25L-20020909	9/9/2002	157000	440	180
MW-25	MW-25T-20020909	9/9/2002	56000	370	200
MW-25	MW-25-20030226	2/26/2003	45900	557	75.7
MW-25	MW-25-20030717	7/17/2003	62200	621	243
MW-25	MW-25-20030924	9/24/2003	103000	775	< 500 U
MW-25	MW-25-20040414	4/14/2004	25600	255	31.8
MW-25	MW-25-20040921	9/21/2004	85200	819	422
MW-25	MW-25-20050407	4/7/2005	21100	353	61.1
MW-25	MW-25-20050928	9/28/2005	136000	837	< 500 U
MW-25	MW-25-20060315	3/15/2006	36300	774	< 200 U
MW-25	MW-25-20061012	10/12/2006	64000	1300	610
MW-25	MW-25-20061012-FD	10/12/2006	65000	1400	600
MW-25	MW-25-20070418	4/18/2007	19000	321	20
MW-25	MW-25-20070418-FD	4/18/2007	18000	319	20
MW-25	MW-25-20070921	9/21/2007	54000	1200	800
MW-25	MW-25-20070921-FD	9/21/2007	55000	1200	780
MW-25	MW-25-20080429	4/29/2008	23000 0	470 0	10 J
MW-25	MW-25-20080429-FD	4/29/2008	25000 0	510 0	10 J
MW-25	MW-25-20081210	12/10/2008	100000	1200	430
MW-25	MW-25-20090427	4/27/2009	36000	2100	140
MW-25	MW-25-20090427-FD	4/27/2009	39000	2000	190
MW-25	MW-25-20091027	10/27/2009	140000	1500	570
MW-25	MW-25-20100511	5/11/2010	81000	1400	11
MW-25	MW-25-20101104	11/4/2010	270000	1500	400
MW-25	MW-25-20110322	3/22/2011	57000	2400	34
MW-25	MW-25-20111026	10/26/2011	120000	2100	< 250 U
MW-25	MW-25-20120417	4/17/2012	18000	690	18
MW-25	MW-25-20121019	10/19/2012	56000	4200	1500
MW-25	MW-25-20121019-FD	10/19/2012	49000	3600	1500
MW-25	MW-25-20130425	4/25/2013	9100	330	7.9
MW-25	MW-25-20130425-FD	4/25/2013	9500	380	11
MW-25	MW-25-101813	10/18/2013	43000	2900	1300
MW-25	MW-25-201403	3/8/2014	14500	625	33.6 J
MW-25	MW-25-201405	5/15/2014	18500	600 J	30.3
MW-25	20140709-GW-MW-25	7/9/2014	49900	1750	< 0.50 U
MW-25	MW-25-201407	7/31/2014	71700	2310 J	< 500 U
MW-25	MW-25-201410	10/16/2014	42500	2870 J	540 J
MW-25	MW-25-20141024	10/24/2014	59800	2650 J	0.66 J
MW-25	MW-25-20141205	12/5/2014	2620 J	31.5	2.1
MW-25	MW-25-201501	1/15/2015	2510	126	1.6

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-25	MW-25-201504	4/16/2015	4650	204	6.4
MW-25	MW-25-201507	7/23/2015	39800	580 J	66.4
MW-25	MW-25-201510	10/8/2015	68700	957 J	< 0.13 U
MW-25	MW-25-201601	1/13/2016	43400	608 J	55.0
MW-25	MW-25-201605	5/5/2016	53000	83.6	< 0.13 U
MW-25	MW-25-201611	11/9/2016	36900	509 J	< 130 U
MW-25	MW-25-201710	10/26/2017	97400	22900	<0.13 U
MW-25	DUP-08-201710	10/26/2017	95900	20900	<0.13 U
MW-26	MW-26-19990201	2/1/1999	360	150	< ND
MW-26	MW-26-19990601	6/1/1999	< ND	< ND	< ND
MW-26	MW-26-20000301	3/1/2000	< ND	< ND	< ND
MW-26	MW-26-20000921	9/21/2000	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20010326	3/26/2001	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20010911	9/11/2001	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20010911-FD	9/11/2001	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20020910	9/10/2002	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20030227	2/27/2003	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20030924	9/24/2003	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20040414	4/14/2004	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20040922	9/22/2004	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20050929	9/29/2005	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20061012	10/12/2006	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20070919	9/19/2007	< 5 U	< 5 U	< 10 U
MW-26	MW-26-20081210	12/10/2008	< 5 U	< 5 U	< 5 U
MW-26	MW-26-20091029	10/29/2009	< 5 U	< 5 U	< 5 U
MW-26	MW-26-20100512	5/12/2010	< 5 U	< 5 U	< 5 U
MW-26	MW-26-20101105	11/5/2010	22	< 5 U	< 5 U
MW-26	MW-26-20111026	10/26/2011	< 5 U	< 5 U	< 5 U
MW-26	MW-26-20120418	4/18/2012	< 5 U	< 5 U	< 5 U
MW-26	MW-26-20121018	10/18/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-26	MW-26-20130423	4/23/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-26	MW-26-101513	10/15/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-26	MW-26-201403	3/5/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-26	MW-26-201405	5/12/2014	0.25 J	< 0.080 U	< 0.13 U
MW-26	MW-26-201407	7/30/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-26	MW-26-201410	10/14/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-26	MW-26-201501	1/14/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-26	MW-26-201504	4/13/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-26	MW-26-201507	7/22/2015	0.18 J	< 0.080 U	< 0.13 U
MW-26	MW-26-201510	10/7/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-26	MW-26-201601	1/13/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-26	MW-26-201605	5/2/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-26	MW-26-201611	11/9/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-26	MW-26-201704	4/28/2017	0.28 J	< 0.080 U	< 0.13 U
MW-26	MW-26-201710	10/25/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-27	MW-27-19991201	12/1/1999	< ND	< ND	< ND
MW-27	MW-27-19991207	12/7/1999	< 5 U	< 5 U	< 10 U
MW-27	MW-27-19991209	12/9/1999	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20000301	3/1/2000	< ND	< ND	< ND
MW-27	MW-27-20000921	9/21/2000	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20010105	1/5/2001	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20010105-FD	1/5/2001	5.55	< 5 U	< 10 U
MW-27	MW-27-20010326	3/26/2001	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20010911	9/11/2001	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20020911	9/11/2002	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20020911-FD	9/11/2002	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20030227	2/27/2003	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20030925	9/25/2003	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20040415	4/15/2004	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20040922	9/22/2004	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20050929	9/29/2005	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20061014	10/14/2006	2 J	< 5 U	< 10 U
MW-27	MW-27-20070919	9/19/2007	< 5 U	< 5 U	< 10 U
MW-27	MW-27-20081210	12/10/2008	< 5 U	< 5 U	< 5 U
MW-27	MW-27-20100512	5/12/2010	3.1 J	< 5 U	< 5 U
MW-27	MW-27-20101105	11/5/2010	42	< 5 U	< 5 U
MW-27	MW-27-20111027	10/27/2011	< 5 U	< 5 U	< 5 U
MW-27	MW-27-20120418	4/18/2012	2.6 J	< 5 U	< 5 U
MW-27	MW-27-20121018	10/18/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-27	MW-27-20130424	4/24/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-27	MW-27-101513	10/15/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-27	MW-27-201403	3/7/2014	0.31 J	< 0.080 U	< 0.13 U
MW-27	MW-27-201405	5/13/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-27	MW-27-201407	7/30/2014	0.63 J	< 0.50 U	< 0.50 U
MW-27	MW-27-201410	10/14/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-27	MW-27-201501	1/14/2015	0.84 J	0.59 J	< 0.50 U
MW-27	MW-27-201504	4/13/2015	0.59 J	< 0.50 U	< 0.50 U
MW-27	MW-27-201507	7/22/2015	0.18 J	< 0.080 U	< 0.13 U
MW-27	MW-27-201510	10/7/2015	0.55 J	0.33 J	< 0.13 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-27	MW-27-201601	1/12/2016	0.61 J	0.42 J	< 0.13 U
MW-27	MW-27-201605	5/4/2016	0.35 J	0.18 J	< 0.13 U
MW-27	MW-27-201611	11/9/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-27	MW-27-201710	10/25/2017	0.41 J	< 0.080 U	< 0.13 U
MW-28	MW-28-19991201	12/1/1999	< ND	< ND	< ND
MW-28	MW-28-19991209	12/9/1999	< 5 U	< 5 U	< 10 U
MW-28	MW-28-19991209-FD	12/9/1999	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20000301	3/1/2000	< ND	< ND	< ND
MW-28	MW-28-20000921	9/21/2000	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20010327	3/27/2001	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20010327-FD	3/27/2001	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20010911	9/11/2001	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20020911	9/11/2002	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20030227	2/27/2003	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20030925	9/25/2003	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20040415	4/15/2004	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20040922	9/22/2004	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20050930	9/30/2005	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20061014	10/14/2006	< 5 U	< 5 U	< 10 UJ
MW-28	MW-28-20070919	9/19/2007	< 5 U	< 5 U	< 10 U
MW-28	MW-28-20081210	12/10/2008	< 5 U	< 5 U	< 5 U
MW-28	MW-28-20091029	10/29/2009	< 5 U	< 5 U	< 5 U
MW-28	MW-28-20100512	5/12/2010	2.6 J	< 5 U	< 5 U
MW-28	MW-28-20101105	11/5/2010	54	< 5 U	< 5 U
MW-28	MW-28-20110323	3/23/2011	1.6 J	< 5 U	< 5 U
MW-28	MW-28-20111027	10/27/2011	< 5 U	< 5 U	< 5 U
MW-28	MW-28-20120419	4/19/2012	< 5 U	< 5 U	< 5 U
MW-28	MW-28-20121017	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-28	MW-28-20130424	4/24/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-28	MW-28-101513	10/15/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-28	MW-28-201403	3/6/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-28	MW-28-201405	5/13/2014	0.3 J	< 0.080 U	< 0.13 U
MW-28	MW-28-201407	7/30/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-28	MW-28-201410	10/14/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-28	MW-28-201501	1/14/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-28	MW-28-201504	4/13/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-28	MW-28-201507	7/22/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-28	MW-28-201510	10/7/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-28	MW-28-201601	1/12/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-28	MW-28-201605	5/4/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-28	MW-28-201611	11/9/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-28	MW-28-201710	10/25/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-29	MW-29-19991201	12/1/1999	< ND	< ND	< ND
MW-29	MW-29-19991209	12/9/1999	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20000301	3/1/2000	< ND	< ND	< ND
MW-29	MW-29-20000920	9/20/2000	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20010327	3/27/2001	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20010911	9/11/2001	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20020910	9/10/2002	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20030227	2/27/2003	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20030924	9/24/2003	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20040414	4/14/2004	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20040922	9/22/2004	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20050928	9/28/2005	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20061012	10/12/2006	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20070919	9/19/2007	< 5 U	< 5 U	< 10 U
MW-29	MW-29-20081210	12/10/2008	< 5 U	< 5 U	< 5 U
MW-29	MW-29-20081210-FD	12/10/2008	< 5 U	< 5 U	< 5 U
MW-29	MW-29-20091029	10/29/2009	< 5 U	< 5 U	< 5 U
MW-29	MW-29-20111025	10/25/2011	< 5 U	< 5 U	< 5 U
MW-29	MW-29-20120418	4/18/2012	< 5 U	< 5 U	< 5 U
MW-29	MW-29-20121018	10/18/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-29	MW-29-20130423	4/23/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-29	MW-29-101413	10/14/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-29	MW-29-201403	3/5/2014	0.52 J	< 0.080 U	< 0.13 U
MW-29	MW-29-201405	5/13/2014	0.18 J	< 0.080 U	< 0.13 U
MW-29	MW-29-201407	7/30/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-29	MW-29-201410	10/15/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-29	MW-29-201501	1/13/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-29	MW-29-201504	4/14/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-29	MW-29-201507	7/22/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-29	MW-29-201510	10/7/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-29	MW-29-201601	1/13/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-29	MW-29-201605	5/3/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-29	MW-29-201611	11/9/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-29	MW-29-201704	4/27/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-29	MW-29-201710	10/25/2017	0.19 J	0.16 J	< 0.13 U
MW-30	MW-30-19991201	12/1/1999	115	34	< ND
MW-30	MW-30-19991209	12/9/1999	115	34	< 10 U
MW-30	MW-30-20000301	3/1/2000	86	25	< ND

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-30	MW-30-20000920	9/20/2000	102	25	< 10 U
MW-30	MW-30-20010327	3/27/2001	43	11	< 10 U
MW-30	MW-30-20010911	9/11/2001	63	18	< 10 U
MW-30	MW-30-20020910	9/10/2002	48	14	< 10 U
MW-30	MW-30-20030227	2/27/2003	60	20.3	< 10 U
MW-30	MW-30-20030924	9/24/2003	46.8	13.7	< 10 U
MW-30	MW-30-20040414	4/14/2004	36.6	11.8	< 10 U
MW-30	MW-30-20040922	9/22/2004	36.2	12.1	< 10 U
MW-30	MW-30-20050928	9/28/2005	59.6	15.6	< 10 U
MW-30	MW-30-20061012	10/12/2006	53	15	< 10 U
MW-30	MW-30-20070920	9/20/2007	39	11	< 10 U
MW-30	MW-30-20081210	12/10/2008	37	11	< 5 U
MW-30	MW-30-20101103	11/3/2010	50	15	< 5 U
MW-30	MW-30-20111026	10/26/2011	57	16	< 5 U
MW-30	MW-30-20120418	4/18/2012	150	32	< 5 U
MW-30	MW-30-20121018	10/18/2012	65	19	< 0.11 U
MW-30	MW-30-20130425	4/25/2013	49	18	0.49 J
MW-30	MW-30-101413	10/14/2013	40	16	< 0.11 U
MW-31	MW-31-20010105	1/5/2001	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20010326	3/26/2001	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20010913	9/13/2001	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20020911	9/11/2002	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20030228	2/28/2003	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20030925	9/25/2003	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20040415	4/15/2004	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20040923	9/23/2004	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20050405	4/5/2005	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20050927	9/27/2005	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20060315	3/15/2006	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20061011	10/11/2006	3 J	< 5 U	< 10 U
MW-31	MW-31-20070419	4/19/2007	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20070918	9/18/2007	< 5 U	< 5 U	< 10 U
MW-31	MW-31-20080430	4/30/2008	2 J	< 5 U	< 10 U
MW-31	MW-31-20081211	12/11/2008	< 5 U	< 5 U	< 5 U
MW-31	MW-31-20090425	4/25/2009	< 5 U	< 5 U	< 5 U
MW-31	MW-31-20100512	5/12/2010	< 5 U	< 5 U	< 5 U
MW-31	MW-31-20101107	11/7/2010	48	< 5 U	< 5 U
MW-31	MW-31-20110323	3/23/2011	< 5 U	< 5 U	< 5 U
MW-31	MW-31-20111026	10/26/2011	< 5 U	< 5 U	< 5 U
MW-31	MW-31-20121019	10/19/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-31	MW-31-101813	10/18/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-31	MW-31-201403	3/6/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-31	MW-31-201405	5/13/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-31	DUP-1-201407	7/30/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-31	MW-31-201407	7/30/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-31	MW-31-201410	10/14/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-31	MW-31-201501	1/12/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-31R	MW-31R-GW-20150119	1/19/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-31R	MW-31R-201504	4/14/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-31R	MW-31R-201507	7/21/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-31R	MW-31R-201510	10/6/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-31R	MW-31R-201601	1/12/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-31R	MW-31R-201604	4/18/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-32	MW-32-20010105	1/5/2001	108	< 5 U	< 10 U
MW-32	MW-32-20010327	3/27/2001	174	< 5 U	< 10 U
MW-32	MW-32-20010913	9/13/2001	95	< 5 U	< 10 U
MW-32	MW-32-20020911	9/11/2002	109	< 5 U	< 10 U
MW-32	MW-32-20030228	2/28/2003	133	< 5 U	< 10 U
MW-32	MW-32-20030925	9/25/2003	32.3	< 5 U	< 10 U
MW-32	MW-32-20040415	4/15/2004	76.9	< 5 U	< 10 U
MW-32	MW-32-20040923	9/23/2004	51.4	< 5 U	< 10 U
MW-32	MW-32-20050405	4/5/2005	158	< 5 U	< 10 U
MW-32	MW-32-20050927	9/27/2005	97.6	< 5 U	< 10 U
MW-32	MW-32-20060315	3/15/2006	111	< 5 U	< 10 U
MW-32	MW-32-20061012	10/12/2006	85	4 J	< 10 U
MW-32	MW-32-20070419	4/19/2007	66.3	10.1	< 10 U
MW-32	MW-32-20070918	9/18/2007	78	< 5 U	< 10 U
MW-32	MW-32-20080430	4/30/2008	70 0	2 J	< 10 U
MW-32	MW-32-20081211	12/11/2008	60	< 5 U	< 5 U
MW-32	MW-32-20090425	4/25/2009	47	< 5 U	< 5 U
MW-32	MW-32-20091028	10/28/2009	68	1.8 J	< 5 U
MW-32	MW-32-20100512	5/12/2010	58	< 5 U	< 5 U
MW-32	MW-32-20101106	11/6/2010	120	< 5 U	< 5 U
MW-32	MW-32-20110324	3/24/2011	66	1.4 J	< 5 U
MW-32	MW-32-20111026	10/26/2011	73	< 5 U	< 5 U
MW-32	MW-32-20121019	10/19/2012	61	1.2 J	< 0.11 U
MW-32	MW-32-101813	10/18/2013	48	1.4 J	< 0.11 U
MW-32	MW-32-201403	3/8/2014	36.8	1.1 J	< 0.13 U
MW-32	MW-32-201405	5/13/2014	33.1	0.19 J	< 0.13 U
MW-32	MW-32-201407	7/29/2014	37.2	1 J	< 0.50 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-32	MW-32-201410	10/14/2014	29.7	0.8 J	< 0.50 U
MW-32	MW-32-201501	1/14/2015	20.2	0.55 J	< 0.50 U
MW-32R	MW-32R-GW-20150119	1/19/2015	12.9	< 0.50 U	< 0.50 U
MW-32R	MW-32R-201504	4/15/2015	11.2	< 0.50 U	< 0.50 U
MW-32R	MW-32R-201507	7/21/2015	7.4	0.29 J	< 0.13 U
MW-32R	MW-32R-201510	10/7/2015	8.2	0.37 J	< 0.13 U
MW-32R	MW-32R-201601	1/12/2016	13.1	0.45 J	< 0.13 U
MW-32R	MW-32R-201604	4/18/2016	8.8	< 0.080 U	< 0.13 U
MW-33	MW-33-20010105	1/5/2001	120	< 5 U	< 10 U
MW-33	MW-33-20010327	3/27/2001	260	7	< 10 U
MW-33	MW-33-20010913	9/13/2001	310	8	< 10 U
MW-33	MW-33-20020911	9/11/2002	450	8	< 10 U
MW-33	MW-33-20030228	2/28/2003	274	6.62	< 10 U
MW-33	MW-33-20030925	9/25/2003	198	5.95	< 10 U
MW-33	MW-33-20040415	4/15/2004	871	21.3	< 10 U
MW-33	MW-33-20040923	9/23/2004	798	15.3	< 10 U
MW-33	MW-33-20050405	4/5/2005	1430	24.5	< 10 U
MW-33	MW-33-20050927	9/27/2005	1030	15.2	< 10 U
MW-33	MW-33-20060315	3/15/2006	1610	20.5	< 10 U
MW-33	MW-33-20061012	10/12/2006	1300	19	< 10 U
MW-33	MW-33-20070419	4/19/2007	1430	9.2 J	< 50 U
MW-33	MW-33-20070918	9/18/2007	1700	25	< 10 U
MW-33	MW-33-20080430	4/30/2008	1100 0	16 0	< 10 U
MW-33	MW-33-20081211	12/11/2008	1200	18	< 5 U
MW-33	MW-33-20090425	4/25/2009	1200	19	< 5 U
MW-33	MW-33-20090527	5/27/2009	1000	19	< 5 U
MW-33	MW-33-20091028	10/28/2009	1200	20	< 5 U
MW-33	MW-33-20100512	5/12/2010	1100	21	< 5 U
MW-33	MW-33-20101106	11/6/2010	1200	17	< 5 U
MW-33	MW-33-20110304-FS	3/4/2011	500	14	< 0.85 U
MW-33	MW-33-20110523-FS	5/23/2011	1300	18	
MW-33	MW-33-20111026	10/26/2011	1000	16	< 5 U
MW-33	MW-33-20121019	10/19/2012	1300	18	0.56 J
MW-33	MW-33-101813	10/18/2013	1100	19	< 0.11 U
MW-33	MW-33-201403	3/8/2014	918	15.9	0.56 J
MW-33	MW-33-201405	5/14/2014	954	15.1	0.56 J
MW-33	MW-33-201407	7/29/2014	1600	20.8	0.59 J
MW-33	MW-33-201410	10/15/2014	1290	15.3	< 0.50 U
MW-33	MW-33-201501	1/14/2015	1080	13.9	< 0.50 U
MW-33R	MW-33R-GW-20150118	1/18/2015	799	9.9	< 0.50 U
MW-33R	DUP-01-201504	4/15/2015	624	10.5	< 0.50 U
MW-33R	MW-33R-201504	4/15/2015	570	12.2	0.37 J
MW-33R	DUP-04-201507	7/22/2015	447	6.1	< 0.13 U
MW-33R	MW-33R-201507	7/22/2015	488	6.8	< 0.13 U
MW-33R	DUP-05-201510	10/8/2015	460	6.3	0.28 J
MW-33R	MW-33R-201510	10/8/2015	562	6.1	0.31 J
MW-33R	MW-33R-201511	11/5/2015	752	8	0.39 J
MW-33R	MW-33R-201512	12/2/2015	675	6.5	0.30 J
MW-33R	MW-33R-201601	1/8/2016	724	7.6	< 0.13 U
MW-33R	MW-33R-201604	4/18/2016	776	6.7	0.23 J
MW-34	MW-34-20010328	3/28/2001	83	< 5 U	< 10 U
MW-34	MW-34-20010913	9/13/2001	61	< 5 U	< 10 U
MW-34	MW-34L-20020909	9/9/2002	84	< 5 U	< 10 U
MW-34	MW-34-20030228	2/28/2003	< 5 U	< 5 U	< 10 U
MW-34	MW-34-20030925	9/25/2003	28.4	< 5 U	< 10 U
MW-34	MW-34-20031114	11/14/2003	121	< 5 U	< 10 U
MW-34	MW-34-20040415	4/15/2004	119	< 5 U	< 10 U
MW-34	MW-34-20040923	9/23/2004	81.1	< 5 U	< 10 U
MW-34	MW-34-20041209	12/9/2004	93.3	< 5 U	< 10 U
MW-34	MW-34-20050405	4/5/2005	65.8	< 5 U	< 10 U
MW-34	MW-34-20050930	9/30/2005	83.7	< 5 U	< 10 U
MW-34	MW-34-20060314	3/14/2006	77.1	< 5 U	< 10 U
MW-34	MW-34-20061011	10/11/2006	63	4 J	< 10 U
MW-34	MW-34-20070418	4/18/2007	41	9.79	< 10 U
MW-34	MW-34-20070919	9/19/2007	61	< 5 U	< 10 U
MW-34	MW-34-20080430	4/30/2008	32 0	< 5 U	< 10 U
MW-34	MW-34-20081210	12/10/2008	53	< 5 U	< 5 U
MW-34	MW-34-20090424	4/24/2009	43	< 5 U	< 5 U
MW-34	MW-34-20090527	5/27/2009	12	< 5 U	< 5 U
MW-34	MW-34-20091028	10/28/2009	34	< 5 U	< 5 U
MW-34	MW-34-20100512	5/12/2010	38	< 5 U	< 5 U
MW-34	MW-34-20101107	11/7/2010	73	< 5 U	< 5 U
MW-34	MW-34-20101107-FD	11/7/2010	70	< 5 U	< 5 U
MW-34	MW-34-20110324	3/24/2011	42	< 5 U	< 5 U
MW-34	MW-34-20110324-FD	3/24/2011	40	< 5 U	< 5 U
MW-34	MW-34-20111026	10/26/2011	56	< 5 U	< 5 U
MW-34	MW-34-20121020	10/20/2012	90	1.6 J	< 0.11 U
MW-34	MW-34-101713	10/17/2013	43	0.9 J	< 0.11 U
MW-34	MW-34-201403	3/8/2014	28.7	0.61 J	< 0.13 U
MW-34	MW-34-201405	5/13/2014	19.9	< 0.080 U	< 0.13 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-34	MW-34-201407	7/29/2014	78.2	1.7 J	< 0.50 U
MW-34	MW-34-201410	10/15/2014	47.7	0.96 J	< 0.50 U
MW-34	MW-34-201501	1/13/2015	22	< 0.50 U	< 0.50 U
MW-34	MW-34-201504	4/14/2015	13.8	< 0.50 U	< 0.50 U
MW-34R	MW-34R-201507	7/21/2015	3.5	< 0.080 U	< 0.13 U
MW-34R	MW-34R-201510	10/8/2015	4.5	0.16 J	< 0.13 U
MW-34R	MW-34R-201601	1/11/2016	2.6	0.3 J	< 0.13 U
MW-34R	MW-34R-201605	5/3/2016	2.5	0.56 J	< 0.13 U
MW-35R	MW-35R-20010328	3/28/2001	960	34	< 10 U
MW-35R	MW-35R-20010913	9/13/2001	1030	40	< 20 U
MW-35R	MW-35L-20020909	9/9/2002	900	31	< 10 U
MW-35R	MW-35R-20030228	2/28/2003	246	15.1	< 10 U
MW-35R	MW-35R-20030925	9/25/2003	297	19.8	< 10 U
MW-35R	MW-35R-20031114	11/14/2003	990	34.9	< 10 U
MW-35R	MW-35R-20040415	4/15/2004	1150	45.8	< 10 U
MW-35R	MW-35R-20040923	9/23/2004	685	28.4	< 10 U
MW-35R	MW-35R-20041209	12/9/2004	880	42	< 10 U
MW-35R	MW-35R-20050406	4/6/2005	886	35	< 10 U
MW-35R	MW-35R-20050930	9/30/2005	804	29.3	< 10 U
MW-35R	MW-35R-20060314	3/14/2006	858	24.2	< 10 U
MW-35R	MW-35R-20060406	4/6/2006	1540	52.5	< 10 U
MW-35R	MW-35R-20061011	10/11/2006	910	29	< 10 U
MW-35R	MW-35R-20070418	4/18/2007	900	27.6	< 10 U
MW-35R	MW-35R-20070919	9/19/2007	1100	28	< 10 U
MW-35R	MW-35R-20080430	4/30/2008	1100 0	33 0	< 10 U
MW-35R	MW-35R-20081211	12/11/2008	790	27	< 5 U
MW-35R	MW-35R-20090424	4/24/2009	1100	37	< 5 U
MW-35R	MW-35R-20090507	5/7/2009	< 5 U	< 5 U	< 5 U
MW-35R	MW-35R-20090527	5/27/2009	< 5 U	< 5 U	< 5 U
MW-35R	MW-35R-20101105	11/5/2010	240	9.9	< 5 U
MW-35R	MW-35R-20110304-FS	3/4/2011	180	8.4	< 0.85 U
MW-35R	MW-35R-20110523-FS	5/23/2011	260	13	
MW-35R	MW-35R-20111025	10/25/2011	280	12	< 5 U
MW-35R	MW-35R-20121020	10/20/2012	280	10	< 0.11 U
MW-35R	MW-35R-101713	10/17/2013	200	12	< 0.11 U
MW-35R	MW-35R-20131017-FD	10/17/2013	220	13	
MW-35R	MW-35R-201403	3/8/2014	345	14.9	< 0.13 U
MW-35R	MW-35R-201405	5/13/2014	183	6.1	< 0.13 U
MW-35R	MW-35R-201407	7/30/2014	64.7	2.8 J	< 0.50 U
MW-35R	MW-35R-201410	10/14/2014	79.2	2.6 J	< 0.50 U
MW-35R	MW-35R-201501	1/13/2015	10.9	< 0.50 U	< 0.50 U
MW-35R	MW-35R-201504	4/14/2015	39.5	1.3	< 0.50 U
MW-35R	MW-35R-201507	7/21/2015	33.7	1	< 0.13 U
MW-35R	MW-35R-201510	10/7/2015	15.4	0.58 J	< 0.13 U
MW-35R	MW-35R-201511	11/4/2015	23.6	0.36 J	< 0.13 U
MW-35R	MW-35R-201512	12/2/2015	0.89 J	< 0.080 U	< 0.13 U
MW-35R	MW-35R-201601	1/11/2016	13.2	0.34 J	< 0.13 U
MW-35R	MW-35R-201605	5/3/2016	19.3	0.49 J	< 0.13 U
MW-36	MW-36-20010328	3/28/2001	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20010913	9/13/2001	< 5 U	< 5 U	< 10 U
MW-36	MW-36L-20020909	9/9/2002	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20030228	2/28/2003	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20030925	9/25/2003	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20031114	11/14/2003	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20040415	4/15/2004	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20040923	9/23/2004	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20050406	4/6/2005	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20050930	9/30/2005	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20060317	3/17/2006	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20061011	10/11/2006	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20070418	4/18/2007	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20070920	9/20/2007	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20080430	4/30/2008	< 5 U	< 5 U	< 10 U
MW-36	MW-36-20081211	12/11/2008	< 5 U	< 5 U	< 5 U
MW-36	MW-36-20090424	4/24/2009	< 5 U	< 5 U	< 5 U
MW-36	MW-36-20090507	5/7/2009	< 5 U	< 5 U	< 5 U
MW-36	MW-36-20090508	5/8/2009	< 5 U	< 5 U	< 5 U
MW-36	MW-36-20090528	5/28/2009	< 5 U	< 5 U	< 5 U
MW-36	MW-36-20091028	10/28/2009	< 5 U	< 5 U	< 5 U
MW-36	MW-36-20100512	5/12/2010	< 5 U	< 5 U	< 5 U
MW-36	MW-36-20101107	11/7/2010	9.9	< 5 U	< 5 U
MW-36	MW-36-20110324	3/24/2011	< 5 U	< 5 U	< 5 U
MW-36	MW-36-20111026	10/26/2011	< 5 U	< 5 U	< 5 U
MW-36	MW-36-20121019	10/19/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-36	MW-36-101713	10/17/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-36	MW-36-201403	3/6/2014	0.22 J	< 0.080 U	< 0.13 U
MW-36	MW-36-201405	5/13/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-36	MW-36-201407	7/29/2014	0.61 J	< 0.50 U	< 0.50 U
MW-36	MW-36-201410	10/14/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-36	MW-36-201501	1/12/2015	< 0.50 U	< 0.50 U	< 0.50 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-36	MW-36-201504	4/14/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-36R	MW-36R-201507	7/20/2015	< 0.17 UJ	< 0.080 UJ	< 0.13 UJ
MW-36R	MW-36R-201510	10/6/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-36R	MW-36R-201601	1/11/2016	0.31 J	< 0.080 U	< 0.13 U
MW-36R	MW-36R-201605	5/3/2016	1.7	< 0.080 U	< 0.13 U
MW-37	MW-37-20010914	9/14/2001	5000	340	< 100 U
MW-37	MW-37-20011120	11/20/2001	< 5 U	< 5 U	< 10 U
MW-37	MW-37-20020911	9/11/2002	1400	10000	300
MW-37	MW-37-20030227	2/27/2003	4050	5660	2500
MW-37	MW-37-20030717	7/17/2003	2560	1710	316
MW-37	MW-37-20030924	9/24/2003	3700	7020	973
MW-37	MW-37-20040413	4/13/2004	5190	3160	1180
MW-37	MW-37-20040921	9/21/2004	5030	5650	1370
MW-37	MW-37-20050405	4/5/2005	5310	2360	1030 E
MW-37	MW-37-20050929	9/29/2005	6780	3210	910 E
MW-37	MW-37-20060316	3/16/2006	11200	5020	1730
MW-37	MW-37-20061013	10/13/2006	13000	5300	1200
MW-37	MW-37-20061013-FD	10/13/2006	13000	5000	1200
MW-37	MW-37-20070419	4/19/2007	9490	3010	780
MW-37	MW-37-20070921	9/21/2007	22000	9100	2800
MW-37	MW-37-20080430	4/30/2008	16000 0	3300 0	1800 0
MW-37	MW-37-20081210	12/10/2008	24000	6300	1800
MW-37	MW-37-20090427	4/27/2009	11000	3200	1200
MW-37	MW-37-20091027	10/27/2009	37000	7400	2200
MW-37	MW-37-20100511	5/11/2010	33000	7200	2400
MW-37	MW-37-20101104	11/4/2010	54000	10000	2200
MW-37	MW-37-20110322	3/22/2011	36000	6000	2300
MW-37	MW-37-20111026	10/26/2011	57000	9700	2500
MW-37	MW-37-20120418	4/18/2012	29000	5300	2100
MW-37	MW-37-20121019	10/19/2012	4800	1100	230
MW-37	MW-37-20130425	4/25/2013	1700	900	230
MW-37	MW-37-20131017	10/17/2013	1100	1500	1300
MW-38	MW-38-20010914	9/14/2001	620	90	< 20 U
MW-38	MW-38-20050929	9/29/2005	< 5 U	98.9	2150
MW-38	MW-38-20061013	10/13/2006	26	130	2000 J
MW-38	MW-38-20081210	12/10/2008	44	110	1400
MW-38	MW-38-20111026	10/26/2011	580	870	1100
MW-38	MW-38-20121018	10/18/2012	1000	750	700
MW-38	MW-38-101613	10/16/2013	2300	1200	560
MW-38	MW-38-201403	3/8/2014	1790	535	68.4
MW-38	DUP1-201405	5/14/2014	2040	426 J	98.2
MW-38	MW-38-201405	5/14/2014	1650	428	97.9
MW-38	MW-38-201407	7/31/2014	1720	637	197
MW-38	DUP-06-201410	10/16/2014	6970	869	370
MW-38	MW-38-201410	10/16/2014	6750	781	321
MW-38	MW-38-20141204	12/4/2014	3190	697	193
MW-38	DUP-06-201501	1/15/2015	3910	1190	143
MW-38	MW-38-201501	1/15/2015	5440	1900	133
MW-38	MW-38-201504	4/16/2015	3060	2060	33.7
MW-38	MW-38-201507	7/23/2015	3420	1340	119
MW-38	MW-38-201510	10/8/2015	2740	1340	190
MW-38	MW-38-201601	1/13/2016	3680	1180	84.3
MW-38	MW-38-201605	5/5/2016	3040	950	18.1
MW-38	MW-38-201611	11/10/2016	2860	1070	597
MW-38	MW-38-201704	4/28/2017	949	2250	23.9
MW-38	MW-38-201710	10/26/2017	2240	823	<0.13 U
MW-39	MW-39-20030718	7/18/2003	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20030925	9/25/2003	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20031114	11/14/2003	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20040415	4/15/2004	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20040923	9/23/2004	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20050408	4/8/2005	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20050930	9/30/2005	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20060317	3/17/2006	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20061011	10/11/2006	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20070418	4/18/2007	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20070919	9/19/2007	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20080430	4/30/2008	< 5 U	< 5 U	< 10 U
MW-39	MW-39-20081209	12/9/2008	< 5 U	< 5 U	< 5 U
MW-39	MW-39-20090424	4/24/2009	< 5 U	< 5 U	< 5 U
MW-39	MW-39-20091027	10/27/2009	< 5 U	< 5 U	< 5 U
MW-39	MW-39-20100511	5/11/2010	< 5 U	< 5 U	< 5 U
MW-39	MW-39-20101107	11/7/2010	20	< 5 U	< 5 U
MW-39	MW-39-20110324	3/24/2011	< 5 U	< 5 U	< 5 U
MW-39	MW-39-20111026	10/26/2011	< 5 U	< 5 U	< 5 U
MW-39	MW-39-20121019	10/19/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-39	MW-39-101813	10/18/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-39	MW-39-201403	3/6/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-39	MW-39-201405	5/13/2014	0.23 J	< 0.080 U	< 0.13 U
MW-39	MW-39-201407	7/29/2014	0.79 J	< 0.50 U	< 0.50 U

TABLE 7
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Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-39	MW-39-201410	10/13/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-39	MW-39-201501	1/12/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-39	MW-39-201504	4/14/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-39R	MW-39R-201507	7/20/2015	< 0.17 UJ	< 0.080 UJ	< 0.13 UJ
MW-39R	MW-39R-201510	10/7/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-39R	MW-39R-201601	1/12/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-39R	MW-39R-201605	5/2/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-39R	MW-39R-201611	11/7/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-39R	MW-39R-201704	4/27/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-39R	MW-39R-201710	10/25/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-39R	FD-05-201710	10/25/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-40	MW-40-20030718	7/18/2003	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20030925	9/25/2003	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20031114	11/14/2003	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20031114-FD	11/14/2003	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20040415	4/15/2004	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20040923	9/23/2004	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20050407	4/7/2005	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20050929	9/29/2005	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20060314	3/14/2006	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20061010	10/10/2006	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20070418	4/18/2007	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20070918	9/18/2007	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20080428	4/28/2008	< 5 U	< 5 U	< 10 U
MW-40	MW-40-20081211	12/11/2008	< 5 U	< 5 U	< 5 U
MW-40	MW-40-20090424	4/24/2009	< 5 U	< 5 U	< 5 U
MW-40	MW-40-20090527	5/27/2009	< 5 U	< 5 U	< 5 U
MW-40	MW-40-20091029	10/29/2009	< 5 U	< 5 U	< 5 U
MW-40	MW-40-20100512	5/12/2010	< 5 U	< 5 U	< 5 U
MW-40	MW-40-20101104	11/4/2010	< 5 U	< 5 U	< 5 U
MW-40	MW-40-20110323	3/23/2011	< 5 U	< 5 U	< 5 U
MW-40	MW-40-20111026	10/26/2011	< 5 U	< 5 U	< 5 U
MW-40	MW-40-20120418	4/18/2012	3.9 J	< 5 U	< 5 U
MW-40	MW-40-20121017	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-40	MW-40-20130423	4/23/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-40	MW-40-101513	10/15/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-40	MW-40-201403	3/6/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-40	MW-40-201405	5/12/2014	0.76 J	< 0.080 U	< 0.13 U
MW-40	MW-40-201407	7/29/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-40	MW-40-201410	10/13/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-40	MW-40-201501	1/12/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-40	MW-40-201504	4/14/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-40R	MW-40R-201507	7/20/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-40R	DUP-03-201510	10/6/2015	0.83 J	< 0.080 U	< 0.13 U
MW-40R	MW-40R-201510	10/6/2015	0.3 J	0.23 J	< 0.13 U
MW-40R	DUP-06-201601	1/12/2016	0.28 J	0.22 J	< 0.13 U
MW-40R	MW-40R-201601	1/12/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-40R	MW-40R-201605	5/2/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-40R	MW-40R-201611	11/7/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-40R	MW-40R-201704	4/27/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-40R	MW-40R-201710	10/24/2017	0.31 J	< 0.080 U	< 0.13 U
MW-41	MW-41-20030718	7/18/2003	972	50.6	< 10 U
MW-41	MW-41-20030718-FD	7/18/2003	964	45.5	< 10 U
MW-41	MW-41-20030925	9/25/2003	722	37.8	< 10 U
MW-41	MW-41-20031114	11/14/2003	331	205	< 10 U
MW-41	MW-41-20040415	4/15/2004	760	54.2	< 10 U
MW-41	MW-41-20040923	9/23/2004	1060	48	< 10 U
MW-41	MW-41-20050407	4/7/2005	1170	58	< 10 U
MW-41	MW-41-20050930	9/30/2005	1120	55.8	< 10 U
MW-41	MW-41-20060317	3/17/2006	917	52.5	< 10 U
MW-41	MW-41-20061013	10/13/2006	970	43	< 10 UJ
MW-41	MW-41-20070418	4/18/2007	900	30.1	< 10 U
MW-41	MW-41-20070920	9/20/2007	850	32	< 10 U
MW-41	MW-41-20080430	4/30/2008	730 0	31 0	< 10 U
MW-41	MW-41-20081211	12/11/2008	820	29	< 5 U
MW-41	MW-41-20090424	4/24/2009	660	25	< 5 U
MW-41	MW-41-20090507	5/7/2009	180	4.7 J	< 5 U
MW-41	MW-41-20090508	5/8/2009	180	4.7 J	< 5 U
MW-41	MW-41-20090527	5/27/2009	230	16	< 5 U
MW-41	MW-41-20091028	10/28/2009	180	4 J	< 5 U
MW-41	MW-41-20100513	5/13/2010	610	19	< 5 U
MW-41	MW-41-20101105	11/5/2010	930	31	< 5 U
MW-41	MW-41-20110304-FS	3/4/2011	120	20	< 0.85 U
MW-41	MW-41-20110523-FS	5/23/2011	370	15	
MW-41	MW-41-20111025	10/25/2011	420	18	< 5 U
MW-41	MW-41-20121020	10/20/2012	620	23	< 0.11 U
MW-41	MW-41-20121020-FD	10/20/2012	550	21	< 0.11 U
MW-41	MW-41-101613	10/16/2013	520	24	< 0.11 U
MW-41	MW-41-201403	3/7/2014	501	19.7	0.68 J
MW-41	MW-41-201405	5/14/2014	518	18	0.50 J

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-41	DUP-2-201407	7/30/2014	511	19.1	< 0.50 U
MW-41	MW-41-201407	7/30/2014	480	19.7	< 0.50 U
MW-41	MW-41-201410	10/15/2014	491	16.9	< 0.50 U
MW-41	MW-41-201501	1/14/2015	425	15.6	< 0.50 U
MW-41	DUP-02-201504	4/15/2015	410	13.5	< 0.50
MW-41	MW-41-201504	4/15/2015	386	15.2	0.27 J
MW-41R	DUP-03-201507	7/21/2015	43	2.8	< 0.13 U
MW-41R	MW-41R-201507	7/21/2015	40.4	3.3	< 0.13 U
MW-41R	DUP-07-201510	10/6/2015	46.4	35.2	0.33 J
MW-41R	MW-41R-201510	10/6/2015	48.7	36.7	0.39 J
MW-41R	DUP-07-201601	1/12/2016	56.6	40.1	0.35 J
MW-41R	MW-41R-201601	1/12/2016	59.9	40.9	0.38 J
MW-41R	DUP-03-201605	5/3/2016	82.9	17.5	0.20 J
MW-41R	MW-41R-201605	5/3/2016	87.8	17.3	0.18 J
MW-42B	MW-42B-20031114	11/14/2003	481	21.1	< 10 U
MW-42B	MW-42B-20040415	4/15/2004	856	29.3	< 10 U
MW-42B	MW-42B-20040923	9/23/2004	400	19.8	< 10 U
MW-42B	MW-42B-20050405	4/5/2005	1310	32	< 10 U
MW-42B	MW-42B-20050927	9/27/2005	1470	27.3	< 10 U
MW-42B	MW-42B-20060315	3/15/2006	2270	37.2	< 10 U
MW-42B	MW-42B-20061010	10/10/2006	2000	35	2 J
MW-42B	MW-42B-20070417	4/17/2007	1600	36.8	< 10 U
MW-42B	MW-42B-20070918	9/18/2007	2100	39	4 J
MW-42B	MW-42B-20080429	4/29/2008	1600 0	33 0	3 J
MW-42B	MW-42B-20081209	12/9/2008	1100	30	< 5 U
MW-42B	MW-42B-20090425	4/25/2009	1500	35	< 5 U
MW-43	MW-43-20031114	11/14/2003	223	18.5	< 10 U
MW-43	MW-43-20040415	4/15/2004	510	12.1	< 10 U
MW-43	MW-43-20040923	9/23/2004	64.7	6.31	< 10 U
MW-43	MW-43-20050405	4/5/2005	304	11.9	< 10 U
MW-43	MW-43-20050927	9/27/2005	518	21.3	< 10 U
MW-43	MW-43-20060315	3/15/2006	1300	35	< 10 U
MW-43	MW-43-20061011	10/11/2006	920	30	< 10 U
MW-43	MW-43-20070417	4/17/2007	220	14.1	< 10 U
MW-43	MW-43-20070918	9/18/2007	350	13	< 10 U
MW-43	MW-43-20080428	4/28/2008	120 0	4 J	< 10 U
MW-43	MW-43-20081209	12/9/2008	150	5.3	< 5 U
MW-43	MW-43-20090425	4/25/2009	120	< 5 U	< 5 U
MW-43	MW-43-20090507	5/7/2009	180	6	< 5 U
MW-43	MW-43-20090508	5/8/2009	180	6	< 5 U
MW-46R	MW-46R-20031114	11/14/2003	39.9	< 5 U	< 10 U
MW-46R	MW-46R-20040415	4/15/2004	77.1	27.2	< 10 U
MW-46R	MW-46R-20040923	9/23/2004	142	21.2	< 10 U
MW-46R	MW-46R-20050406	4/6/2005	210	28.4	< 10 U
MW-46R	MW-46R-20050928	9/28/2005	222	15.6	< 10 U
MW-46R	MW-46R-20060316	3/16/2006	111	6.37	< 10 U
MW-46R	MW-46R-20060406	4/6/2006	300	< 5 U	< 10 U
MW-46R	MW-46R-20061011	10/11/2006	450	8	< 10 U
MW-46R	MW-46R-20070417	4/17/2007	440	12.5	< 10 U
MW-46R	MW-46R-20070918	9/18/2007	420	9	< 10 U
MW-46R	MW-46R-20080429	4/29/2008	430 0	8 0	< 10 U
MW-46R	MW-46R-20081209	12/9/2008	310	19	< 5 U
MW-46R	MW-46R-20090425	4/25/2009	460	11	< 5 U
MW-46R	MW-46R-20090527	5/27/2009	< 5 U	< 5 U	< 5 U
MW-46R	MW-46R-20091027	10/27/2009	390	12	< 5 U
MW-46R	MW-46R-20091221-FS	12/21/2009	410	10	< 1.6 U
MW-46R	MW-46R-20100511	5/11/2010	610	13	< 5 U
MW-46R	MW-46R-20101105	11/5/2010	650	12	< 5 U
MW-46R	MW-46R-20110307-FS	3/7/2011	670	14	< 0.85 U
MW-46R	MW-46R-20110322	3/22/2011	680	11	< 5 U
MW-46R	MW-46R-20110523-FS	5/23/2011	610	13	
MW-46R	MW-46R-20111026	10/26/2011	460	10	< 5 U
MW-46R	MW-46R-20120418	4/18/2012	680	14	< 5 U
MW-46R	MW-46R-20121020	10/20/2012	410	7.9	0.44 J
MW-46R	MW-46R-20130423	4/23/2013	470	7.6	0.91 J
MW-46R	MW-46R-101813	10/18/2013	410	11	< 0.11 U
MW-46R	MW-46R-201403	3/7/2014	469	12.8	0.46 J
MW-46R	MW-46R-201405	5/14/2014	471	12.8	0.76 J
MW-46R	MW-46R-201407	7/29/2014	472	13.7	0.64 J
MW-46R	DUP-03-201410	10/16/2014	373	25.2	< 0.50 U
MW-46R	MW-46R-201410	10/16/2014	410	24.6	< 0.50 U
MW-46R	DUP-03-201501	1/13/2015	428	12	0.90 J
MW-46R	MW-46R-201501	1/13/2015	452	11.6	0.71 J
MW-46R	DUP-07-201504	4/14/2015	482	13.9	0.51 J
MW-46R	MW-46R-201504	4/14/2015	220 J	13.8	0.47 J
MW-46R	DUP-05-201507	7/21/2015	444	10.3	0.40 J
MW-46R	MW-46R-201507	7/21/2015	460	11.2	0.37 J
MW-46R	MW-46R-201510	10/7/2015	371	10.2	0.43 J
MW-46R	MW-46R-201601	1/12/2016	432	10.9	0.56 J
MW-46R	DUP-10-201605	5/3/2016	461	11.1	0.52 J

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-46R	MW-46R-201605	5/3/2016	445	12.6	0.40 J
MW-46R	MW-46R-201611	11/8/2016	411	10.3	0.79 J
MW-46R	MW-46R-201704	4/27/2017	486	12.4	0.47 J
MW-46R	MW-46R-201710	10/24/2017	408	10.7	0.51 J
MW-50	MW-50-20040415	4/15/2004	6.51	< 5 U	< 10 U
MW-50	MW-50-20040923	9/23/2004	< 5 U	< 5 U	< 10 U
MW-50	MW-50-20041210	12/10/2004	< 5 U	< 5 U	< 10 U
MW-50	MW-50-20050406	4/6/2005	< 5 U	< 5 U	< 10 U
MW-50	MW-50-20050928	9/28/2005	< 5 U	< 5 U	< 10 U
MW-50	MW-50-20060317	3/17/2006	< 5 U	< 5 U	< 10 U
MW-50	MW-50-20061012	10/12/2006	< 5 U	< 5 U	< 10 U
MW-50	MW-50-20070419	4/19/2007	< 5 U	< 5 U	< 10 U
MW-50	MW-50-20070919	9/19/2007	< 5 U	< 5 U	< 10 U
MW-50	MW-50-20080429	4/29/2008	< 5 U	< 5 U	< 10 U
MW-50	MW-50-20081210	12/10/2008	< 5 U	< 5 U	< 5 U
MW-50	MW-50-20090424	4/24/2009	< 5 U	< 5 U	< 5 U
MW-50	MW-50-20091027	10/27/2009	< 5 U	< 5 U	< 5 U
MW-50	MW-50-20100511	5/11/2010	< 5 U	< 5 U	< 5 U
MW-50	MW-50-20101105	11/5/2010	< 5 U	< 5 U	< 5 U
MW-50	MW-50-20110323	3/23/2011	< 5 U	< 5 U	< 5 U
MW-50	MW-50-20111025	10/25/2011	< 5 U	< 5 U	< 5 U
MW-50	MW-50-20121017	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-50	MW-50-101613	10/16/2013	1.6 J	< 0.56 U	< 0.11 U
MW-50	MW-50-201403	3/6/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-50	MW-50-201405	5/13/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-50	MW-50-201407	7/28/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-50	MW-50-201410	10/14/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-50	MW-50-201501	1/13/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-50	MW-50-201504	4/14/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-50R	MW-50R-201507	7/21/2015	0.22 J	< 0.080 U	< 0.13 U
MW-50R	MW-50R-201510	10/6/2015	0.35 J	< 0.080 U	< 0.13 U
MW-50R	MW-50R-201601	1/11/2016	0.42 J	< 0.080 U	< 0.13 U
MW-50R	MW-50R-201605	5/2/2016	0.46 J	< 0.080 U	< 0.13 U
MW-50R	MW-50R-201611	11/7/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-50R	MW-50R-201704	4/26/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-50R	MW-50R-201710	10/23/2017	0.26 J	< 0.080 U	< 0.13 U
MW-55	MW-55-20041209	12/9/2004	< 5 U	< 5 U	< 10 U
MW-55	MW-55-20050408	4/8/2005	< 5 U	< 5 U	< 10 U
MW-55	MW-55-20050928	9/28/2005	< 5 U	< 5 U	< 10 U
MW-55	MW-55-20060316	3/16/2006	< 5 U	< 5 U	< 10 U
MW-55	MW-55-20061013	10/13/2006	2 J	< 5 U	< 10 UJ
MW-55	MW-55-20070419	4/19/2007	2.6 J	< 5 U	< 10 U
MW-55	MW-55-20070919	9/19/2007	5 J	< 5 U	< 10 U
MW-55	MW-55-20080429	4/29/2008	< 5 U	< 5 U	< 10 U
MW-55	MW-55-20081210	12/10/2008	< 5 U	< 5 U	< 5 U
MW-55	MW-55-20090424	4/24/2009	< 5 U	< 5 U	< 5 U
MW-55	MW-55-20091027	10/27/2009	3.6 J	< 5 U	< 5 U
MW-55	MW-55-20100512	5/12/2010	4.2 J	< 5 U	< 5 U
MW-55	MW-55-20101106	11/6/2010	14	< 5 U	< 5 U
MW-55	MW-55-20110323	3/23/2011	5.5	< 5 U	< 5 U
MW-55	MW-55-20111025	10/25/2011	7	< 5 U	< 5 U
MW-55	MW-55-20121020	10/20/2012	9.2	< 0.56 U	< 0.11 U
MW-55	MW-55-101613	10/16/2013	13	< 0.56 U	< 0.11 U
MW-55R	MW-55R-201507	7/20/2015	8.2	0.42 J	0.13 J
MW-55R	MW-55R-201510	10/6/2015	4.4	0.53 J	0.14 J
MW-55R	MW-55R-201601	1/12/2016	0.26 J	< 0.080 U	< 0.13 U
MW-55R	MW-55R-201605	5/2/2016	2.1	< 0.080 U	< 0.13 U
MW-55R	MW-55R-201611	11/7/2016	3.1	< 0.080 U	< 0.13 U
MW-55R	MW-55R-201704	4/27/2017	7	0.58 J	< 0.13 U
MW-55R	MW-55R-201710	10/25/2017	10.9	0.77 J	0.15 J
MW-56	MW-56-20041210	12/10/2004	90.2	< 5 U	< 10 U
MW-56	MW-56-20050408	4/8/2005	88.2	< 5 U	< 10 U
MW-56	MW-56-20050928	9/28/2005	207	< 5 U	< 10 U
MW-56	MW-56-20060316	3/16/2006	8.7	< 5 U	< 10 U
MW-56	MW-56-20061014	10/14/2006	110	2 J	< 10 UJ
MW-56	MW-56-20070419	4/19/2007	< 5 U	< 5 U	< 10 U
MW-56	MW-56-20070919	9/19/2007	38	< 5 U	< 10 U
MW-56	MW-56-20080429	4/29/2008	4 J	< 5 U	< 10 U
MW-56	MW-56-20081210	12/10/2008	93	< 5 U	< 5 U
MW-56	MW-56-20090424	4/24/2009	14	< 5 U	< 5 U
MW-56	MW-56-20091027	10/27/2009	8.7	< 5 U	< 5 U
MW-56	MW-56-20100512	5/12/2010	230	6.4	< 5 U
MW-56	MW-56-20110323	3/23/2011	71	2.6 J	< 5 U
MW-56	MW-56-20111025	10/25/2011	150	11	1.9 J
MW-56	MW-56-20121020	10/20/2012	470	11	< 0.11 U
MW-56	MW-56-101713	10/17/2013	590	17	< 0.11 U
MW-56	MW-56-201403	3/7/2014	618	15.3	0.15 J
MW-56	MW-56-201405	6/11/2014	307	17.6	0.16 J
MW-56	MW-56-201407	7/29/2014	516	19.3	< 0.50 U
MW-56	MW-56-201410	10/15/2014	408	12.1	< 0.50 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-56	MW-56-201501	1/13/2015	326	10	< 0.50 U
MW-56	MW-56-201504	4/16/2015	495	8.2	< 0.13 U
MW-56R	MW-56R-201507	7/20/2015	156	8	0.31 J
MW-56R	MW-56R-201510	10/6/2015	278	18.1	0.42 J
MW-56R	MW-56R-201601	1/11/2016	408	19.2	0.32 J
MW-56R	MW-56R-201605	5/3/2016	734	19.7	0.52 J
MW-56R	MW-56R-201611	11/8/2016	679	27.8	0.37 J
MW-56R	MW-56R-201710	10/24/2017	815	33.8	< 0.13 U
MW-57	MW-57-20041210	12/10/2004	207	6.72	< 10 U
MW-57	MW-57-20050408	4/8/2005	282	6.83	< 10 U
MW-57	MW-57-20050928	9/28/2005	96	< 5 U	< 10 U
MW-57	MW-57-20060316	3/16/2006	254	7.56	< 10 U
MW-57	MW-57-20061013	10/13/2006	64	< 5 U	< 10 UJ
MW-57	MW-57-20070419	4/19/2007	201	3.77 J	< 10 U
MW-57	MW-57-20070920	9/20/2007	250	5 J	< 10 U
MW-57	MW-57-20080430	4/30/2008	14 0	< 5 U	< 10 U
MW-57	MW-57-20081210	12/10/2008	130	7.4	< 5 U
MW-57	MW-57-20090424	4/24/2009	96	4.2 J	< 5 U
MW-57	MW-57-20091027	10/27/2009	100	2.6 J	< 5 U
MW-57	MW-57-20100512	5/12/2010	210	6	< 5 U
MW-57	MW-57-20110323	3/23/2011	110	2.3 J	< 5 U
MW-57	MW-57-20111025	10/25/2011	59	2 J	< 5 U
MW-57	MW-57-20121020	10/20/2012	120	5.1	< 0.11 U
MW-57	MW-57-101713	10/17/2013	210	7.4	< 0.11 U
MW-57	MW-57-201403	3/7/2014	134	3 J	0.14 J
MW-57	MW-57-201405	6/11/2014	167	4.4 J	< 0.13 U
MW-57	MW-57-201407	7/29/2014	308	8.2	< 0.50 U
MW-57	MW-57-201410	10/15/2014	172	4.2 J	< 0.50 U
MW-57	MW-57-201501	1/13/2015	177	5.4	< 0.50 U
MW-57	MW-57-201504	4/16/2015	194	4.8	< 0.50 U
MW-57R	MW-57R-201507	7/20/2015	409	10.6	0.53 J
MW-57R	MW-57R-201510	10/6/2015	400	13	0.42 J
MW-57R	MW-57R-201601	1/11/2016	422	15.7	0.48 J
MW-57R	MW-57R-201605	5/3/2016	425	12.8	0.51 J
MW-57R	DUP-07-201611	11/8/2016	453	24.3	0.45 J
MW-57R	MW-57R-201611	11/8/2016	441	23	0.44 J
MW-57R	MW-57R-201710	10/24/2017	441	17.5	< 0.13 U
MW-58	MW-58-20041209	12/9/2004	526	14.5	< 10 U
MW-58	MW-58-20050407	4/7/2005	809	18.8	< 10 U
MW-58	MW-58-20050928	9/28/2005	486	10.9	< 10 U
MW-58	MW-58-20060316	3/16/2006	421	8.66	< 10 U
MW-58	MW-58-20061013	10/13/2006	620	14	< 10 UJ
MW-58	MW-58-20070419	4/19/2007	784	30.7	< 25 U
MW-58	MW-58-20070419-FD	4/19/2007	717	9.54 J	< 25 U
MW-58	MW-58-20070919	9/19/2007	650	17	< 10 U
MW-58	MW-58-20070919-FD	9/19/2007	640	16	< 10 U
MW-58	MW-58-20080430	4/30/2008	630 0	15 0	< 10 U
MW-58	MW-58-20080430-FD	4/30/2008	580 0	14 0	< 10 U
MW-58	MW-58-20081211	12/11/2008	530	12	< 5 U
MW-58	MW-58-20081211-FD	12/11/2008	510	13	< 5 U
MW-58	MW-58-20090425	4/25/2009	590	14	< 5 U
MW-58	MW-58-20090425-FD	4/25/2009	580	15	< 5 U
MW-58	MW-58-20091028	10/28/2009	480	11	< 5 U
MW-58	MW-58-20091028-FD	10/28/2009	480	11	< 5 U
MW-58	MW-58-20100512	5/12/2010	660	14	< 5 U
MW-58	MW-58-20101106	11/6/2010	580	12	< 5 U
MW-58	MW-58-20101106-FD	11/6/2010	560	11	< 5 U
MW-58	MW-58-20110324	3/24/2011	710	12	< 5 U
MW-58	MW-58-20110324-FD	3/24/2011	700	14	1.1 J
MW-58	MW-58-20121020	10/20/2012	440	18	0.84 J
MW-58	MW-58-101713	10/17/2013	410	13	1.5 J
MW-58	MW-58-20131017-FD	10/17/2013	420	12	1.1 J
MW-58	MW-58-201403	3/7/2014	293	22.3	0.93 J
MW-58	MW-58-201405	5/12/2014	397	12.1	0.72 J
MW-58	MW-58-201407	7/29/2014	399	12.7	0.76 J
MW-58	MW-58-201410	10/15/2014	360	10.8	0.68 J
MW-58	MW-58-201501	1/14/2015	385	14.7	0.71 J
MW-58	MW-58-201504	4/16/2015	356	19.7	1.5
MW-58R	MW-58R-201507	7/21/2015	337	9.5	0.57 J
MW-58R	MW-58R-201510	10/8/2015	299	10.5	0.55 J
MW-58R	DUP-10-201601	1/12/2016	319	29.4	0.66 J
MW-58R	MW-58R-201601	1/12/2016	312	28.7	0.67 J
MW-58R	DUP-04-201605	5/4/2016	308	25.2	0.64 J
MW-58R	MW-58R-201605	5/4/2016	352	29.7	0.81 J
MW-58R	MW-58R-201611	11/10/2016	< 0.17 U	28.5	0.85 J
MW-58R	MW-58R-201612	12/14/2016	265	30.3	0.61 J
MW-58R	MW-58R-201710	10/24/2017	360	10.0	0.65 J
MW-60	MW-60-20050401	4/1/2005	< 5 U	< 5 U	< 10 U
MW-60	MW-60-20050930	9/30/2005	< 5 U	< 5 U	< 10 U
MW-60	MW-60-20060317	3/17/2006	< 5 U	< 5 U	< 10 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-60	MW-60-20061012	10/12/2006	< 5 U	< 5 U	< 10 U
MW-60	MW-60-20070419	4/19/2007	< 5 U	< 5 U	< 10 U
MW-60	MW-60-20070919	9/19/2007	< 5 U	< 5 U	< 10 U
MW-60	MW-60-20080429	4/29/2008	< 5 U	< 5 U	< 10 U
MW-60	MW-60-20081210	12/10/2008	< 5 U	< 5 U	< 5 U
MW-60	MW-60-20090424	4/24/2009	< 5 U	< 5 U	< 5 U
MW-60	MW-60-20091027	10/27/2009	< 5 U	< 5 U	< 5 U
MW-60	MW-60-20100511	5/11/2010	< 5 U	< 5 U	< 5 U
MW-60	MW-60-20101104	11/4/2010	< 5 U	< 5 U	< 5 U
MW-60	MW-60-20110323	3/23/2011	< 5 U	< 5 U	< 5 U
MW-60	MW-60-20111025	10/25/2011	< 5 U	< 5 U	< 5 U
MW-60	MW-60-20121017	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-60	MW-60-101513	10/15/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-60	MW-60-201403	3/6/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-60	MW-60-201405	5/13/2014	0.21 J	< 0.080 U	< 0.13 U
MW-60	MW-60-201407	7/28/2014	1 J	< 0.50 U	< 0.50 U
MW-60	MW-60-201410	10/14/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-60	MW-60-201501	1/13/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-60	MW-60-201504	4/14/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-60R	MW-60R-201507	7/21/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-60R	MW-60R-201510	10/6/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-60R	MW-60R-201601	1/11/2016	0.22 J	< 0.080 U	< 0.13 U
MW-60R	MW-60R-201605	5/2/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-60R	MW-60R-201611	11/8/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-60R	MW-60R-201704	4/26/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-60R	MW-60R-201710	10/24/2017	0.83 J	< 0.080 U	< 0.13 U
MW-61	MW-61-20050401	4/1/2005	< 5 U	< 5 U	< 10 U
MW-61	MW-61-20050401-FD	4/1/2005	< 5 U	< 5 U	< 10 U
MW-61	MW-61-20050930	9/30/2005	< 5 U	< 5 U	< 10 U
MW-61	MW-61-20060317	3/17/2006	< 5 U	< 5 U	< 10 U
MW-61	MW-61-20061012	10/12/2006	< 5 U	< 5 U	< 10 U
MW-61	MW-61-20070419	4/19/2007	< 5 U	< 5 U	< 10 U
MW-61	MW-61-20070919	9/19/2007	< 5 U	< 5 U	< 10 U
MW-61	MW-61-20080429	4/29/2008	< 5 U	< 5 U	< 10 U
MW-61	MW-61-20081210	12/10/2008	< 5 U	< 5 U	< 5 U
MW-61	MW-61-20090424	4/24/2009	4 J	< 5 U	< 5 U
MW-61	MW-61-20091027	10/27/2009	< 5 U	< 5 U	< 5 U
MW-61	MW-61-20100511	5/11/2010	< 5 U	< 5 U	< 5 U
MW-61	MW-61-20101104	11/4/2010	< 5 U	< 5 U	< 5 U
MW-61	MW-61-20110323	3/23/2011	1.8 J	< 5 U	< 5 U
MW-61	MW-61-20111025	10/25/2011	< 5 U	< 5 U	< 5 U
MW-61	MW-61-20121017	10/17/2012	2.4 J	< 0.56 U	< 0.11 U
MW-61	MW-61-101613	10/16/2013	4 J	< 0.56 U	< 0.11 U
MW-61	MW-61-201403	3/6/2014	4.7 J	< 0.080 U	< 0.13 U
MW-61	MW-61-201405	5/13/2014	6.6	< 0.080 U	< 0.13 U
MW-61	MW-61-201407	7/28/2014	8.1	< 0.50 U	< 0.50 U
MW-61	MW-61-201410	10/14/2014	7.9	< 0.50 U	< 0.50 U
MW-61	MW-61-201501	1/13/2015	10.2	< 0.50 U	< 0.50 U
MW-61	MW-61-201504	4/14/2015	10.9	< 0.50 U	< 0.50 U
MW-61R	MW-61R-201507	7/21/2015	14.7	< 0.080 U	< 0.13 U
MW-61R	MW-61R-GW-091815	9/18/2015	16.5	< 0.080 U	< 0.13 U
MW-61R	DUP-02-201510	10/8/2015	13.3	< 0.080 U	< 0.13 U
MW-61R	MW-61R-201510	10/8/2015	11.7	< 0.080 U	< 0.13 U
MW-61R	MW-61R-201511	11/4/2015	9.2	1.1	< 0.13 U
MW-61R	MW-61R-201512	12/1/2015	5	4.6	< 0.13 U
MW-61R	MW-61R-201601	1/8/2016	3.9	4.6	< 0.13 U
MW-61R	MW-61R-201605	5/3/2016	5.3	3.8	< 0.13 U
MW-61R	MW-61R-201611	11/7/2016	2.3	2.9	< 0.13 U
MW-61R	MW-61R-201704	4/27/2017	2.4	2.6	< 0.13 U
MW-61R	MW-61R-201710	10/25/2017	2.9	2.1	< 0.13 U
MW-62	MW-62-20050401	4/1/2005	< 5 U	< 5 U	< 10 U
MW-62	MW-62-20050930	9/30/2005	< 5 U	< 5 U	< 10 U
MW-62	MW-62-20060316	3/16/2006	< 5 U	< 5 U	< 10 U
MW-62	MW-62-20061012	10/12/2006	< 5 U	< 5 U	< 10 U
MW-62	MW-62-20070419	4/19/2007	< 5 U	< 5 U	< 10 U
MW-62	MW-62-20070919	9/19/2007	< 5 U	< 5 U	< 10 U
MW-62	MW-62-20080429	4/29/2008	< 5 U	< 5 U	< 10 U
MW-62	MW-62-20081210	12/10/2008	< 5 U	< 5 U	< 5 U
MW-62	MW-62-20090424	4/24/2009	< 5 U	< 5 U	< 5 U
MW-62	MW-62-20091027	10/27/2009	< 5 U	< 5 U	< 5 U
MW-62	MW-62-20100511	5/11/2010	< 5 U	< 5 U	< 5 U
MW-62	MW-62-20110323	3/23/2011	< 5 U	< 5 U	< 5 U
MW-62	MW-62-20111025	10/25/2011	1.9 J	< 5 U	< 5 U
MW-62	MW-62-20121017	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-62	MW-62-101713	10/17/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-62	MW-62-201403	3/7/2014	0.18 J	< 0.080 U	< 0.13 U
MW-62	MW-62-201405	5/14/2014	0.62 J	< 0.080 U	< 0.13 U
MW-62	MW-62-201407	7/29/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-62	MW-62-201410	10/14/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-62	MW-62-201501	1/13/2015	< 0.50 U	< 0.50 U	< 0.50 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-62	MW-62-201504	4/14/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-62R	MW-62R-201507	7/21/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-62R	MW-62R-201510	10/6/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-62R	MW-62R-201601	1/11/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-62R	MW-62R-201605	5/3/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-62R	MW-62R-201611	11/7/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-62R	MW-62R-201704	4/26/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-62R	MW-62-201710	10/25/2017	0.38 J	0.17 J	< 0.13 U
MW-62R	FD-02-201710	10/25/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-63	MW-63-20050401	4/1/2005	8.14	< 5 U	< 10 U
MW-63	MW-63-20050930	9/30/2005	< 5 U	< 5 U	< 10 U
MW-63	MW-63-20060316	3/16/2006	9.76	< 5 U	< 10 U
MW-63	MW-63-20060406	4/6/2006	11.6	< 5 U	< 10 U
MW-63	MW-63-20061012	10/12/2006	4 J	< 5 U	< 10 U
MW-63	MW-63-20070419	4/19/2007	4.08 J	< 5 U	< 10 U
MW-63	MW-63-20070919	9/19/2007	8	< 5 U	< 10 U
MW-63	MW-63-20080430	4/30/2008	3 J	< 5 U	< 10 U
MW-63	MW-63-20081210	12/10/2008	< 5 U	< 5 U	< 5 U
MW-63	MW-63-20090424	4/24/2009	4.3 J	< 5 U	< 5 U
MW-63	MW-63-20091027	10/27/2009	7.7	< 5 U	< 5 U
MW-63	MW-63-20100511	5/11/2010	7.6	< 5 U	< 5 U
MW-63	MW-63-20101106	11/6/2010	11	< 5 U	< 5 U
MW-63	MW-63-20110323	3/23/2011	12	< 5 U	< 5 U
MW-63	MW-63-20111025	10/25/2011	9.8	< 5 U	< 5 U
MW-63	MW-63-20121019	10/19/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-63	MW-63-101713	10/17/2013	7.5	< 0.56 U	< 0.11 U
MW-63	MW-63-201403	3/7/2014	9.4	1.3 J	< 0.13 U
MW-63	MW-63-201405	5/14/2014	12.2	0.61 J	0.13 J
MW-63	MW-63-201407	7/28/2014	8.3	0.99 J	< 0.50 U
MW-63	MW-63-201410	10/14/2014	9.4	0.98 J	< 0.50 U
MW-63	MW-63-201501	1/13/2015	8.2	1	< 0.50 U
MW-63	MW-63-201504	4/14/2015	9.2	0.99 J	< 0.50 U
MW-63R	MW-63R-201507	7/21/2015	5.6	0.7 J	< 0.13 U
MW-63R	MW-63R-201510	10/8/2015	3.9	0.7 J	< 0.13 U
MW-63R	MW-63R-201601	1/12/2016	3.2	0.39 J	< 0.13 U
MW-63R	MW-63R-201605	5/2/2016	3.3	0.55 J	< 0.13 U
MW-63R	MW-63R-201611	11/7/2016	2.9	0.21 J	< 0.13 U
MW-63R	MW-63R-201704	4/26/2017	3.8 B	< 0.080 U	< 0.13 U
MW-63R	MW-63R-201710	10/23/2017	4.4	0.85 J	< 0.13 U
MW-65	MW-65-20061011	10/11/2006	470	19	< 10 U
MW-65	MW-65-20061011-FD	10/11/2006	560	18	< 10 U
MW-65	MW-65-20070419	4/19/2007	1350	23.4	< 10 U
MW-65	MW-65-20070920	9/20/2007	580	17	< 10 U
MW-65	MW-65-20080430	4/30/2008	570 0	16 0	< 10 U
MW-65	MW-65-20081211	12/11/2008	460	11	< 5 U
MW-65	MW-65-20090424	4/24/2009	620	19	< 5 U
MW-65	MW-65-20101107	11/7/2010	400	11	< 5 U
MW-65	MW-65-20110304-FS	3/4/2011	370	13	< 0.85 U
MW-65	MW-65-20111025	10/25/2011	310	10	< 5 U
MW-65	MW-65-20121020	10/20/2012	280	8.9	< 0.11 U
MW-65	MW-65-101713	10/17/2013	220	8.6	< 0.11 U
MW-65	MW-65-201403	3/8/2014	199	6.6	< 0.13 U
MW-65	MW-65-201405	5/14/2014	195	6.9	< 0.13 U
MW-65	MW-65-201407	7/30/2014	17.1	< 0.50 U	< 0.50 U
MW-65	MW-65-201410	10/14/2014	30.8	0.54 J	< 0.50 U
MW-65	MW-65-201501	1/13/2015	19.2	< 0.50 U	< 0.50 U
MW-65	MW-65-201504	4/15/2015	16	< 0.50 U	< 0.50 U
MW-65	MW-65-201507	7/20/2015	26.3	0.38 J	< 0.13 U
MW-65	MW-65-201510	10/7/2015	0.28 J	< 0.080 U	< 0.13 U
MW-65	MW-65-201511	11/4/2015	7.7	< 0.080 U	< 0.13 U
MW-65	MW-65-201512	12/2/2015	6.6	< 0.080 U	< 0.13 U
MW-65	MW-65-201601	1/11/2016	14.5	0.32 J	< 0.13 U
MW-65	MW-65-201605	5/3/2016	21.5	0.35 J	< 0.13 U
MW-66	MW-66-20060406	4/6/2006	< 5 U	< 5 U	< 10 U
MW-66	MW-66-20061012	10/12/2006	2 J	< 5 U	< 10 U
MW-66	MW-66-20070418	4/18/2007	< 5 U	< 5 U	< 10 U
MW-66	MW-66-20070919	9/19/2007	4 J	< 5 U	< 10 U
MW-66	MW-66-20080429	4/29/2008	< 5 U	< 5 U	< 10 U
MW-66	MW-66-20081210	12/10/2008	< 5 U	< 5 U	< 5 U
MW-66	MW-66-20090425	4/25/2009	< 5 U	< 5 U	< 5 U
MW-66	MW-66-20091028	10/28/2009	< 5 U	< 5 U	< 5 U
MW-66	MW-66-20100511	5/11/2010	< 5 U	< 5 U	< 5 U
MW-66	MW-66-20101103	11/3/2010	< 5 U	< 5 U	< 5 U
MW-66	MW-66-20110324	3/24/2011	1.6 J	< 5 U	< 5 U
MW-66	MW-66-20111026	10/26/2011	1.8 J	< 5 U	< 5 U
MW-66	MW-66-20121017	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-66	MW-66-101713	10/17/2013	2.1 J	< 0.56 U	< 0.11 U
MW-66	MW-66-201403	3/7/2014	3.5 J	< 0.080 U	< 0.13 U
MW-66	MW-66-201405	5/13/2014	3.1 J	< 0.080 U	< 0.13 U
MW-66	MW-66-201407	7/28/2014	2.6 J	< 0.50 U	< 0.50 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-66	MW-66-201410	10/13/2014	2.3 J	< 0.50 U	< 0.50 U
MW-66	MW-66-201501	1/14/2015	2.4	< 0.50 U	< 0.50 U
MW-66	MW-66-201504	4/15/2015	2.6	< 0.50 U	< 0.50 U
MW-66	MW-66-201507	7/20/2015	3.3	0.22 J	< 0.13 U
MW-66	MW-66-201510	10/6/2015	2.3	0.18 J	< 0.13 U
MW-66	MW-66-201601	1/11/2016	0.53 J	< 0.080 U	< 0.13 U
MW-66	MW-66-201605	5/2/2016	2.6	0.2 J	< 0.13 U
MW-67	MW-67-20060406	4/6/2006	< 5 U	< 5 U	< 10 U
MW-67	MW-67-20061012	10/12/2006	1 J	< 5 U	< 10 U
MW-67	MW-67-20070419	4/19/2007	< 5 U	< 5 U	< 10 U
MW-67	MW-67-20070918	9/18/2007	< 5 U	< 5 U	< 10 U
MW-67	MW-67-20080429	4/29/2008	< 5 U	< 5 U	< 10 U
MW-67	MW-67-20081210	12/10/2008	< 5 U	< 5 U	< 5 U
MW-67	MW-67-20090425	4/25/2009	< 5 U	< 5 U	< 5 U
MW-67	MW-67-20091028	10/28/2009	< 5 U	< 5 U	< 5 U
MW-67	MW-67-20100511	5/11/2010	< 5 U	< 5 U	< 5 U
MW-67	MW-67-20101103	11/3/2010	< 5 U	< 5 U	< 5 U
MW-67	MW-67-20110324	3/24/2011	< 5 U	< 5 U	< 5 U
MW-67	MW-67-20111026	10/26/2011	< 5 U	< 5 U	< 5 U
MW-67	MW-67-20121017	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-67	MW-67-101713	10/17/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-67	MW-67-201403	3/7/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-67	MW-67-201405	5/13/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-67	MW-67-201407	7/28/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-67	MW-67-201410	10/13/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-67	MW-67-201501	1/12/2015	1.3	< 0.50 U	< 0.50 U
MW-67	MW-67-201504	4/15/2015	0.77 J	< 0.50 U	< 0.50 U
MW-67R	MW-67R-201507	7/20/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-67R	MW-67R-201510	10/6/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-67R	MW-67R-201601	1/11/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-67R	MW-67R-201605	5/2/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-68	MW-68-20090115	1/15/2009	< 5 U	< 5 U	< 5 U
MW-68	MW-68-20090424	4/24/2009	< 5 U	< 5 U	< 5 U
MW-68	MW-68-20091028	10/28/2009	< 5 U	< 5 U	< 5 U
MW-68	MW-68-20100513	5/13/2010	< 5 U	< 5 U	< 5 U
MW-68	MW-68-20101106	11/6/2010	9.5	< 5 U	< 5 U
MW-68	MW-68-20111026	10/26/2011	< 5 U	< 5 U	< 5 U
MW-68	MW-68-20121017	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-68	MW-68-101613	10/16/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-68	MW-68-201403	3/6/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-68	MW-68-201405	5/14/2014	0.49 J	< 0.080 U	< 0.13 U
MW-68	MW-68-201407	7/29/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-68	MW-68-201410	10/14/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-68	MW-68-201501	1/12/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-68	MW-68-201504	4/13/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-68	MW-68-201507	7/20/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-68	MW-68-201510	10/6/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-68	MW-68-201601	1/12/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-68	MW-68-201605	5/2/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-68	MW-68-201611	11/7/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-68	MW-68-201704	4/27/2017	0.22 J	< 0.080 U	< 0.13 U
MW-68	MW-68-201710	10/24/2017	0.31 J	< 0.080 U	< 0.13 U
MW-70	MW-70-20101104	11/4/2010	540	14	< 5 U
MW-70	MW-70-20110322	3/22/2011	170	9.2	1.2 J
MW-70	MW-70-20111026	10/26/2011	320	7.7	< 5 U
MW-70	MW-70-20120418	4/18/2012	330	11	< 5 U
MW-70	MW-70-20121018	10/18/2012	200	11	< 0.11 U
MW-70	MW-70-20130423	4/23/2013	180	3.6 J	0.32 J
MW-70	MW-70-101613	10/16/2013	270	7.2	0.30 J
MW-71	MW-71-20091028	10/28/2009	190	6.3	< 5 U
MW-71	MW-71-20100513	5/13/2010	160	7.4	< 5 U
MW-71	MW-71-20101104	11/4/2010	250	7.2	< 5 U
MW-71	MW-71-20110322	3/22/2011	76	1.6 J	< 5 U
MW-71	MW-71-20111026	10/26/2011	130	2.7 J	< 5 U
MW-71	MW-71-20120418	4/18/2012	160	5.3	< 5 U
MW-71	MW-71-20121020	10/20/2012	210	7.3	< 0.11 U
MW-71	MW-71-20130423	4/23/2013	220	4.8 J	0.23 J
MW-71	MW-71-101613	10/16/2013	160	6.1	0.57 J
MW-71	MW-71-201403	3/7/2014	166	5.8	0.19 J
MW-71	MW-71-201405	5/13/2014	164	5.3	0.33 J
MW-71	MW-71-201407	7/29/2014	181	6.4	< 0.50 U
MW-71	MW-71-201410	10/14/2014	185	6	< 0.50 U
MW-71	MW-71-201501	1/14/2015	170	6	< 0.50 U
MW-71	MW-71-201504	4/14/2015	156	5.7	< 0.50 U
MW-71	MW-71-201507	7/20/2015	165	5.3	0.48 J
MW-71	MW-71-201510	10/6/2015	179	6.5	0.43 J
MW-71	MW-71-201601	1/11/2016	171	6.1	0.40 J
MW-71	MW-71-201605	5/3/2016	140	5.3	0.23 J
MW-81	MW-81-201405	5/29/2014	512	14.3	0.21 J

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-81	20140708-GW-MW-81	7/9/2014	518	11.4	< 0.50 U
MW-81	MW-81-201409	9/11/2014	463	13.5	< 0.50 U
MW-81	MW-81-201501	1/13/2015	385	9.9	< 0.50 U
MW-81	MW-81-201504	4/15/2015	198	4.2	< 0.50 U
MW-81	MW-81-201507	7/22/2015	275	7.7	< 0.13 U
MW-81	MW-81-201510	10/8/2015	160	3.8	< 0.13 U
MW-81	MW-81-201511	11/5/2015	233	6.5	< 0.13 U
MW-81	MW-81-201512	12/2/2015	56.1	0.84 J	< 0.13 U
MW-81	MW-81-201601	1/11/2016	157	3.9	< 0.13 U
MW-81	MW-81-201605	5/4/2016	256	8.3	< 0.13 U
MW-82	MW-82-201405	5/28/2014	285	4.8 J	0.14 J
MW-82	20140708-GW-MW-82	7/9/2014	48.2	1.2 J	< 0.50 U
MW-82	MW-82-201409	9/11/2014	50	1.1 J	< 0.50 U
MW-82	MW-82-201501	1/13/2015	66	1.2	< 0.50 U
MW-82	MW-82-201504	4/15/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-82	MW-82-201507	7/22/2015	5.3	< 0.080 U	< 0.13 U
MW-82	MW-82-201510	10/6/2015	4.2	< 0.080 U	< 0.13 U
MW-82	MW-82-201601	1/11/2016	5.6	0.18 J	< 0.13 U
MW-82	MW-82-201605	5/4/2016	31.7	0.81 J	< 0.13 U
MW-82	MW-82-201611	11/9/2016	36.2	0.24 J	< 0.13 U
MW-82	MW-82-201710	10/24/2017	34.3	0.80 J	< 0.13 U
MW-82	FD-03-201710	10/24/2017	34.1	0.80 J	< 0.13 U
MW-83	MW-83-20140523	5/23/2014	470	8.3	< 0.13 U
MW-83	MW-83-201409	9/12/2014	213	4.9 J	< 0.50 U
MW-83	MW-83-20141023	10/23/2014	210	5.2	< 0.50 U
MW-83	MW-83-201501	1/15/2015	101	1.8	< 0.50 U
MW-83	MW-83-201504	4/16/2015	151	2.8	< 0.50 U
MW-83	MW-83-201507	7/22/2015	27.9	0.49 J	< 0.13 U
MW-83	MW-83-201510	10/8/2015	9.8	0.25 J	< 0.13 U
MW-83	MW-83-201511	11/5/2015	3.2	< 0.080 U	< 0.13 U
MW-83	MW-83-201512	12/2/2015	1.3	< 0.080 U	< 0.13 U
MW-83	MW-83-201601	1/7/2016	1.1	< 0.080 U	< 0.13 U
MW-83	MW-83-201605	5/4/2016	3.3	< 0.080 U	< 0.13 U
MW-83	MW-83-201611	11/9/2016	0.63 J	< 0.080 U	< 0.13 U
MW-83	MW-83-201710	10/25/2017	4.8	< 0.080 U	< 0.13 U
MW-84	MW-84-201405	5/27/2014	214	4.6 J	0.16 J
MW-84	MW-84-201409A	9/12/2014	0.93 J	< 0.50 U	< 0.50 U
MW-84	MW-84-20141023	10/23/2014	0.68 J	< 0.50 U	< 0.50 U
MW-84	MW-84-201501	1/14/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-84	MW-84-201504	4/16/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-84	MW-84-201507	7/23/2015	0.29 J	< 0.080 U	< 0.13 U
MW-84	MW-84-201510	10/7/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-84	MW-84-201601	1/7/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-84	MW-84-201605	5/5/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-84	MW-84-201611	11/9/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-84	MW-84-201704	4/27/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-84	MW-84-201710	10/25/2017	0.98 J	< 0.080 U	< 0.13 U
MW-85	MW-85-201405	5/29/2014	1970	99.4	23.1
MW-85	20140708-GW-MW-85	7/8/2014	3780	133	3.9
MW-85	MW-85-201409	9/11/2014	5820	226 J	35.3
MW-85	MW-85-20141205	12/5/2014	27700	280	7.7
MW-85	MW-85-201501	1/15/2015	5940	167	1.1
MW-85	MW-85-201504	4/16/2015	256	16.8	< 0.50 U
MW-85	MW-85-201507	7/23/2015	132	6.3	< 0.13 U
MW-85	MW-85-201510	10/8/2015	12000	52.6	1.8
MW-85	MW-85-201601	1/13/2016	6980	32.8	0.70 J
MW-85	MW-85-201605	5/5/2016	678	12	0.82 J
MW-86	MW-86-201405	5/29/2014	533000	1220 J	341 J
MW-86	MW-86-201409	9/11/2014	129000	91.6	4.1
MW-86	MW-86-20141205	12/5/2014	169000	290 E	24.7
MW-86	MW-86-201501	1/15/2015	81200	128	4.5
MW-86	MW-86-201504	4/16/2015	46700	128	5.8
MW-86	MW-86-201507	7/23/2015	65100	292 J	46.7
MW-86	MW-86-201510	10/8/2015	131000	1020	127
MW-86	MW-86-201601	1/13/2016	95500	610 J	57.1
MW-86	MW-86-201605	5/5/2016	64900	348 J	35.7
MW-86	MW-86-201611	11/9/2016	75100	< 80.0 U	65.4 J
MW-86	MW-86-201704	4/28/2017	29900	1330	< 0.13 U
MW-86	MW-86-201710	10/26/2017	61300	2210	<0.13 U
MW-87	20140625-GW-MW-87	6/25/2014	564	41.8	< 0.50 U
MW-87	MW-87-201410	10/16/2014	594	47.8	< 0.50 U
MW-87	MW-87-201501	1/14/2015	661	51.3	< 0.50 U
MW-87	MW-87-201504	4/16/2015	758	58.6	0.33 J
MW-87	MW-87-201507	7/23/2015	758	56.5	0.34 J
MW-87	MW-87-201510	10/7/2015	708	54.5	0.31 J
MW-87	DUP-09-201601	1/13/2016	781	63.2	0.40 J
MW-87	MW-87-201601	1/13/2016	757	61.9	0.47 J
MW-87	MW-87-201605	5/5/2016	839	51.6	0.36 J
MW-87	DUP-05-201611	11/8/2016	948 J	49	0.39 J

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-87	MW-87-201611	11/8/2016	701 J	51.9	0.25 J
MW-87	MW-87-201710	10/26/2017	486	36.4	<0.13 U
MW-88	20140624-GW-MW-88	6/24/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-88	MW-88-201410	10/16/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-88	MW-88-201501	1/13/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-88	MW-88-201504	4/16/2015	0.58 J	< 0.50 U	< 0.50
MW-88	MW-88-201507	7/23/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-88	MW-88-201510	10/7/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-88	MW-88-201601	1/12/2016	0.58 J	< 0.080 U	< 0.13 U
MW-88	MW-88-201605	5/4/2016	0.25 J	< 0.080 U	< 0.13 U
MW-89	20140624-GW-MW-89	6/24/2014	19.5	< 0.50 U	< 0.50 U
MW-89	MW-89-201410	10/15/2014	11.3	< 0.50 U	< 0.50 U
MW-89	MW-89-201501	1/13/2015	11.4	< 0.50 U	< 0.50 U
MW-89	MW-89-201504	4/16/2015	15.9	< 0.50 U	< 0.50
MW-89	MW-89-201507	7/23/2015	14.5	0.18 J	< 0.13 U
MW-89	MW-89-201510	10/7/2015	12.7	0.24 J	< 0.13 U
MW-89	MW-89-201601	1/12/2016	11.6	0.2 J	< 0.13 U
MW-89	MW-89-201605	5/3/2016	14	0.3 J	< 0.13 U
MW-89	MW-89-201611	11/8/2016	13.4	< 0.080 U	< 0.13 U
MW-89	MW-89-201710	10/26/2017	11.3	0.48 J	<0.13 U
MW-90	20140625-GW-MW-90	6/25/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-90	MW-90-201410	10/16/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-90	MW-90-201501	1/12/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-90	MW-90-201504	4/15/2015	< 0.50 U	< 0.50 U	< 0.50
MW-90	MW-90-201507	7/22/2015	0.38 J	< 0.080 U	< 0.13 U
MW-90	MW-90-201510	10/7/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-90	MW-90-201601	1/12/2016	0.25 J	< 0.080 U	< 0.13 U
MW-90	MW-90-201605	5/4/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-91	20140625-GW-MW-91	6/25/2014	234	21.7	< 0.50 U
MW-91	MW-91-201410	10/16/2014	319	28.8	< 0.50 U
MW-91	DUP-07-201501	1/13/2015	317	31	< 0.50 U
MW-91	MW-91-201501	1/13/2015	354	31.5	< 0.50 U
MW-91	MW-91-201504	4/16/2015	438	36.6	0.18 J
MW-91	MW-91-201507	7/23/2015	411	34.8	0.23 J
MW-91	DUP-08-201510	10/7/2015	442	35.7	0.19 J
MW-91	MW-91-201510	10/7/2015	405	35.2	0.17 J
MW-91	DUP-08-201601	1/13/2016	422	38.6	0.24 J
MW-91	MW-91-201601	1/13/2016	413	36.1	0.24 J
MW-91	DUP-02-201605	5/4/2016	459	33.4	0.26 J
MW-91	MW-91-201605	5/4/2016	530	37.8	0.23 J
MW-91	DUP-03-201611	11/10/2016	599	40.6	0.38 J
MW-91	MW-91-201611	11/10/2016	574	41.6	0.36 J
MW-91	DUP-04-201704	4/27/2017	556	42.6	0.15 J
MW-91	MW-91-201704	4/27/2017	605	44.3	0.20 J
MW-91	MW-91-201710	10/25/2017	534	36.4	0.27 J
MW-92	MW-92-20141022	10/22/2014	2160	16	7.2
MW-92	MW-92-20141204	12/4/2014	2200	23.4	10.3
MW-92	MW-92-201501	1/15/2015	1410	10.4	4.6
MW-92	MW-92-201504	4/16/2015	736	5.4	2.1
MW-92	MW-92-201507	7/23/2015	617	6.7	1.0
MW-92	MW-92-201510	10/8/2015	1400	10.8	1.4
MW-92	MW-92-201601	1/13/2016	1840	7.1	0.66 J
MW-92	DUP-08-201605	5/4/2016	1840	25.7	1.7
MW-92	MW-92-201605	5/4/2016	2210	25.5	1.8
MW-93	MW-93-20141022	10/22/2014	18200	145	5.0
MW-93	MW-93-20141204	12/4/2014	14600	85.7	2.5
MW-93	MW-93-201501	1/15/2015	18000	131	3.4
MW-93	MW-93-201504	4/16/2015	21500	160	3.9
MW-93	MW-93-201507	7/23/2015	20800	164	3.4
MW-93	MW-93-201510	10/8/2015	21100	120	3.3
MW-93	MW-93-201601	1/13/2016	21200	103	2.6
MW-93	MW-93-201605	5/5/2016	17300	127	7.6
MW-93	MW-93-201611	11/9/2016	18300	98.8	0.93 J
MW-93	MW-93-201704	4/28/2017	28200	127	5.8
MW-93	MW-93-201710	10/26/2017	16600	111	9.1
MW-94	MW-94-20141022	10/22/2014	11100	309 J	2.5
MW-94	MW-94-20141204	12/4/2014	9570	250 J	3.0
MW-94	MW-94-201501	1/15/2015	9530	297	2.4
MW-94	MW-94-201504	4/16/2015	11800	325	1.3
MW-94	MW-94-201507	7/23/2015	3890	119	0.61 J
MW-94	MW-94-201510	10/8/2015	1990	59.5	0.25 J
MW-94	MW-94-201601	1/13/2016	936	30.3	< 0.13 U
MW-94	MW-94-201605	5/5/2016	424	15.6	< 0.13 U
MW-95	MW-95-20141022	10/22/2014	22300	151	25.7
MW-95	MW-95-20141204	12/4/2014	20900	159	29.9
MW-95	MW-95-201501	1/15/2015	21100	177	25.6
MW-95	MW-95-201504	4/16/2015	26700	184	14.9
MW-95	MW-95-201507	7/23/2015	25200	181	17.1
MW-95	MW-95-201510	10/8/2015	26300	161	32.0

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Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-95	MW-95-201601	1/13/2016	24700	161	31.0
MW-95	MW-95-201605	5/5/2016	21600	164	14.8
MW-95	MW-95-201611	11/9/2016	28700	191	46.9 J
MW-95	MW-95-201704	4/28/2017	36300	181	10.7
MW-95	MW-95-201710	10/26/2017	23900	198	51.2
MW-96	MW-96-20141022	10/22/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-96	MW-96-201501	1/15/2015	0.59 J	< 0.50 U	< 0.50 U
MW-96	DUP-06-201504	4/16/2015	< 0.50 U	< 0.50 U	< 0.50
MW-96	MW-96-201504	4/16/2015	< 0.50 U	< 0.50 U	< 0.50
MW-96	DUP-06-201507	7/23/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-96	MW-96-201507	7/23/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-96	MW-96-201510	10/7/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-96	MW-96-201601	1/12/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-96	MW-96-201605	5/3/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-96	MW-96-201611	11/8/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-96	MW-96-201704	4/27/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-96	MW-96-201710	10/25/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-97	MW-97-20141022	10/22/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-97	MW-97-201501	1/15/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-97	MW-97-201504	4/16/2015	< 0.50 U	< 0.50 U	< 0.50
MW-97	MW-97-201507	7/23/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-97	MW-97-201510	10/7/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-97	MW-97-201601	1/12/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-97	MW-97-201605	5/5/2016	< 0.17 U	0.28 J	< 0.13 U
MW-97	MW-97-201611	11/8/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-97	MW-97-201704	4/27/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-97	MW-97-201710	10/25/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-98	MW-98-GW-2014 1029	10/29/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-98	MW-98-201501	1/15/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-98	MW-98-201504	4/16/2015	< 0.50 U	< 0.50 U	< 0.50
MW-98	MW-98-201507	7/23/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-98	MW-98-201510	10/6/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-98	MW-98-201601	1/11/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-98	MW-98-201605	5/3/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-98	MW-98-201611	11/8/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-98	MW-98-201704	4/27/2017	0.21 J	0.23 J	< 0.13 U
MW-98	MW-98-201710	10/24/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-99	MW-99-20141022	10/22/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-99	MW-99-201501	1/15/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-99	MW-99-201504	4/16/2015	< 0.50 U	< 0.50 U	< 0.50
MW-99	MW-99-201507	7/23/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-99	MW-99-201510	10/6/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-99	MW-99-201601	1/11/2016	0.21 J	< 0.080 U	< 0.13 U
MW-99	MW-99-201605	5/3/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-99	MW-99-201704	4/26/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-99	MW-99-201710	10/24/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-172	MW-172-20141022	10/22/2014	3010	21.4	2.4
MW-172	MW-172-20141205	12/5/2014	1810	15.6	1.3 J
MW-172	MW-172-201501	1/15/2015	3600	22.4	1.2
MW-172	MW-172-201504	4/16/2015	1740	11.9	0.92 J
MW-172	MW-172-201507	7/23/2015	2140	12.4	0.69 J
MW-172	MW-172-201510	10/8/2015	2110	12.4	0.51 J
MW-172	MW-172-201601	1/13/2016	3190	13.5	< 0.13 U
MW-172	MW-172-201605	5/5/2016	2160	13.3	< 0.13 U
MW-173	MW-173-201504	4/15/2015	< 0.50 U	< 0.50 U	< 0.50
MW-173	MW-173-201507	7/22/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-173	MW-173-201510	10/6/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-173	MW-173-201601	1/12/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-173	MW-173-201605	5/4/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-174	MW-174-GW-20150120	1/20/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-174	MW-174-201504	4/14/2015	0.68 J	< 0.50 U	< 0.50
MW-174	MW-174-201507	7/21/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-174	MW-174-201510	10/6/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-174	MW-174-201601	1/12/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-174	MW-174-201605	5/4/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-175	MW-175-GW-20150120	1/20/2015	123	2	< 0.50 U
MW-175	MW-175-201504	4/15/2015	98.8	1.5	< 0.50
MW-175	MW-175-201507	7/21/2015	20.3	0.32 J	< 0.13 U
MW-175	MW-175-201510	10/7/2015	78.6	1.6	0.19 J
MW-175	MW-175-201601	1/11/2016	52.6	1.1	< 0.13 U
MW-175	MW-175-201605	5/3/2016	54.9	1.2	< 0.13 U
MW-175	MW-175-201611	11/8/2016	50.9	0.49 J	< 0.13 U
MW-175	MW-175-201704	4/28/2017	53.2	1.3	< 0.13 U
MW-175	MW-175-201710	10/24/2017	72.2	0.27 J	<0.13 U
MW-176	MW-176-GW-20150120	1/20/2015	720	16.8	0.57 J
MW-176	MW-176-201504	4/14/2015	528	16.7	0.69 J
MW-176	MW-176-201507	7/21/2015	575	21.5	0.79 J
MW-176	MW-176-201510	10/6/2015	420	111	1.2
MW-176	MW-176-201601	1/12/2016	306	125	1.3

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-176	MW-176-201605	5/3/2016	389	93.7	0.45 J
MW-176	MW-176-201611	11/8/2016	320	202	1.6
MW-176	MW-176-201704	4/28/2017	355	140	0.63 J
MW-176	MW-176-201710	10/24/2017	281	187	0.29 J
MW-177	MW-177-GW-20150121	1/21/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-177	MW-177-201504	4/14/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-177	MW-177-201510	10/6/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-177	MW-177-201601	1/11/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-177	MW-177-201605	5/2/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-178	MW-178-GW-20150118	1/18/2015	5.2	0.99 J	< 0.50 U
MW-178	MW-178-201504	4/16/2015	5	1.3	< 0.50 U
MW-178	MW-178-201507	7/22/2015	4.6	1.1	< 0.13 U
MW-178	MW-178-201510	10/7/2015	5.8	1.4	< 0.13 U
MW-178	MW-178-201611	11/10/2016	3.2	0.15 J	< 0.13 U
MW-178	MW-178-201704	4/27/2017	4.6	1.3	< 0.13 U
MW-178	MW-178-201710	10/25/2017	3.9	0.97 J	< 0.13 U
MW-178	FD-06-201710	10/25/2017	3.6	0.96 J	< 0.13 U
MW-179	MW-179-201504	4/16/2015	41.2	1.6	< 0.50
MW-179	MW-179-201507	7/22/2015	27.3	1.1	< 0.13 U
MW-179	MW-179-201601	1/13/2016	30.6	1.1	< 0.13 U
MW-179	MW-179-201605	5/4/2016	6.6	< 0.080 U	< 0.13 U
MW-179	MW-179-201704	4/28/2017	20.4	1	< 0.13 U
MW-179	MW-179-201710	10/26/2017	10.7	0.35 J	<0.13 U
MW-180	MW-180-GW-20150119	1/19/2015	23.7	3.4	< 0.50 U
MW-180	MW-180-201504	4/16/2015	21.4	3.8	< 0.50
MW-180	MW-180-201507	7/22/2015	22.1	3	< 0.13 U
MW-180	MW-180-201510	10/7/2015	18.5	3	< 0.13 U
MW-180	MW-180-201601	1/14/2016	10.6	1.5	< 0.13 U
MW-180	MW-180-201605	5/5/2016	10.3	1.4	< 0.13 U
MW-181	MW-181-GW-20150121	1/21/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-181	MW-181-201504	4/14/2015	< 0.50 U	< 0.50 U	< 0.50 U
MW-181	MW-181-201507	7/21/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-181	MW-181-201601	1/11/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-181	MW-181-201605	5/4/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-182	MW-182-201507	7/23/2015	193	17.8	0.28 J
MW-182	MW-182-201510	10/5/2015	196	17.2	0.25 J
MW-182	MW-182-201601	1/13/2016	258	19.9	0.30 J
MW-182	DUP-09-201605	5/4/2016	271	16.6	0.32 J
MW-182	MW-182-201605	5/4/2016	283	18.9	0.31 J
MW-182	DUP-02-201611	11/9/2016	204	15.5	0.20 J
MW-182	MW-182-201611	11/9/2016	192	14.6	0.28 J
MW-182	MW-182-201710	10/24/2017	92.2	5.7	< 0.13 U
MW-183	MW-183-201510	10/6/2015	2	0.3 J	< 0.13 U
MW-183	MW-183-201601	1/12/2016	2.7	0.32 J	< 0.13 U
MW-183	MW-183-201605	5/4/2016	2.8	0.34 J	< 0.13 U
MW-183	MW-183-201611	11/9/2016	5.3	< 0.080 U	< 0.13 U
MW-183	DUP-03-201704	4/26/2017	1.9	0.17 J	< 0.13 U
MW-183	MW-183-201704	4/26/2017	2	0.26 J	< 0.13 U
MW-183	MW-183-201710	10/25/2017	2.8	0.24 J	< 0.13 U
MW-184	MW-184-201510	10/5/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-184	MW-184-201601	1/11/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-184	MW-184-201605	5/3/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-184	MW-184-201611	11/8/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-184	MW-184-201704	4/28/2017	0.45	< 0.080 U	< 0.13 U
MW-184	MW-184-201710	10/24/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-185	MW-185-GW-091615	9/16/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-185	MW-185-201510	10/5/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-185	MW-185-201601	1/11/2016	0.87 J	< 0.080 U	< 0.13 U
MW-185	MW-185-201605	5/4/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-185	MW-185-201611	11/8/2016	3.1	< 0.080 U	< 0.13 U
MW-185	MW-185-201704	4/26/2017	8	< 0.080 U	< 0.13 U
MW-185	MW-185-201710	10/24/2017	12.7	< 0.080 U	< 0.13 U
MW-186	MW-186-GW-091415	9/14/2015	< 0.17 U	0.37 J	< 0.13 U
MW-186	MW-186-201510	10/5/2015	1.2	2.4	< 0.13 U
MW-186	MW-186-201601	1/7/2016	3	3.2	< 0.13 U
MW-186	MW-186-201605	5/4/2016	4	3	< 0.13 U
MW-186	MW-186-201611	11/7/2016	5.2	3.3	0.16 J
MW-186	DUP-02-201704	4/26/2017	5 B	2.8	< 0.13 U
MW-186	MW-186-201704	4/26/2017	4.7	2.7	< 0.13 U
MW-186	MW-186-201710	10/24/2017	7.8	4.1	0.14 J
MW-186	FD-04-201710	10/24/2017	7.8	3.8	0.16 J
MW-187	MW-187-GW-091415	9/14/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-187	MW-187-201510	10/5/2015	< 0.17 U	0.21 J	< 0.13 U
MW-187	MW-187-201601	1/8/2016	0.22 J	0.27 J	< 0.13 U
MW-187	MW-187-201605	5/4/2016	0.56 J	0.59 J	< 0.13 U
MW-187	MW-187-201611	11/9/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-187	MW-187-201704	4/26/2017	0.46 J	0.55 J	< 0.13 U
MW-187	MW-187-201710	10/24/2017	0.65 J	0.73 J	< 0.13 U
MW-188	MW-188A-GW-091715	9/17/2015	< 0.17 U	< 0.080 U	< 0.13 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW-188	MW-188-201510	10/5/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-188	MW-188-201601	1/8/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-188	MW-188-201605	5/3/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-188	MW-188-201611	11/9/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-188	MW-188-201704	4/27/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-188	MW-188-201710	10/24/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-189	MW-189A-GW-091715	9/17/2015	2.4	3.1	< 0.13 U
MW-189	MW-189-201510	10/5/2015	4.1	4.5	0.14 J
MW-189	MW-189-201601	1/7/2016	4.5	5.4	0.19 J
MW-189	MW-189-201605	5/4/2016	5.5	6.1	0.19 J
MW-189	MW-189-201611	11/7/2016	10.2	9.7	0.31 J
MW-189	MW-189-201704	4/26/2017	30.1	11.1	0.29 J
MW-189	MW-189-201710	10/25/2017	195	9.5	0.40 J
MW-190	MW-190-GW-091415	9/14/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-190	MW-190-201510	10/5/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-190	MW-190-201601	1/11/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-190	MW-190-201605	5/4/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-190	MW-190-201611	11/8/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-190	MW-190-201704	4/26/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-190	MW-190-201710	10/25/2017	0.94 J	< 0.080 U	< 0.13 U
MW-191	MW-191-GW-091515	9/15/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-191	MW-191-201510	10/5/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-191	MW-191-201601	1/11/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-191	MW-191-201605	5/4/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-191	MW-191-201611	11/8/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-191	MW-191-201704	4/26/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-191	MW-191-201710	10/25/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-192	MW-192-GW-091615	9/16/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-192	MW-192-201510	10/5/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-192	MW-192-201601	1/11/2016	0.3 J	< 0.080 U	< 0.13 U
MW-192	MW-192-201605	5/4/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-192	MW-192-201611	11/9/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-192	MW-192-201704	4/26/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-192	MW-192-201710	10/25/2017	0.25 J	< 0.080 U	< 0.13 U
MW-193	MW-193-201510	10/6/2015	< 0.17 U	< 0.080 U	< 0.13 U
MW-193	MW-193-201601	1/11/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-193	MW-193-201605	5/2/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-194	MW-194-GW-080516	8/5/2016	6.6	0.66 J	< 0.13 U
MW-194	MW-194-201611	11/7/2016	12.7	< 0.080 U	< 0.13 U
MW-194	MW-194-201704	4/26/2017	10.8	< 0.080 U	< 0.13 U
MW-194	MW-194-201710	10/23/2017	15.4	1.1	< 0.13 U
MW-195	MW-195-GW-080516	8/5/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-195	MW-195-201611	11/9/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-195	MW-195-201704	4/28/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-195	MW-195-201710	10/23/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-196	MW-196-GW-080516	8/5/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-196	MW-196-201611	11/9/2016	< 0.17 U	< 0.080 U	< 0.13 U
MW-196	MW-196-201704	4/26/2017	< 0.17 U	< 0.080 U	< 0.13 U
MW-196	MW-196-201710	10/24/2017	< 0.17 U	< 0.080 U	< 0.13 U
RW-69	RW-69-20090115	1/15/2009	170	7.1	< 5 U
RW-69	RW-69-20090424	4/24/2009	62	< 5 U	< 5 U
RW-69	RW-69-20090527	5/27/2009	290	10	< 5 U
RW-69	RW-69-20091221-FS	12/21/2009	200	6.3	< 1.6 U
RW-69	RW-69-20100513	5/13/2010	170	8.2	< 5 U
RW-69	RW-69-20101104	11/4/2010	320	9	< 5 U
RW-69	RW-69-20110303-FS	3/3/2011	200	7.1	< 0.85 U
RW-69	RW-69-20110523-FS	5/23/2011	130	3 J	
RW-69	RW-69-20111026	10/26/2011	210	5.7	< 5 U
RW-69	RW-69-20120418	4/18/2012	150	3.6 J	< 5 U
RW-69	RW-69-20121018	10/18/2012	180	5	< 0.11 U
RW-69	RW-69-20130423	4/23/2013	190	2.8 J	< 0.11 U
RW-69	RW-69-101613	10/16/2013	190	7.7	< 0.11 U
RW-69	RW-69-201403	3/7/2014	105	3.5 J	0.41 J
RW-69	RW-69-201405	5/13/2014	110	3.3 J	0.30 J
RW-69	RW-69-201407	7/29/2014	164	5.6	0.50 J
RW-69	RW-69-201410	10/14/2014	173	6.9	< 0.50 U
RW-69	RW-69-201501	1/14/2015	115	4.7	< 0.50 U
RW-69	RW-69-201504	4/14/2015	113	4.5	< 0.50 U
RW-69	RW-69-201507	7/21/2015	135	5.5	0.31 J
RW-69	RW-69-201510	10/6/2015	184	6.7	0.24 J
RW-69	RW-69-201601	1/12/2016	128	4.6	< 0.13 U
RW-69	RW-69-201605	5/3/2016	91.1	4.1	< 0.13 U
RW-69	RW-69-201611	11/9/2016	185	6.2	0.26 J
RW-69	RW-69-201704	4/27/2017	158	4.6	< 0.13 U
RW-69	RW-69-201710	10/24/2017	159	5.2	0.21 J
TMW-01	TMW-01-062613-GW	6/26/2013	< 1.6 U	< 0.56 U	
TMW-01	TMW-01-062613-LL	6/26/2013			< 0.11 U
TMW-02	TMW-02-062613-GW	6/26/2013	< 1.6 U	< 0.56 U	
TMW-02	TMW-02-062613-LL	6/26/2013			< 0.11 U

TABLE 7
HISTORICAL SUMMARY OF GROUNDWATER CONCENTRATIONS FOR TCE AND DAUGHTER-PRODUCTS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Sample Name	Date	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
TMW-04	TMW-04-062613-GW	6/26/2013	< 1.6 U	< 0.56 U	
TMW-04	TMW-04-062613-LL	6/26/2013			< 0.11 U
TMW-05	TMW-05-062613-GW	6/26/2013	< 1.6 U	< 0.56 U	
TMW-05	TMW-05-062613-LL	6/26/2013			< 0.11 U
TMW-10	TMW-10-GW-091815	9/18/2015	190	1.9	< 0.13 U
TMW-10	TMW-10-201510	10/8/2015	102	1.1	< 0.13 U
TMW-10	TMW-10-201511	11/4/2015	120	0.72 J	< 0.13 U
TMW-10	TMW-10-201512	12/1/2015	114	0.88 J	< 0.13 U
TMW-10	TMW-10-201601	1/8/2016	103	3.1	< 0.13 U
TMW-10	TMW-10-201605	5/4/2016	123	12.9	< 0.13 U
TMW-10	TMW-10-201611	11/8/2016	95.4	4.4	< 0.13 U
TMW-10	DUP-05-201704	4/27/2017	102	5.9	0.38 J
TMW-10	TMW-10-201704	4/27/2017	96.2	5.1	0.32 J
TMW-10	TMW-10-201710	10/24/2017	89.5	4.5	0.91 J
TMW-11	TMW-11-GW-091815	9/18/2015	31.1	0.15 J	< 0.13 U
TMW-11	TMW-11-201510	10/8/2015	14.3	< 0.080 U	< 0.13 U
TMW-11	TMW-11-201511	11/4/2015	6.3	2.5	< 0.13 U
TMW-11	TMW-11-201512	12/1/2015	0.63 J	5.8	< 0.13 U
TMW-11	TMW-11-201601	1/8/2016	3.1	5.3	< 0.13 U
TMW-11	TMW-11-201605	5/3/2016	8.1	3.6	< 0.13 U
TMW-11	TMW-11-201611	11/8/2016	1.2	4.7	< 0.13 U
TMW-11	TMW-11-201704	4/27/2017	0.85 J	3.6	0.36 J
TMW-11	TMW-11-201710	10/23/2017	0.62 J	1.7	0.70 J
TMW-12	TMW-12-201704	4/27/2017	463	12	0.34 J
TMW-13	TMW-13-201704	4/27/2017	193	4.2	0.15 J
TMW-14	TMW-14-201704	4/27/2017	10.9	0.29 J	< 0.13 U
TMW-15	TMW-15-201704	4/26/2017	5.3	0.41 J	< 0.13 U
TMW-16	TMW-16-201704	4/25/2017	682	8.4	0.57 J
TMW-16	TMW-16-201710	10/24/2017	956	10.4	< 0.13 U
TMW-17	TMW-17-201704	4/25/2017	154	7.6	0.37 J
TMW-18	TMW-18-201704	4/25/2017	0.6 J	0.72 J	< 0.13 U
TMW-19	DUP-01-201704	4/25/2017	0.3 J	< 0.080 U	< 0.13 U
TMW-19	TMW-19-201704	4/25/2017	< 0.17 U	< 0.080 U	< 0.13 U
TMW-19	TMW-19-201710	10/24/2017	< 0.17 U	< 0.080 U	< 0.13 U
TMW-20	TMW-20-201710	10/23/2017	< 0.17 U	< 0.080 U	< 0.13 U
TMW-20	FD-01-201710	10/23/2017	< 0.17 U	< 0.080 U	< 0.13 U
TMW-21	TMW-21-201710	10/24/2017	461	9.2	< 0.13 U
TMW-22	TMW-22-201710	10/24/2017	486	9.8	< 0.13 U
TMW-23	TMW-23-201710	10/25/2017	62.2	0.89 J	< 0.13 U
TMW-24	TMW-24-201710	10/24/2017	385	8.1	< 0.13 U
TMW-25	TMW-25-201710	10/25/2017	245	11.2	0.41 J
TMW-26	TMW-26-201710	10/24/2017	36.3	<0.080 U	<0.13 U
TMW-27	TMW-27-201710	10/25/2017	< 0.17 U	< 0.080 U	< 0.13 U
TMW-29	TMW-29-201710	10/24/2017	< 0.17 U	< 0.080 U	< 0.13 U
TMW-30	TMW-30-201710	10/24/2017	0.55 J	< 0.080 U	< 0.13 U

TABLE 8
SUMMARY OF STATISTICAL TEMPORAL TREND ANALYSIS (2009 - 2017)
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Start Date	End Date	Number of Samples	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
Northern Plume Wells						
MW-24	4/27/2009	10/25/2017	20	Decreasing	Decreasing	<PQL
MW-27	5/12/2010	10/25/2017	19	No Trend	<PQL	ND
MW-28	10/29/2009	10/25/2017	21	Decreasing	ND	ND
MW-39	4/24/2009	10/25/2017	21	No Trend	ND	ND
MW-40	4/24/2009	10/24/2017	24	<PQL	<PQL	ND
MW-46R	4/25/2009	10/24/2017	27	Stable	Stable	<PQL
MW-50	4/24/2009	10/23/2017	21	Increasing	ND	ND
MW-55	4/24/2009	10/25/2017	15	Stable	<PQL	<PQL
MW-56	4/24/2009	10/24/2017	19	Increasing	Increasing	<PQL
MW-57	4/24/2009	10/24/2017	19	Increasing	Increasing	<PQL
MW-58	4/25/2009	10/24/2017	21	Decreasing	Stable	Stable
MW-60	4/24/2009	10/24/2017	21	Increasing	ND	ND
MW-61	4/24/2009	10/25/2017	21	Increasing	Increasing	ND
MW-62	4/24/2009	4/26/2017	19	No Trend	ND	ND
MW-63	4/24/2009	10/23/2017	21	Decreasing	Increasing	<PQL
MW-68	1/15/2009	10/24/2017	21	No Trend	ND	ND
RW-69	1/15/2009	10/24/2017	26	Decreasing	Stable	<PQL
IW-73	4/23/2009	10/24/2017	20	Decreasing	No Trend	No Trend
IW-77	4/23/2009	10/24/2017	29	Decreasing	Decreasing	<PQL
IW-78	10/25/2011	10/25/2017	11	Decreasing	Decreasing	ND
MW-82	5/28/2014	10/24/2017	11	No Trend	No Trend	<PQL
MW-83	5/23/2014	10/25/2017	11	Decreasing	Decreasing	ND
MW-84	5/27/2014	10/25/2017	12	Decreasing	Decreasing	<PQL
MW-194	8/5/2016	10/23/2017	5	Increasing	Stable	ND
MW-195	8/5/2016	10/23/2017	5	ND	ND	ND
MW-196	8/5/2016	10/24/2017	5	ND	ND	ND
Southern Plume Wells (includes Source Area Wells as indicated by bold font well ID)						
ITMW-1	10/27/2011	10/25/2017	17	Decreasing	Decreasing	ND
ITMW-2	11/3/2010	10/25/2017	19	<PQL	<PQL	ND
ITMW-5	4/27/2009	10/25/2017	13	Increasing	Decreasing	Increasing
ITMW-7	4/27/2009	10/25/2017	22	Decreasing	Decreasing	Increasing
ITMW-9	4/27/2009	10/25/2017	21	No Trend	Decreasing	No Trend
ITMW-10	4/27/2009	10/25/2017	20	Increasing	Decreasing	Decreasing
ITMW-16	11/6/2010	10/25/2017	18	Decreasing	ND	ND
ITMW-18	4/27/2009	10/26/2017	22	Decreasing	Decreasing	<PQL
ITMW-19	4/27/2009	10/26/2017	22	Decreasing	Decreasing	<PQL
ITMW-20	10/29/2009	10/25/2017	21	No Trend	ND	<PQL
ITMW-21	10/27/2009	10/25/2017	21	Decreasing	<PQL	ND
MW-22	10/27/2009	10/25/2017	19	<PQL	ND	ND
MW-24	4/27/2009	10/25/2017	20	Decreasing	Decreasing	<PQL
MW-25	4/27/2009	10/26/2017	23	No Trend	Decreasing	Decreasing
MW-26	10/29/2009	10/25/2017	21	No Trend	ND	ND
MW-29	10/29/2009	10/25/2017	19	<PQL	<PQL	ND
MW-38	10/26/2011	10/26/2017	17	Stable	Stable	Decreasing
MW-86	5/29/2014	10/26/2017	12	Decreasing	Increasing	No Trend
MW-93	10/22/2014	10/26/2017	11	Stable	Stable	Stable
MW-95	10/22/2014	10/26/2017	11	Increasing	Increasing	Stable
MW-182	7/23/2015	10/24/2017	6	Stable	Stable	<PQL
MW-185	10/5/2015	10/24/2017	6	Increasing	No Trend	ND
MW-186	10/5/2015	10/24/2017	6	Increasing	Stable	<PQL
MW-187	10/5/2015	10/24/2017	6	<PQL	<PQL	ND
MW-188	10/5/2015	10/24/2017	6	ND	ND	ND
MW-189	10/5/2015	10/25/2017	6	Increasing	Increasing	<PQL
MW-190	10/5/2015	10/25/2017	6	<PQL	ND	ND
MW-191	10/5/2015	10/25/2017	6	No Trend	ND	No Trend
MW-192	10/5/2015	10/25/2017	6	No Trend	ND	ND
Northeast Corner Wells						
MW-87	6/25/2014	10/26/2017	10	Increasing	Stable	<PQL
MW-89	6/24/2014	10/26/2017	10	Stable	<PQL	ND
MW-91	6/25/2014	10/25/2017	11	Increasing	Increasing	<PQL
MW-96	10/22/2014	10/25/2017	10	<PQL	ND	ND
MW-97	10/22/2014	10/25/2017	10	ND	<PQL	ND
MW-98	10/29/2014	10/24/2017	10	<PQL	<PQL	ND
MW-99	10/22/2014	10/24/2017	9	No Trend	ND	ND
MW-183	10/5/2015	10/25/2017	6	Stable	<PQL	ND
MW-184	10/5/2015	10/24/2017	6	No Trend	ND	ND

Notes:
ND = Result is Not Detected at the associated method quantitation limit
<PQL = Analyte qualified as estimated because it was detected
Bolded text = source well

TABLE 9
SUMMARY OF WATER QUALITY PARAMETERS (MW-61R PILOT TEST)
Whirlpool Facility - Fort Smith, Arkansas

Well	Time - Time Stamp	TOC Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	Temperature (°C)	Conductivity (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Fe(II) (mg/L)	Notes
MW-61R	9/18/2015 15:07	459.31	4.5	454.81	25.09	687	0.38	6.22	-147.3	ND	Pre-Injection Baseline
	9/30/2015 12:51	459.31	3.05	456.26							During Injection
	9/30/2015 14:25	459.31	7.72	451.59	24.06	531	1.37	6.29	79.1	2.4	
	9/30/2015 14:44	459.31	8.14	451.17	23.93	526	1.25	6.29	84.6	3.3	
	9/30/2015 15:46	459.31	8.80	450.51	23.80	530	1.31	6.23	78.8		
	9/30/2015 17:04	459.31	14.14	445.17	23.00	564	0.32	6.47	15.4		
	10/1/2015 10:46	459.31	2.96	456.35							
	10/1/2015 11:19	459.31	8.40	450.91	23.49	646	3.75	6.28	111.3	ND	
	10/1/2015 13:13	459.31	13.13	446.18	22.98	678	1.46	6.34	65.5	3.3	
	10/1/2015 14:00	459.31	14.84	444.47	22.71	680	1.06	6.35	58.4	3.3	
	10/1/2015 17:30	459.31			23.64	658	5.00	6.45	94.8		
	10/2/2015 8:44	459.31	1.85	457.46							
	10/2/2015 9:18	459.31			23.33	720	2.99	6.28	-33.8		
	10/2/2015 13:44	459.31			23.33	1189	3.08	6.29	-50	3.3	
	10/2/2015 15:26	459.31			23.91	1090	2.74	6.24	-57.2	3.3	
	10/8/2015 9:40	459.31	3.08	456.23							6 days post injection
	10/8/2015 10:25	459.31	6.65	452.66	24.55	4238	1.30	5.52	-13.1	>3.3	
	10/22/2015 9:35	459.31	7.15	452.16	23.96	2190	0.00	6.20	-152	3.0	20 days post injection
	11/4/2015 14:31	459.31	5.45	453.86	23.77	1790	0.07	6.50	-105.6	3.3	30 days post injection
	12/1/2015 15:55	459.31	6.49	452.82	19.70	1802	0.08	6.85	-148.7	2.8	60 days post injection
	1/8/2016 8:30	459.31	7.10	452.21	16.18	1207	0.21	6.82	-117.3	>3.0	90 days post injection
	5/3/2016 12:10	459.31	6.40	452.91	18.18	1250	0.17	6.79	-124.8	>3.3	210 days post injection
	11/7/2016 0:00	459.31	7.60	451.71	21.34	1063	0.63	7.67	-170.5	>3.3	405 days post injection
	4/27/2017 9:26	459.31	7.60	451.71	18.10	1073	0.18	6.81	-66.5	3.3	575 days post injection
	10/23/2017 16:52	459.31	6.53	452.78	23.90	1204	0.18	6.95	-119.3	3.3	754 days post injection
TMW-10	9/18/2015 13:40	460.75	4.2	456.55	23.96	932	0.78	6.31	-183.9	ND	Pre-Injection Baseline
	9/30/2015 11:34	460.75	3.34	457.41							During Injection
	9/30/2015 17:57	460.75	4.95	455.80	21.1	753	1.79	6.47	167.1		
	10/1/2015 18:03	460.75			21.75	906	6.61	6.53	162.0		
	10/2/2015 8:59	460.75	1.89	458.86							
	10/2/2015 9:42	460.75			21.25	866	4.84	6.40	132.1	0.41	
	10/2/2015 11:22	460.75			21.59	868	5.08	6.38	190.1	3.3	

TABLE 9
SUMMARY OF WATER QUALITY PARAMETERS (MW-61R PILOT TEST)
Whirlpool Facility - Fort Smith, Arkansas

Well	Time - Time Stamp	TOC Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	Temperature (°C)	Conductivity (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Fe(II) (mg/L)	Notes
TMW-10	10/8/2015 12:15	460.75	0	460.75							6 days post injection
	10/8/2015 12:57	460.75	1.16	459.59	23.13	833	4.24	6.40	101.4	>3.3	
	11/4/2015 13:05	460.75	2.6	458.15	21.65	871	3.00	6.34	97.6		30 days post injection
	12/1/2015 13:58	460.75	3.91	456.84	19.67	800	2.02	6.29	136.2	1.4	60 days post injection
	1/8/2016 8:40	460.75	5.00	455.75	16.94	822	2.17	6.19	209.8	0.14	90 days post injection
	5/4/2016 10:10	460.75	5.70	455.05	17.10	869	1.12	6.40	135.5	0.13	210 days post injection
	11/8/2016 0:00	460.75	4.61	456.14	20.32	892	0.50	6.31	187	0.67	405 days post injection
	4/27/2017 12:09	460.75	7.42	453.33	17.87	829	0.29	6.30	-3.2	0.08	575 days post injection
	10/24/2017 14:15	460.75	4.93	455.82	21.59	904	0.18	6.33	55.1	0.08	754 days post injection
TMW-11	9/18/2015 10:05	460.20	3.49	456.71	23.93	1005	3.07	6.52	12.4	ND	Pre-Injection Baseline
	10/1/2015 9:34	460.20	2.51	457.69							During Injection
	10/1/2015 10:31	460.20	3.49	456.71	22.07	985	2.58	6.75	126.8	ND	
	10/1/2015 18:08	460.20			21.27	968	6.71	6.86	166		
	10/2/2015 13:58	460.20			21.00	1147	4.06	6.62	28.3	3.3	
	10/2/2015 15:46	460.20			21.39	1033	3.05	6.58	37		
	10/8/2015 13:02	460.20	6.44	453.76	23.35	5448	1.01	5.72	-61.9	3.0	6 days post injection
	11/4/2015 14:00	460.20	1.98	458.22	21.59	4,196	5.16	6.24	-18.4	3.3	30 days post injection
	12/1/2015 13:35	460.20	3.25	456.95	17.07	5,609	0.11	6.74	-150.3	>3.0	60 days post injection
	1/8/2016 8:53	460.20	4.43	455.77	15.83	3,793	0.16	7.19	-128	>3.0	90 days post injection
	5/3/2016 15:10	460.20	4.96	455.24	18.93	2,512	0.15	7.17	-153.8	*	210 days post injection
	11/8/2016 0:00	460.20	3.75	456.45	22.83	1,834	0.21	7.1	-131.1	>3.3	405 days post injection
	4/27/2017 10:46	460.20	6.53	453.67	17.55	1,694	-0.05	7.1	-115	3.3	575 days post injection
	10/23/2017 16:00	460.20	4.00	456.20	22.99	1,510	0.07	7.07	-137.9	3.3	754 days post injection

Notes:

µS/cm = MicroSiemens per centimeter
mg/L = Miligrams per liter
ND = Not detected
TOC = Top of casing
DO = Dissolved oxygen
ORP = Oxidation reduction potential
mV = Millivolts
* = Inconclusive test
NA= Not Analyzed

Injection intervals: 8 to 10 feet (ft) below ground surface (bgs) and 10 to 12 ft., bgs (see boring logs for modification of injection intervals).
Injection pressures: 150 psi air surge to clear injection rod ports and develop pathway-breakout, injection pressures 80 to 100 psi at injection pump.
Injection solution at each depth interval: 85.2 pounds (lbs) Provectus IR; 7.5 (lbs) MgO; 0.15 lbs DHC inoculum; (55 gallons total solution).
10/1/15, 15:08 hours, pressurization, gurgling TMW-10 during injection at IP-34.
10/1/15, 15:52 hours, pressurization, gurgling MW-61R during injection at IP-12.
10/2/15, 10:06 hours, pressurization, TMW-11 well cap displaced during injection at IP-26.
10/2/15, yellow GW, solids, yeast-odor MW-61R.
10/2/15, yellow GW, solids, yeast-odor TMW-11.
10/23/2017, light gray tint to GW

TABLE 10
GROUNDWATER SAMPLE ANALYTICAL RESULTS ISCR PILOT WELLS (July 2015 - October 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-61R	MW-61R	MW-61R	MW-61R	MW-61R	MW-61R	MW-61R	MW-61R	MW-61R	MW-61R	MW-61R	TMW-10	TMW-10	TMW-10	TMW-10	TMW-10
Field Sample ID		MW-61R-201507	MW-61R-GW-091815	MW-61R-201510	DUP-02-201510	MW-61R-201511	MW-61R-201512	MW-61R-201601	MW-61R-201605	MW-61R-201611	MW-61R-201704	MW-61R-201710	TMW-10-GW-091815	TMW-10-201510	TMW-10-201511	TMW-10-201512	TMW-10-201601
Lab Sample ID(s)		057MG030, 161940005, 60198937025	167200003, 60203213003	086MJ09, 169690006, 60204767001	60204767002	60206665003	175080003, 60208468003	179040010, 021NA08	190510021, 190770016, 60218288008, 002NE033	60231722001, 209510002, 037NK05	60243014005	60256266011	167200002, 60203213002	60204791002	60206665001	175080001, 60208468001	60210924001
Sample Date		7/21/2015	9/18/2015	10/8/2015	10/8/2015	11/4/2015	12/1/2015	1/8/2016	5/3/2016	11/07/2016	4/27/2017	10/23/2017	9/18/2015	10/8/2015	11/4/2015	12/1/2015	1/8/2016
Sample Method		Low Flow		Low Flow	Low Flow			Low Flow	Low Flow	Low Flow	Low Flow	Low Flow		Low Flow			Low Flow
Comments					Field Duplicate												
Volatile Organic Compounds																	
Acetone	12000	U (1.9)	U (1.9)	U (1.9)	U (1.9)	58.1 (1.9)	148 (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	3.4 J (1.9)	8.4 J (1.9)	2.0 (1.9)	U (1.9)
Benzene	5	U (0.060)	U (0.060)	0.099 J (0.060)	0.11 J (0.060)	U (0.060)	0.10 J (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)
Bromoform	80	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)
Bromomethane	7	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
2-Butanone	4900	U (0.59)	U (0.59)	243 (0.59)	269 (0.59)	155 (0.59)	233 (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	3.6 J (0.59)	8.6 J (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	720	U (0.12)	U (0.12)	0.34 J (0.12)	0.59 J (0.12)	0.49 J (0.12)	0.27 J (0.12)	U (0.12)	U (0.12)	UJ (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	0.31 J (0.12)	U (0.12)	U (0.12)
Carbon Tetrachloride	5	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)
Chlorobenzene	100	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
Chloroethane	12000	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Chloroform	80	0.45 J (0.14)	0.18 J (0.14)	0.20 J (0.14)	0.26 J (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Chloromethane	190	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	0.52 J (0.080)	0.27 J (0.080)	U (0.080)	0.21 JB (0.080)	NM	U (0.080)	U (0.080)	U (0.080)	0.29 J (0.080)	0.14 J (0.080)	
Dibromochloromethane	80	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
1,1-Dichloroethane	2.4	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	5	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.050)	U (0.050)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	7	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	0.26 J (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	U (0.080)	U (0.080)	U (0.080)	U (0.080)	1.1 (0.080)	4.6 (0.080)	4.6 (0.080)	3.8 (0.080)	2.9 (0.080)	2.6 (0.080)	2.1 (0.080)	1.9 (0.080)	1.1 (0.080)	0.72 J (0.080)	0.88 J (0.080)	3.1 (0.080)
trans-1,2-Dichloroethene	100	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	0.36 J (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
1,2-Dichloropropane	5	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	NM	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
1,3-Dichloropropene (total)	0.41	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	NM	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
cis-1,3-Dichloropropene		U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	NM	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
trans-1,3-Dichloropropene		U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	NM	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
Ethyl Benzene	700	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	0.28 J (0.18)	NM	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)
2-Hexanone	34	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)	NM	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)
4-Methyl-2-pentanone	1000	U (0.42)	U (0.42)	1.5 J (0.42)	1.5 J (0.42)	U (0.42)	0.61 J (0.42)	U (0.42)	U (0.42)	UJ (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Methylene Chloride	5	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	0.26 (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Styrene	100	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	NM	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1,2,2-Tetrachloroethane	0.066	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	5	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	0.16 J (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	1000	U (0.17)	U (0.17)	0.22 J (0.17)	0.32 J (0.17)	U (0.17)	0.46 J (0.17)	0.23 J (0.17)	U (0.17)	0.48 J (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
1,1,1-Trichloroethane	200	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)
1,1,2-Trichloroethane	5	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
Trichloroethene	5	14.7 (0.17)	16.5 (0.17)	11.7 (0.17)	13.3 (0.17)	9.2 (0.17)	5.0 (0.17)	3.9 (0.17)	5.3 (0.17)	2.3 (0.17)	2.4 (0.17)	2.9 (0.17)	190 (0.17)	102 (0.17)	120 (0.17)	114 (0.17)	103 (0.17)
Vinyl Chloride	2	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)
Xylenes (total)	10000	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	NM	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Metals																	
Iron	NE	3790 (50.0)	4110 (50.0)	74000 M1 (50.0)	NM	NM	52400 (50.0)	27300 (50.0)	22000 (50.0)	11600 (50.0)	NM	12,000 (50.0)	755 (50.0)	NM	NM	1730 (50.0)	NM
Manganese	NE	1480 (5.0)	NM	20000 M1 (5.0)	NM	NM	6320 (5.0)	2850 (5.0)	1710 (5.0)	1020 (5.0)	NM	1,120 (5.0)	NM	NM	NM	37.4 (5.0)	NM
Monitored Natural Attenuation Parameters (Laboratory)																	
Acetic acid	NE	U (5000)	U (5000)	1800000 (100000)	NM	NM	13000 (5000)	U (5000)	U (5000)	NM	NM	NM	U (5000)	NM	NM	U (5000)	NM
Total Alkalinity	NE	124000 (20000)	NM	1190000 (40000)	NM	NM	862000 (20000)	U (20000)	384000 (20000)	362000 (20000)	NM	411,000 (20,000)	NM	NM	NM	154000 (20000)	NM
Ammonia	NE	U (100)	NM	8100 (500)	NM	NM	NM	980 (100)	2000 (100)	1000 M1 (100)	NM	870 (100)	NM	NM	NM	NM	NM
Bicarbonate Alkalinity	NE	124000 (20000)	NM	1190000 (40000)	NM	NM	862000 (20000)	U (20000)	384000 (20000)	362000 (20000)	NM	411,000 (20,000)	NM	NM	NM	154000 (20000)	NM
Butyric acid	NE	U (5000)	U (5000)	280000 (100000)	NM	NM	U (5000)	U (5000)	U (5000)	NM	NM	NM	U (5000)	NM	NM	U (5000)	NM
Carbon Dioxide	NE	265000 (20000)	NM	8230000 (20000)	NM	NM	1000000 (20000)	U (20000)	463000 (20000)	NM	NM	NM	NM	NM	NM	294000 (20000)	NM
Organic Carbon (total)	NE	U (1000)	U (1000)	1620000 (200000)	NM	NM	NM	7700 (2000)	2800 (1000)	3400 (1000)	NM	1200 (1000)	U (1000)	NM	NM	NM	NM
Organic Carbon (dissolved)	NE	NM	U (1000)	NM	NM	NM	NM	4000 (1000)	2500 (1000)	1700 (100)	NM	NM	U (1000)	NM	NM	NM	NM
Carbonate Alkalinity	NE	U (20000)	NM	U (40000)	NM	NM	U (20000)	U (20000)	U (20000)	U (20000)	NM	U (20,000)	NM	NM	NM	U (20000)	NM
Chloride	NE	110000 (10000)	108000 (10000)	130000 (20000)	NM	NM	NM	81200 (5000)	83600 (10000)	87300 (10000)	NM	96500 (10,000)	177000 (10000)	NM	NM	NM	NM
2-Chloroethanol	NE	U (10000)	U (10000)	U (10000)	NM	NM	NM	U (10000)	U (10000)	NM	NM	NM	U (10000)	NM	NM	NM	NM
Iron, Ferric	NE	2000 (200)	4100 (200)	70700 (200)	NM	NM	NM	24300 (200)	18600 (200)	NM	NM	NM	760 (200)	NM	NM	NM	NM
Lactic Acid	NE	U (10000)	U (10000)	U (20000)	NM	NM	U (10000)	U (10000)	U (10000)	NM	NM	NM	U (10000)	NM	NM	U (10000)	NM
Nitrogen	NE	1300 M1 (100)	1400 (100)	110 M1 (100)	NM	NM	NM	U (100)	U (100)	NM	NM	U (100)	280 (100)	NM	NM	NM	NM
Nitrogen, Nitrate (As N)	NE	1300 (100)	1400 (100)	110 M1 (100)	NM	NM	U (1000)	U (100)	U (100)	NM	NM	U (100)	280 (100)	NM	NM	1900 (1000)	NM
Nitrogen, Nitrite	NE	U (100)	U (100)	U (100)	NM	NM	U (1000)	U (100)	U (100)	NM	NM	U (100)	U (100)	NM	NM	U (1000)	NM
pH [PH UNITS]	NE	6.2 (0.10)	NM	5.5 (0.10)	NM	NM	6.8 (0.10)	6.8 (0.10)	6.8 (0.10)	NM	NM	NM	NM	NM	NM	6.3 (0.10)	NM
Phosphates (total)	NE	130 M1 (30)	NM	3600 (310)	NM	NM	NM	180 (30)	590 (30)	260 M1 (30)	NM	NM	NM	NM	NM	NM	NM
Propionic Acid	NE	U (5000)	U (5000)	140000 (100000)	NM	NM	76000 (5000)	U (5000)	U (5000)	NM	NM	NM	U (5000)	NM	NM	U (5000)	NM
Pyruvic Acid	NE	U (5000)	U (5000)	U (10000)	NM	NM	U (5000)	U (5000)	U (5000)	NM	NM	NM	U (5000)	NM	NM	U (5000)	NM
Sulfide (total)	NE	U (50)	NM	21 J (50)	NM	NM	NM	U (50)	U (50)	U (50)	NM	21 J (50)	NM	NM	NM	NM	NM
Sulfate	NE	14800 (1000)	11000 (1000)	79000 (5000)	NM	NM	7400 (1000)	12100 (1000)	7500 (1000)	7900 (1000)	NM	8900(1000)	2100 (1000)	NM	NM	3700 (1000)	NM
Gases																	
Acetylene	NE	U (0.50)	NM	U (0.50)	NM	NM	U (0.50)	U (0.50)	U (0.50)	U (0.50)	NM	NM	NM	NM	NM	U (0.50)	NM
Methane	NE	4.5 (0.50)	2.1 (0.50)	4.3 (0.50)	NM	NM	10000 (0.50)	12000 (0.50)	12000 (0.50)	9400 (0.50)	NM	14000 (0.02)	U (0.50)	NM	NM	1.3 (0.50)	NM
Ethane	NE	1.4 (0.10)	0.31 (0.10)	0.33 (0.10)	NM	NM	0.41 (0.10)	1.7 (0.10)	2.0 (0.10)	1.1 (0.10)	NM	0.71 (0.007)	U (0.10)	NM	NM	U (0.10)	NM
Ethene	NE	1.1 (0.10)	0.48 (0.10)	1.2 (0.10)	NM	NM	2.7 (0.10)	1.7 (0.10)	0.58 (0.10)	0.18 (0.10)	NM	0.16 (0.005)	U (0.10)	NM	NM	U (0.10)	NM
Hydrogen (H2) [nM][4*]	NE	2.0 (0.60)	NM	500 d (12)	NM	NM	NM	0.98 (0.60)	1.1 (0.60)	4.2 (2.4)	NM	1.3 (0.16)	NM	NM	NM	NM	NM
Molecular Analyses																	
BAV1 Vinyl Chloride Reductase [cells/mL]	NE	U (0.5)	NM	1.9 (1)	NM	NM	NM	U (1)	U (1.25)	6.2 (0.5)	NM	U (1.1)	NM	NM	NM	NM	NM
Dehalococcoides (DHC) [cells/mL]	NE	U (0.5)	NM	184 (1)	NM	NM	NM	30 (1)	44.1 (1.25)	163 (0.5)	NM	U (1.1)	NM	NM	NM	NM	NM
tceA Reductase [cells/mL]	NE	U (0.5)	NM	U (1)	NM	NM	NM	U (1)	U (1.25)	0.6 (0.5)	NM	U (1.1)	NM	NM	NM	NM	NM
Vinyl Chloride Reductase (vrcA) [cells/mL]	NE	U (0.5)	NM	0.3 J (1)	NM	NM	NM	U (1)	U (1.25)	16.6 (0.5)	NM	U (1.1)	NM	NM	NM	NM	NM

Notes:

1 All concentrations are presented in ug/L except where noted.
2 All compounds are shown.
3 Concentrations that exceed the Remedial Action Levels per ADEQ RADD Issued Dec 2013 are double underlined.
U = Not detected
J = Estimated concentration
d = The analyte concentration was determined from a dilution.
( ) = Method detection limit for VOCs; reporting limit for all other parameters
* = Sampled on different day than other parameters with different method

RADD = Remedial action decision document
ADEQ = Arkansas Department of Environmental Quality
VOC = Volatile organic compounds
µg/L = Micrograms per liter
mL = Milliliters
NE = Not established
NM = Not measured

RAMBOLL ENVIRON

TABLE 10
GROUNDWATER SAMPLE ANALYTICAL RESULTS ISCR PILOT WELLS (July 2015 - October 2017)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	TMW-10	TMW-10	TMW-10	TMW-10	TMW-10	TMW-11	TMW-11	TMW-11	TMW-11	TMW-11	TMW-11	TMW-11	TMW-11	TMW-11
Field Sample ID		TMW-10-201605	TMW-10-201611	TMW-10-201704	DUP-05-201704	TMW-10-201710	TMW-11-GW-091815	TMW-11-201510	TMW-11-201511	TMW-11-201512	TMW-11-201601	TMW-11-201605	TMW-11-201611	TMW-11-201704	TMW-11-201704
Lab Sample ID(s)		190520001, 190770017, 60218387004, 002NE037	60231848024, 209510003, 037NK07	60243014026	60243014015	60256365032	167200001, 60203213001	60204791001	60206665002	175080002, 60208468002	179040011, 021NA010	190510020, 190770018, 60218288007, 002NE032	60231848015, 209510007, 037NK03	60243014009	60243014009
Sample Date		5/4/2016	11/08/2016	4/27/2017	4/27/2017	10/24/2017	9/18/2015	10/8/2015	11/4/2015	12/1/2015	1/8/2016	5/3/2016	11/08/2016	4/27/2017	10/23/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow		Low Flow			Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments															
Volatile Organic Compounds															
Acetone	12000	U (1.9)	U (1.9)	3.1 J (1.9)	U (1.9)	U (1.9)	U (1.9)	104 (1.9)	636 (1.9)	1420 (9.4)	1120 (9.4)	15.4 (1.9)	5.0 J (1.9)	5.2 J (1.9)	U (1.9)
Benzene	5	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	0.27 J (0.060)	U (0.060)	0.15 J (0.060)	0.11 J (0.060)	0.11 J (0.060)	0.10 J (0.060)	U (0.060)	0.11 J (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)
Bromoform	80	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)
Bromomethane	7	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	1.8 J (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
2-Butanone	4900	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	135 (0.59)	810 (0.59)	1410 (3.0)	902 (0.59)	19.7 (0.59)	U (0.59)	4.6 J (0.59)	U (0.59)
Carbon Disulfide	720	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	0.92 J (0.12)	2.6 J (0.12)	0.38 J (0.12)	0.68 J (0.12)	0.56 J (0.12)	0.26 J (0.12)	0.20 (0.12)	U (0.12)
Carbon Tetrachloride	5	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)
Chlorobenzene	100	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
Chloroethane	12000	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	0.48 J (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Chloroform	80	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Chloromethane	190	U (0.080)	U (0.080)	NM	NM	U (0.080)	U (0.080)	U (0.080)	U (0.080)	0.46 J (0.080)	0.31 J (0.080)	U (0.080)	U (0.080)	NM	U (0.080)
Dibromochloromethane	80	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
1,1-Dichloroethane	2.4	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	5	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	7	0.23 J (0.20)	U (0.20)	0.92 J (0.20)	1.0 J (0.20)	0.22 J (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	12.9 (0.080)	4.4 (0.080)	5.1 (0.080)	5.9 (0.080)	4.5 (0.080)	0.15 J (0.080)	U (0.080)	2.5 (0.080)	5.8 (0.080)	5.3 (0.080)	3.6 (0.080)	4.7 (0.080)	3.6 (0.080)	1.7 (0.080)
trans-1,2-Dichloroethene	100	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	0.64 J (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
1,2-Dichloropropane	5	U (0.16)	U (0.16)	NM	NM	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	NM	U (0.16)
1,3-Dichloropropene (total)	0.41	U (0.14)	U (0.14)	NM	NM	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	NM	U (0.14)
cis-1,3-Dichloropropene		U (0.14)	U (0.14)	NM	NM	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	NM	U (0.14)
trans-1,3-Dichloropropene		U (0.12)	U (0.12)	NM	NM	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	NM	U (0.12)
Ethyl Benzene	700	U (0.18)	U (0.18)	NM	NM	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	NM	U (0.18)
2-Hexanone	34	U (1.2)	U (1.2)	NM	NM	U (1.2)	U (1.2)	U (1.2)	3.6 J (1.2)	5.3 J (1.2)	3.9 J (1.2)	U (1.2)	U (1.2)	NM	U (1.2)
4-Methyl-2-pentanone	1000	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	4.0 J (0.42)	2.0 J (0.42)	1.6 J (0.42)	1.1 J (0.42)	0.89 J (0.42)	1.1 J (0.42)	0.77 J (0.42)	U (0.42)
Methylene Chloride	5	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	0.66 (0.15)	U (0.15)	0.30 (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Styrene	100	U (0.12)	U (0.12)	NM	NM	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	NM	U (0.12)
1,1,2,2-Tetrachloroethane	0.066	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	5	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	1000	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	0.46 J (0.17)	U (0.17)	0.57 J (0.17)	0.44 J (0.17)	0.90 J (0.17)	0.87 J (0.17)	0.33 J (0.17)	0.47 J (0.17)
1,1,1-Trichloroethene	200	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)
1,1,2-Trichloroethene	5	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
Trichloroethene	5	123 (0.17)	95.4 (0.17)	96.2 (0.17)	102 (0.17)	89.5 (0.17)	31.1 (0.17)	14.3 (0.17)	6.3 (0.17)	0.63 J (0.17)	3.1 (0.17)	8.1 (0.17)	1.2 (0.17)	0.85 J (0.17)	0.62 J (0.17)
Vinyl Chloride	2	U (0.13)	U (0.13)	0.32 J (0.13)	0.38 J (0.13)	0.91 J (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	0.36 J (0.13)	0.70 J (0.13)
Xylenes (total)	10000	U (0.42)	U (0.42)	NM	NM	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	NM	U (0.42)
Metals															
Iron	NE	2160 (50.0)	133 (50.0)	NM	NM	276,000 (50,000)	5220 (50.0)	NM	NM	193000 (50.0)	20900 (50.0)	11700 (50.0)	7730 (50.0)	NM	NM
Manganese	NE	20.6 (5.0)	NM	NM	NM	37,800 (5,000)	NM	NM	NM	35900 (50.0)	4090 (5.0)	1850 (5.0)	NM	NM	NM
Monitored Natural Attenuation Parameters (Laboratory)															
Acetic acid	NE	U (5000)	NM	NM	NM	NM	U (5000)	NM	NM	1600000 (25000)	18000 (5000)	U (5000)	NM	NM	NM
Total Alkalinity	NE	171000 (20000)	NM	NM	NM	NM	NM	NM	NM	2630000 (60000)	1750000 (40000)	967000 (20000)	NM	NM	NM
Ammonia	NE	U (100)	NM	NM	NM	NM	NM	NM	NM	NM	1900 (100)	6600 (100)	NM	NM	NM
Bicarbonate Alkalinity	NE	171000 (20000)	NM	NM	NM	NM	NM	NM	NM	2630000 (60000)	1750000 (40000)	967000 (20000)	NM	NM	NM
Butyric acid	NE	U (5000)	NM	NM	NM	NM	U (5000)	NM	NM	600000 (25000)	U (5000)	U (5000)	NM	NM	NM
Carbon Dioxide	NE	287000 (20000)	NM	NM	NM	NM	NM	NM	NM	3270000 (20000)	1770000 (20000)	982000 (20000)	NM	NM	NM
Organic Carbon (total)	NE	510 J (1000)	750 J (1000)	NM	NM	260 J (1,000)	U (1000)	NM	NM	NM	306000 (100000)	46200 (10000)	29400 (3000)	NM	NM
Organic Carbon (dissolved)	NE	570 (1000)	NM	NM	NM	NM	U (1000)	NM	NM	NM	284000 (50000)	22500 (2000)	NM	NM	NM
Carbonate Alkalinity	NE	U (20000)	NM	NM	NM	NM	NM	NM	NM	U (60000)	U (40000)	U (20000)	NM	NM	NM
Chloride	NE	154000 (20000)	NM	NM	NM	167,000 (10,000)	149000 (10000)	NM	NM	NM	131000 (20000)	145000 (10000)	NM	NM	NM
2-Chloroethanol	NE	U (10000)	NM	NM	NM	NM	U (10000)	NM	NM	NM	NM	U (10000)	NM	NM	NM
Iron, Ferric	NE	2000 (200)	U (200)	NM	NM	NM	5200 (200)	NM	NM	NM	17900 (200)	11000 (200)	4400 (200)	NM	NM
Lactic Acid	NE	U (10000)	NM	NM	NM	NM	U (10000)	NM	NM	160000 (10000)	64000 (10000)	U (10000)	NM	NM	NM
Nitrogen	NE	140 (100)	2100 (100)	NM	NM	U (100)	U (100)	NM	NM	NM	U (100)	U (100)	U (100)	NM	NM
Nitrogen, Nitrate (As N)	NE	140 (100)	1100 (100)	NM	NM	U (100)	U (100)	NM	NM	U (1000)	U (100)	U (100)	U (100)	NM	NM
Nitrogen, Nitrite	NE	U (100)	970 (100)	NM	NM	U (100)	U (100)	NM	NM	U (1000)	U (100)	U (100)	19 J (100)	NM	NM
pH [PH UNITS]	NE	6.4 (0.10)		NM	NM	NM	NM	NM	NM	6.7 (0.10)	7.2 (0.10)	7.2 (0.10)	NM	NM	NM
Phosphates (total)	NE	210 (30)	NM	NM	NM	NM	NM	NM	NM	NM	350 (30)	1800 (30)	NM	NM	NM
Propionic Acid	NE	U (5000)	NM	NM	NM	NM	U (5000)	NM	NM	550000 (25000)	260000 (5000)	U (5000)	NM	NM	NM
Pyruvic Acid	NE	U (5000)	NM	NM	NM	NM	U (5000)	NM	NM	U (5000)	U (5000)	U (5000)	NM	NM	NM
Sulfide (total)	NE	U (50)	U (50)	NM	NM	U (50)	NM	NM	NM	NM	NM	U (50)	U (50)	NM	NM
Sulfate	NE	2300 (1000)	2400 (1000)	NM	NM	2,000 (1,000)	3300 (1000)	NM	NM	910 J (1000)	1200 (1000)	2400 (1000)	680 J (1000)	NM	NM
Gases															
Acetylene	NE	U (0.50)	U (0.50)	NM	NM	NM	NM	NM	NM	U (0.50)	U (0.50)	U (0.50)	U (0.50)	NM	NM
Methane	NE	700 (0.50)	24 (0.50)	NM	NM	410 (0.02)	0.57 (0.50)	NM	NM	12000 (0.50)	15000 (0.50)	17000 (0.50)	15000 (0.50)	NM	16000 (0.02)
Ethane	NE	0.36 (0.10)	U (0.10)	NM	NM	U (0.007)	U (0.10)	NM	NM	0.16 (0.10)	0.36 (0.10)	0.67 (0.10)	0.85 (0.10)	NM	0.48 (0.007)
Ethene	NE	0.15 (0.10)	0.25 (0.10)	NM	NM	0.54 (0.005)	U (0.10)	NM	NM	2.6 (0.10)	2.4 (0.10)	0.80 (0.10)	0.55 (0.10)	NM	1.4 (0.005)
Hydrogen (H2) [nM][4*]	NE	0.95 (0.60)	1.8 (0.60)	NM	NM	1.9 (0.16)	NM	NM	NM	NM	NM	1.2 (0.60)	2.2 (0.60)	NM	1.7 (0.16)
Molecular Analyses															
BAV1 Vinyl Chloride Reductase [cells/mL]	NE	U (2)	0.5 (0.5)	NM	NM	U (0.6)	NM	NM	NM	NM	U (8.33)	U (3.33)	26.9 (0.5)	NM	U (1)
Dehalocaccoides (DHC) [cells/mL]	NE	U (2)	158 (0.5)	NM	NM	555	NM	NM	NM	NM	48.9 (8.33)	14.2 (3.33)	715 (0.5)	NM	100
tceA Reductase [cells/mL]	NE	U (2)	14.3 (0.5)	NM	NM	537	NM	NM	NM	NM	3.2 J (8.33)	U (3.33)	1.7 (0.5)	NM	396
Vinyl Chloride Reductase (vrcA) [cells/mL]	NE	U (2)	10.8 (0.5)	NM	NM	786	NM	NM	NM	NM	U (8.33)	U (3.33)	115 (0.5)	NM	263

Notes:

1 All concentrations are presented in ug/L except where noted.
2 All compounds are shown.
3 Concentrations that exceed the Remedial Action Levels per ADEQ RADD Issued Dec 2013 are double underlined.
U = Not detected
J = Estimated concentration
d = The analyte concentration was determined from a dilution.
( ) = Method detection limit for VOCs; reporting limit for all other parameters
* = Sampled on different day than other parameters with different method

RADD = Remedial action decision document
ADEQ = Arkansas Department of Environmental Quality
VOC = Volatile organic compounds
µg/L = Micrograms per liter
mL = Milliliters
NE = Not established
NM = Not measured

TABLE 11
SUMMARY OF TCE CONCENTRATIONS (ISCR PILOT STUDY)
Whirlpool Facility - Fort Smith, Arkansas

Event	Date(s)	MW-61R	TMW-10	TMW-11
Baseline	9/18/2015	16.5	190	31.1
4Q monitoring (6 days post)	10/8/2015	11.7	102	14.3
30 days after injection	11/5/2015	9.2	120	6.3
60 days after injection	12/1/2015	5	114	0.63
90 days after injection	1/8/2016	3.9	103	3.1
210 days after injection	5/3/2016	5.3	123	8.1
405 days after injection	11/7/2016	2.3	95.4	1.2
575 days after injection	4/27/2017	2.4	102	0.85
754 days after injection	10/23-24/2017	2.9	89.5	0.62
	Percent Reduction	82.4%	52.9%	98.0%

Notes:

TCE = Trichloroethylene

Concentrations in micrograms per liter (µg/L)

Figures

0 150 300 450 600

Feet

1 inch = 300 feet

Notes
- Water levels measured October 23rd, 2017
- Water levels in ft
1) Water levels measured October 24th, 2017
2) Water levels not used in contour

Brazil Ave

Ferguson St

Ingersoll Ave

Jenny Lind Rd

Boys Club Ln

MW-50R 454.95
MW-60R 457.39
MW-61R 452.76
MW-196 453.86
MW-195 455.46 1)
TMW-10 455.99
TMW-11 456.19
TMW-23 457.21
TMW-22 456.57
TMW-20 457.33
TMW-21 456.68
TMW-29 453.13
MW-55R 462.70
MW-58R 462.16
TMW-12 458.33
MW-57R 459.70
TMW-24 457.33
MW-194 457.88
IW-72 462.77
MW-68 462.94
MW-40R 462.92
MW-71 461.93
MW-56R 459.93
IW-73 462.92
MW-70 462.93
TMW-14 458.14
MW-82 462.90
RW-69 462.53
MW-46R 462.55 1)
MW-63R 459.92
MW-97 451.23
IW-77 462.98
IW-75 462.95
MW-62R 458.84
MW-81 462.91
IW-74 462.85
MW-35R 462.91
MW-41R 462.17
MW-96 451.72
MW-39R 463.03
IW-76 462.78
MW-183 453.47
IW-78 462.87
IW-115 462.49
MW-65 462.87
IW-80 462.83
MW-98 451.73 1)
MW-34R 463.02
MW-36R 462.86
MW-23 462.97
IW-79 462.94
MW-28 462.72
MW-26 463.29
MW-83 462.86
MW-27 462.70
MW-90 464.46 2)
MW-84 462.80
MW-89 456.80
MW-24 462.97
ITMW-16 462.67
MW-88 460.41
MW-184 456.33 1)
MW-85 462.75
ITMW-2 462.36
ITMW-20 462.90
MW-25 462.95
MW-22 461.30
MW-86 462.77
ITMW-14 462.54
ITMW-1 461.00
MW-87 458.04
MW-99 457.23
ITMW-21 462.82
ITMW-13 462.65
MW-91 457.51
MW-92 462.82
ITMW-12 462.74
ITMW-17 462.28
ITMW-11 462.26
MW-172 462.84
MW-94 462.47
ITMW-19 462.82
MW-37 463.07
ITMW-15 463.00
ITMW-18 461.59 2)
MW-93 462.69
MW-95 462.54
MW-38 462.96
MW-30 461.88
MW-29 462.18
ITMW-7 461.04
ITMW-5 459.65
ITMW-4 459.69
ITMW-10 459.64
ITMW-9 459.53
MW-185 459.30
ITMW-6 459.49
TMW-27 456.03
MW-182 458.66
TMW-25 456.76
MW-191 459.51
MW-190 459.52
MW-192 459.45
TMW-16 456.30
TMW-30 455.54
MW-189 459.45
MW-186 455.76
TMW-26 455.26 1)
MW-187 457.30
TMW-19 459.26
MW-188 459.07

455 456 457 458 459 460 461 462 463 452 453 454 451

Monitoring Well Location
Groundwater Contour
Groundwater Contour (dashed where inferred)
Approximate Property Boundary

FILE: L:\Loop Project Files\Whirlpool Fort Smith\2017 Semi Annual M&R\mxd\Second 2017 Semi-Annual Potentiometric Surface Map_20171117.mxd

RAMBOLL ENVIRON

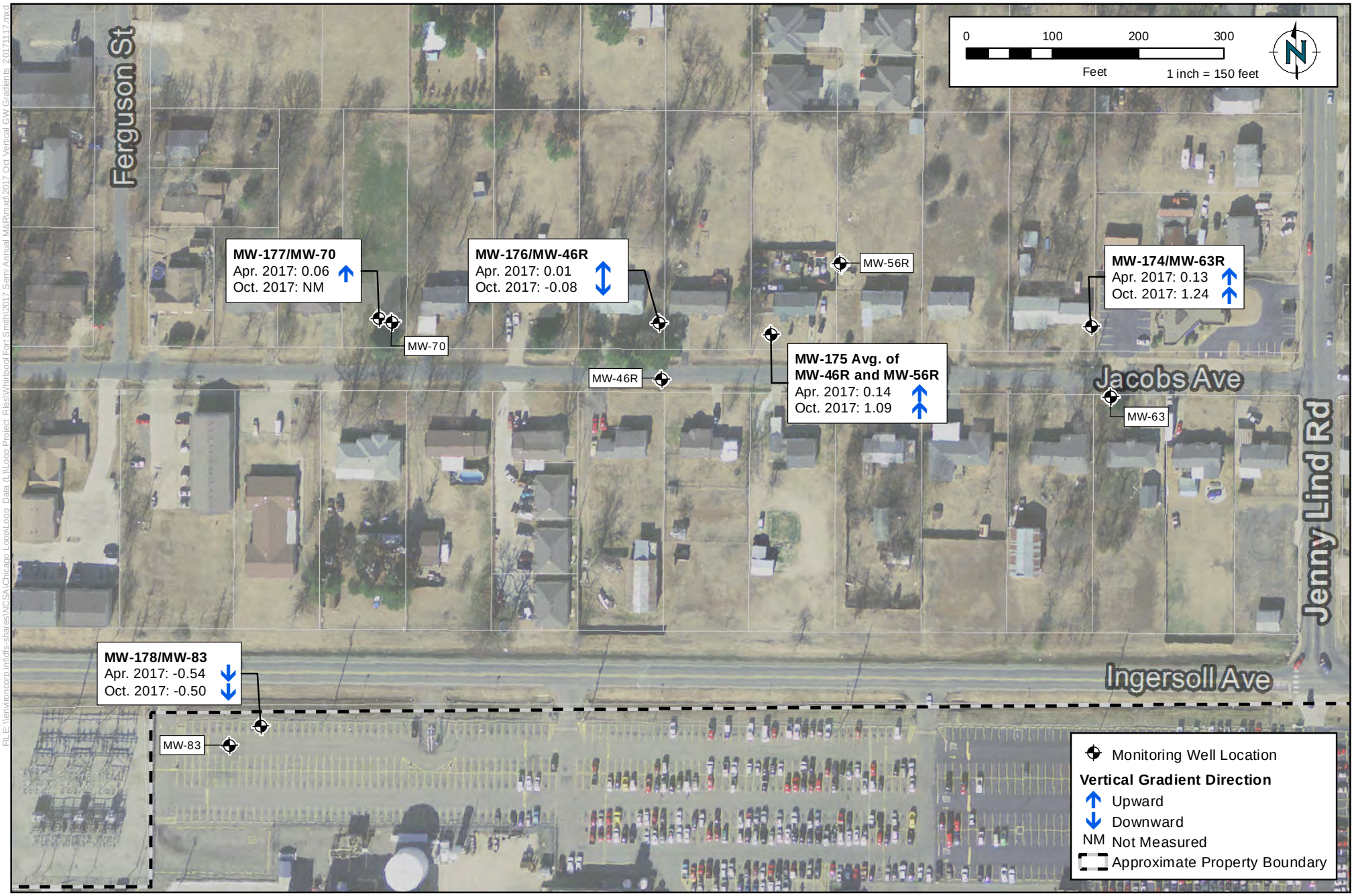
DRAFTED BY: FK/WZ | DATE: 11/21/2017

2017 ANNUAL SAMPLING POTENTIOMETRIC SURFACE

Whirlpool Facility - Fort Smith, Arkansas

Figure 1A

PROJECT: 1690003330



FILE: \\environcorp.int\dfs-shares\NCSA\Chicago Loop\Loop_Data (L)\Loop Project Files\Whirlpool Fort Smith\2017 Semi Annual M&R\mxd\2017 Oct Vertical GW Gradients_20171117.mxd

RAMBOLL ENVIRON

DRAFTED BY: FK/WZ | DATE: 11/17/2017

VERTICAL GROUNDWATER GRADIENTS OBSERVED IN NESTED WELLS APRIL 2017 / OCTOBER 2017

Whirlpool Facility - Fort Smith, Arkansas

Figure 1B

PROJECT: 1690003330

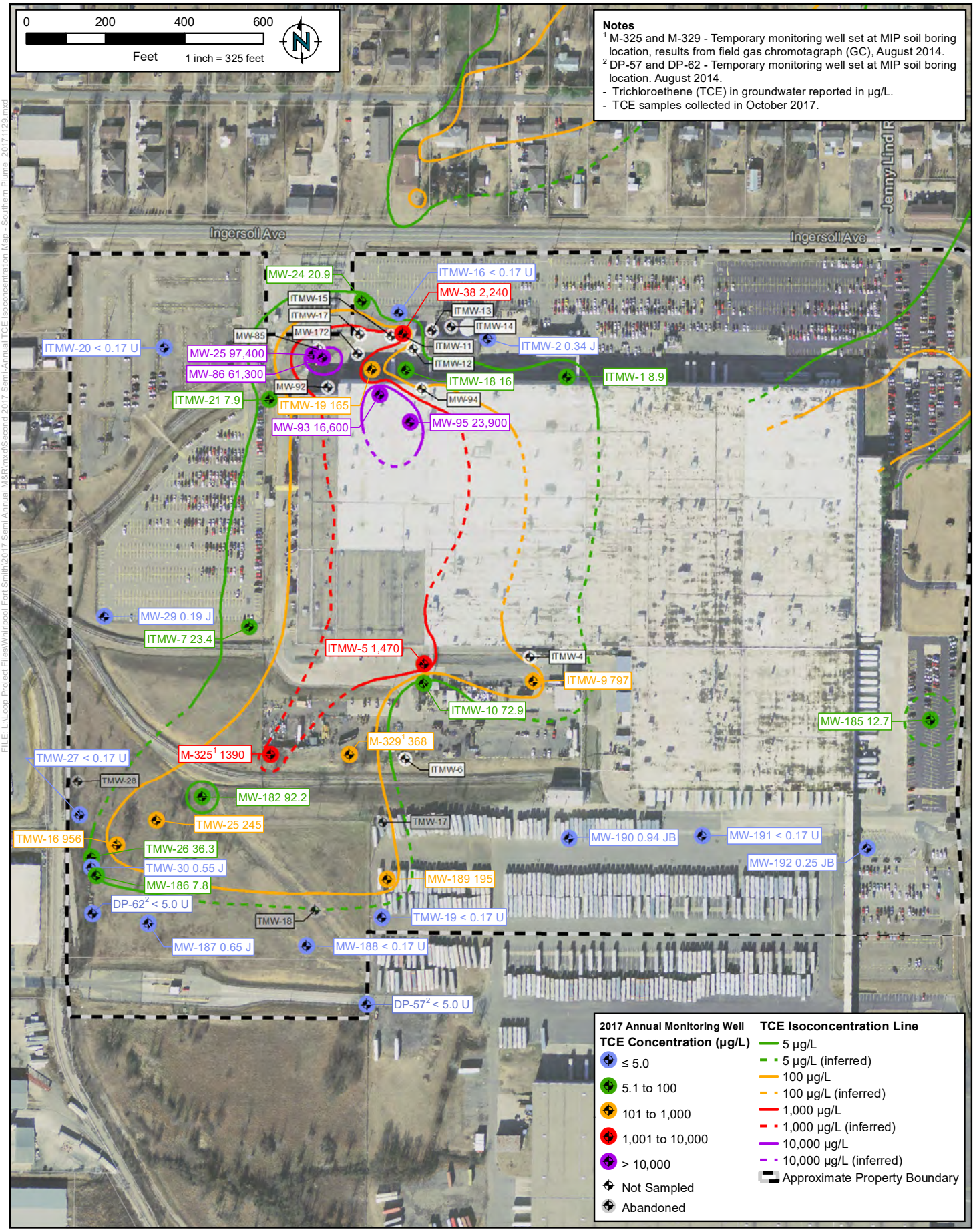
RAMBOLL ENVIRON

2017 ANNUAL TCE ISOCONCENTRATION MAP NORTHERN AND NORTHEASTERN PLUMES

Whirlpool Facility - Fort Smith, Arkansas

Figure 2A

DRAFTED BY: FK/WZ | DATE: 11/29/2017 | PROJECT: 1690003330



FILE: L:\Loop Project Files\Whirlpool Fort Smith\2017 Semi-Annual M&R\mxd\Second 2017 Semi-Annual TCE Isoconcentration Map - Southern Plume_20171129.mxd

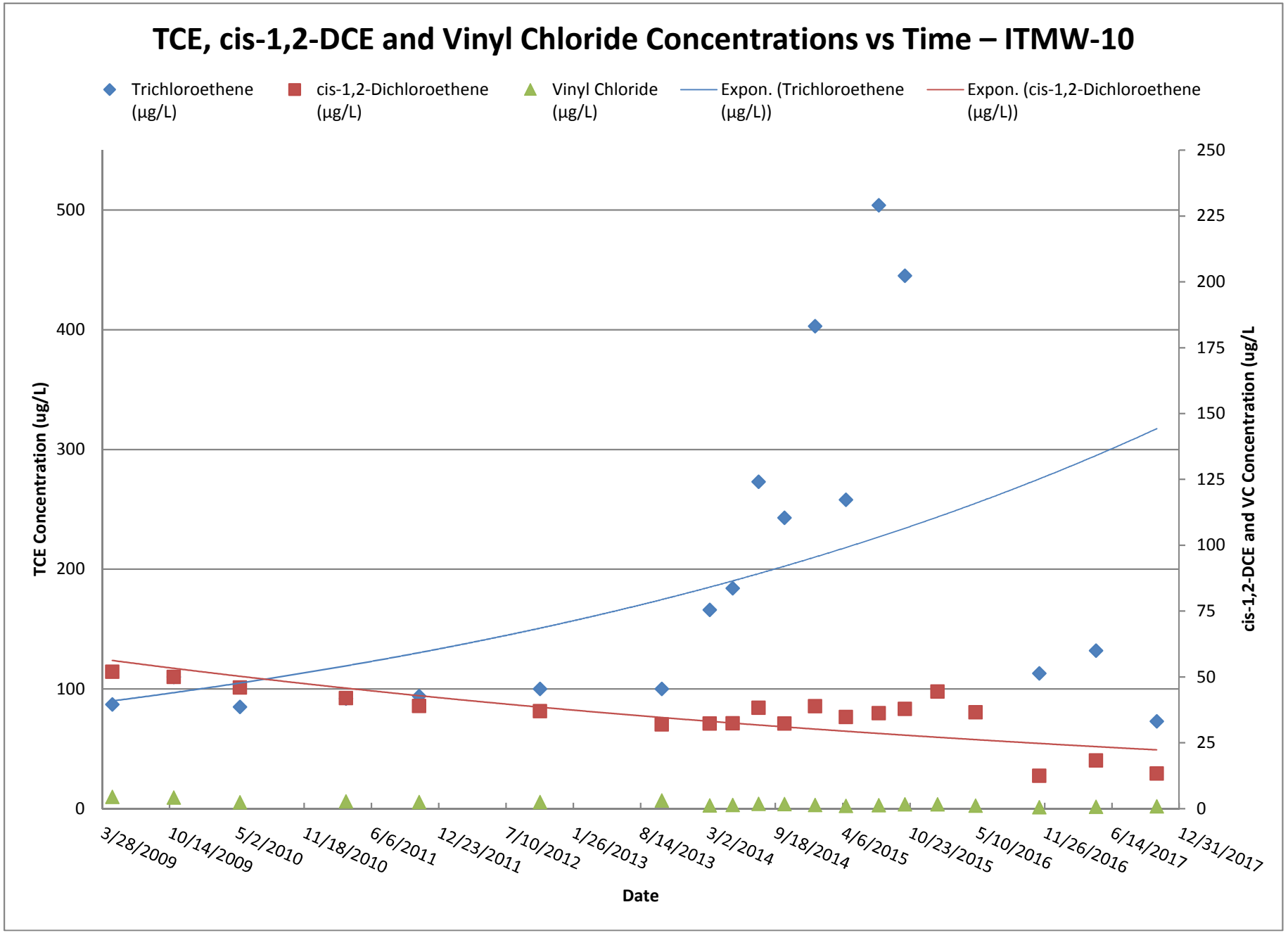
RAMBOLL ENVIRON

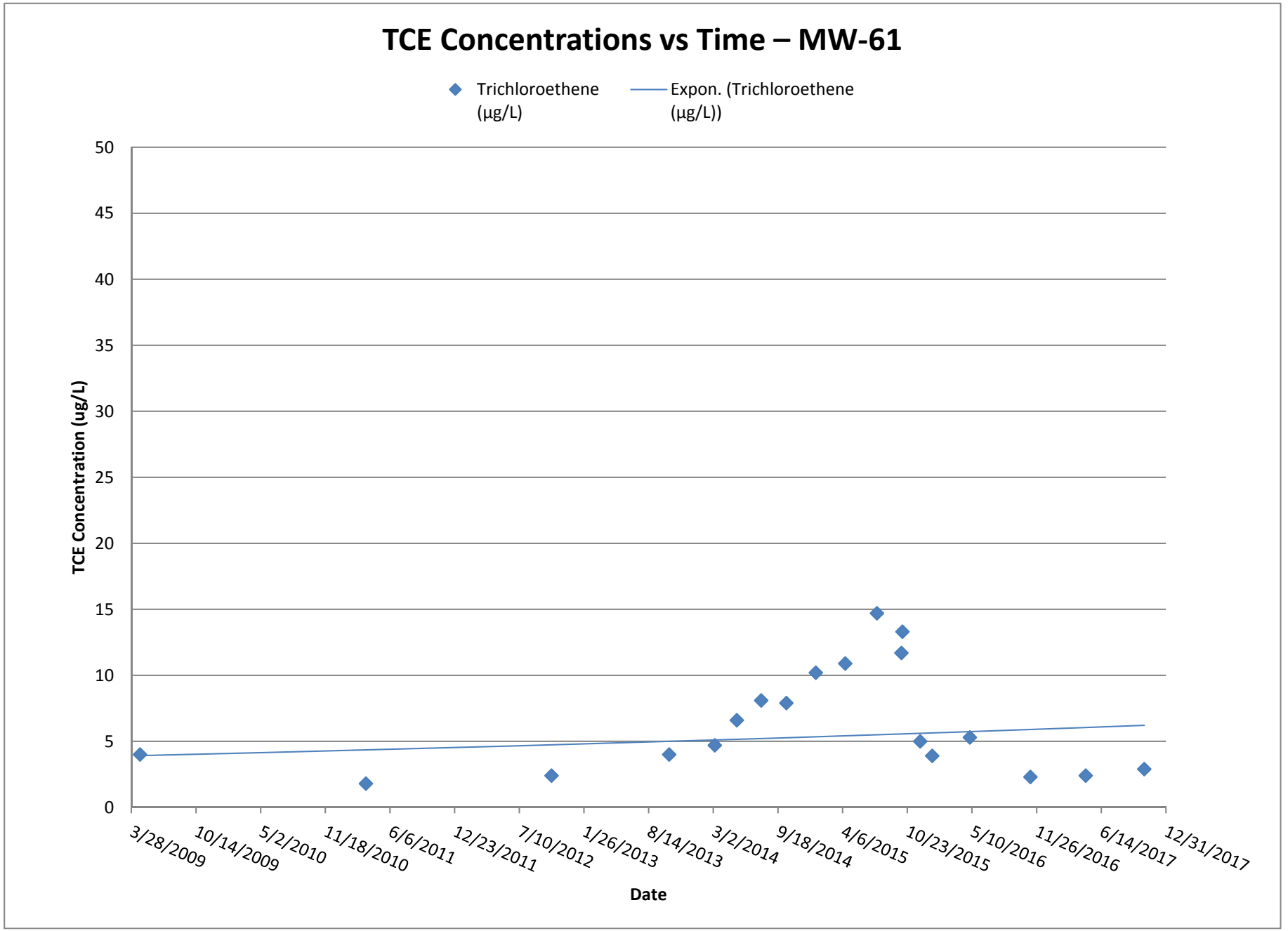
2017 ANNUAL TCE ISOCONCENTRATION MAP SOUTHERN PLUME

Whirlpool Facility - Fort Smith, Arkansas

Figure 2B

DRAFTED BY: FK/WZ | DATE: 11/29/2017 | PROJECT: 1690003330


TCE, cis-1,2-DCE and Vinyl Chloride Concentrations vs Time – ITMW-10
Trichloroethene (µg/L)
cis-1,2-Dichloroethene (µg/L)
Vinyl Chloride (µg/L)
Expon. (Trichloroethene (µg/L))
Expon. (cis-1,2-Dichloroethene (µg/L))
TCE Concentration (ug/L)
cis-1,2-DCE and VC Concentration (ug/L
0
100
200
300
400
500
0
25
50
75
100
125
150
175
200
225
250
3/28/2009
10/14/2009
5/2/2010
11/18/2010
6/6/2011
12/23/2011
7/10/2012
1/26/2013
8/14/2013
3/2/2014
9/18/2014
4/6/2015
10/23/2015
5/10/2016
11/26/2016
6/14/2017
12/31/2017
Date


TCE Concentrations vs Time – MW-61
Trichloroethene (µg/L)
Expon. (Trichloroethene (µg/L))
TCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
3/28/2009
10/14/2009
5/2/2010
11/18/2010
6/6/2011
12/23/2011
7/10/2012
1/26/2013
8/14/2013
3/2/2014
9/18/2014
4/6/2015
10/23/2015
5/10/2016
11/26/2016
6/14/2017
12/31/2017
Date

RAMBOLL ENVIRON

DRAFTED BY: FK | DATE: 11/24/2015

ISCR PILOT
PRB TREATMENT ZONES

Whirlpool Facility - Fort Smith, Arkansas

Figure 5

PROJECT: 3437500G

Attachment A

Calibration Logs

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10/23/17

Calibrated by: S Kreck

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 662243 **Exp:** 12/31/17

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below. – 1.413
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 0207 **Exp:** 5/31/21

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** 662570 **Exp:** 12/31/18
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** 662126 **Exp:** 12/31/18
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** 662207 **Exp:** 12/31/18
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 1258 + 10min = 1308
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.61 in. x 25.4 = 762.254 mmHg - 15.169 = 747.085 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:

YSI – Serial Number: 01B1251 AF – Pine # 12315

1. Specific Conductance: 1.387 → 1.413
2. ORP: 252.3 → 240.0
3. pH:
   - Point 1: 6.95 → 7.00
   - Point 2: 4.00 → 4.00
   - Point 3: 10.12 → 10.01
4. DO: 98.9% → 98.3%

Turbidity Meter Model/Serial Number: La Motte 2020we turbidimeter SN: 1854-0412 Pine # 19431

RAMBOLL ENVIRON

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10/23/17

Calibrated by: D Pavlowsky

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 76B841 **Exp:** Feb/18

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 1422 **Exp:** 04/2022

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** 761561 **Exp:** 9/19
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** Jan19 **Exp:** 76A211
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** 76B647 **Exp:** Feb/19
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: _____ + 10min =_____
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.09 in. x 25.4 = 764.28 mmHg - 15.169 = 749.12 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:
YSI – Serial Number: 21,410 mS/cm

1. Specific Conductance: 10B101572
2. ORP: 240.0
3. pH: ~~7.03~~ 7.03
   - Point 1: 7.03
   - Point 2: 10.03
   - Point 3: 4.01
4. DO: 98.9

Turbidity Meter Model/Serial Number: 032789

RAMBOLL ENVIRON

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10/23/17

Calibrated by: Victoria Stegler

Turn on YSI. Note time on line 38!

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 6GL243 **Exp:** 12/31/17

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 5B5T0207 **Exp:** 5/31/2021

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** 6GL570 **Exp:** 12/31/18
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** 6GL120 **Exp:** 12/31/18
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.

9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** 6GL207 **Exp:** 12/31/18
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 1429 + 10min = 1439
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.09 in. x 25.4 = 764.29 mmHg - 15.169 = 749.117 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:

YSI – Serial Number: 1797

1. Specific Conductance: 1357
2. ORP: 240 9
3. pH:
   - Point 1: 6.99
   - Point 2: 3 90
   - Point 3: 10.01
4. DO: 90.8

Turbidity Meter Model/Serial Number: 030493

2310

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10/23/17

Calibrated by: H. Ahlers

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 7GA091 **Exp:** 01/2018

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 0207 **Exp:** 5/2021

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** 7GA929 **Exp:** 01/2019
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** 6GJ010 **Exp:** 10/2018
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** 6GG109 **Exp:** 10/2018
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 1523 + 10min = 1533
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   29.98 in. x 25.4 = 761.492 mmHg - 15.169 = 746.323 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:

YSI – Serial Number: 12L101300

1. Specific Conductance: 1.414 mS/cm³
2. ORP: 240.1
3. pH:
   - Point 1: 7.00
   - Point 2: 4.00
   - Point 3: 9.96
4. DO: ~~5229-5014~~ NA 98.2%

Turbidity Meter Model/Serial Number: 5229-5014

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Note: Initial cal. bration completed by Pine Environmental on 10/18/17
pH: 7, 4, 10
Cond: 1.413
ORP: 240
DO: 100

Date: 10/23/17

Calibrated by: Nick Martin

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** GGJ307 **Exp:** 10/31/17

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below. 1.208
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 1600 **Exp:** 5/2022

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** GG1910 **Exp:** 9/2018
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** GGL126 **Exp:** 12/2018
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** GGB799 **Exp:** 2/2018
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 1408 + 10min = 1418 (1486 actual)
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   29.96 in. x 25.4 = 760.98 mmHg - 15.169 = 745.82 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

* Installed new cap Membrane @ 1455

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:
YSI – Serial Number: 13H100508

1. Specific Conductance: 1.208
2. ORP: 240.0
3. pH:
   - Point 1: 7.00
   - Point 2: 4.00
   - Point 3: 10.00
4. DO: 98.1

Turbidity Meter Model/Serial Number: Lamotte 2020we - 022207

RAMBOLL ENVIRON

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10/23/17 1225

Calibrated by: NZ

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 6GL243 **Exp:** 12/31/17

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 0617 **Exp:** 10/21

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** 6GL570 **Exp:** ~~12/31/17~~ NZ 12/31/18
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** 6GL126 **Exp:** 12/31/18
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** 6GL207 **Exp:** 12/31/18
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 1225 + 10min = 1235
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.01 in. x 25.4 = 762.254 mmHg - 15.169 = 747.085 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:
YSI – Serial Number: 08K101206

1. Specific Conductance: 1.413 ms/cm
2. ORP: 240 mV
3. pH:
   - Point 1: ~~6.94~~ NZ 7.00
   - Point 2: 4.00
   - Point 3: 10.02
4. DO: 98.3 %

Turbidity Meter Model/Serial Number: 5886

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10/24/17

Calibrated by: S Knoll

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 661243 **Exp:** 12/31/17

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 0207 **Exp:** 5/31/21

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** 661570 **Exp:** 12/31/18
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** 661126 **Exp:** 12/31/18
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** 661207 **Exp:** 12/31/18
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 7:29 + 10min = 7:39
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.14 in. x 25.4 = 765.56 mmHg - 15.169 = 750.39 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:

YSI – Serial Number: 07181251AF Pump # 12315

1. Specific Conductance: 1379 → 1413
2. ORP: 246.9 → 240.0
3. pH:
   - Point 1: 7.03 → 7.00
   - Point 2: 4.05 → 4.00
   - Point 3: 10.12 → 10.03
4. DO: 91.8 → 98.6

Turbidity Meter Model/Serial Number: La Motte 2020 we turbidimeter SN: 1054-0412 P.M # 19431

RAMBOLL ENVIRON

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10/24/17 0715

Calibrated by: NZ

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** GGL213 **Exp:** 12/31/17

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 0647 **Exp:** 10/21

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** GGL570 **Exp:** 12/31/18
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** GGL126 **Exp:** 12/31/18
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** GGL207 **Exp:** 12/31/18
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 0715 + 10min = 0725
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.14 in. x 25.4 = 765.56 mmHg - 15.169 = 750.39 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:

YSI – Serial Number: 08K101206

1. Specific Conductance: 1413 uS/cm
2. ORP: 240 mV
3. pH:
   - Point 1: 7.00
   - Point 2: 4.00
   - Point 3: 10.02
4. DO: 98.8%

Turbidity Meter Model/Serial Number: 5886

RAMBOLL ENVIRON

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10-24-17

Calibrated by: JP

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 76B641 **Exp:** Feb/18

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 1422 **Exp:** 04/2022

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** 767561 **Exp:** 9/19
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** 76A211 **Exp:** 1/19
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** 76B647 **Exp:** 02/19
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 0807 + 10min = 0817
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   29.09 in. x 25.4 = 764.29 mmHg - 15.169 = 749.117 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:

YSI – Serial Number: 10B101572

1. Specific Conductance: 1.416
2. ORP: 240.8
3. pH: 7.04
   - Point 1: 4.05
   - Point 2: 10.03
   - Point 3:
4. DO: 98.6 %

Turbidity Meter Model/Serial Number:

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10/24/17

Calibrated by: Nick Marin

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** GG J307 **Exp:** 10/31/17

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 1600 **Exp:** 5/2022

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** GG 1910 **Exp:** 9/2018
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** GGL126 **Exp:** 12/2018
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.

9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** GGB729 **Exp:** 2/2018
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 0725 + 10min = 0735
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.14 in. x 25.4 = 765.56 mmHg - 15.169 = 750.39 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:
YSI – Serial Number: 13H100508

1. Specific Conductance: 1413
2. ORP: 240.0
3. pH:
   - Point 1: 7.00
   - Point 2: 4.00
   - Point 3: 10.07
4. DO: 98.7

Turbidity Meter Model/Serial Number: LaMotte 2020we - 022207

RAMBOLL ENVIRON

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10/24/17

Calibrated by: Victoria Sigler

Turn on YSI. Note time on line 38!

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 16F1243 **Exp:** 12/31/17

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 0207 **Exp:** 5/31/2021

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** 176L570 **Exp:** 12/31/18
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** 16BL210 **Exp:** 12/31/18
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.

9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** 16BL207 **Exp:** 12/31/2018
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 1.21 + 10min = 0731
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.23 in. x 25.4 = 767.8 mmHg - 15.169 = 752.631 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry: MD101946/1797

YSI – Serial Number:

1. Specific Conductance: 1369
2. ORP: 2402
3. pH:
   - Point 1: 7.09
   - Point 2: 3.92
   - Point 3: 9.93
4. DO: 102.1%

Turbidity Meter Model/Serial Number: 030493

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10/24/17

Calibrated by: H. Anders

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 76A091 **Exp:** 1/2018

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 0207 **Exp:** 5/2021

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** 76A929 **Exp:** 1/2019
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** 96J010 **Exp:** 10/2018
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** 6GA282 **Exp:** Oct/2018
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 0740 + 10min = 0750
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.14 in. x 25.4 = 765.56 mmHg - 15.169 = 750.39 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:

YSI – Serial Number: 12L101300

1. Specific Conductance: 1,413 µS/cm³
2. ORP: 240.0 mV
3. pH:
   - Point 1: 7.00
   - Point 2: 4.00
   - Point 3: 10.00
4. DO: 98.6 %

Turbidity Meter Model/Serial Number: 5229 - 5014

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10/25/17 1355

Calibrated by: NZ

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 661243 **Exp:** 12/31/17

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 0647 **Exp:** 10/21

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** 661570 **Exp:** 12/31/18
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** 662136 **Exp:** 12/31/18
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** 661207 **Exp:** 12/31/18
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 1355 + 10min = 1405
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.01 in. x 25.4 = 762.254 mmHg - 15.169 = 747.085 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:

YSI – Serial Number: 08K101206

1. Specific Conductance: 1,413 µS/cm
2. ORP: 240 mV
3. pH:
   - Point 1: 7.00
   - Point 2: 4.00
   - Point 3: 10.02
4. DO: 98.3 %

Turbidity Meter Model/Serial Number: 5886

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10/25/17

Calibrated by: J Krech

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 66243 **Exp:** 12/31/17

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 0207 **Exp:** 5/31/21

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #**66257 **Exp:** 12/31/18
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** 66126 **Exp:** 12/31/18
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #**66207 **Exp:** 12/31/18
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 739 + 10min = 749
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.16 in. x 25.4 = 76606 mmHg - 15.169 = 75089 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:

YSI – Serial Number: Ø1B1251AF Pine # 12315

1. Specific Conductance: 1341 - 1413
2. ~~ORP~~: ORP: 244.7 -> 240.0
3. pH:
   - Point 1: 6.99 -> 7.00
   - Point 2: 4.01 -> 4.00
   - Point 3: 10.07 -> 10.01
4. DO: 103.4 -> 98.8

Turbidity Meter Model/Serial Number: La Motte 2020 we turbidimeter SN 1854-0412 Pine # 19431

RAMBOLL ENVIRON

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10/25/17

Calibrated by: H. Anders

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 76A091 **Exp:** 1/2018

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 0207 **Exp:** 5/2021

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** 7GA929 **Exp:** 1/2019
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** 9GJ010 **Exp:** 10/2018
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** 6GA1282 **Exp:** 10/2012
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 0731 + 10min = 0741
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.14 in. x 25.4 = 766.064 mmHg - 15.169 = 750.895 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:

YSI – Serial Number: 12L101300

1. Specific Conductance: 1413 µS/cm
2. ORP: 240.0
3. pH:
   - Point 1: 7.00
   - Point 2: 4.00
   - Point 3: 9.95
4. DO: 98.8%

Turbidity Meter Model/Serial Number: 5229-5014

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10/25/17

Calibrated by: Nick Marsh

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** GGJ307 **Exp:** 10/31/17

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 1600 **Exp:** 5/2022

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** GG1920 **Exp:** 9/2018
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** GGL126 **Exp:** 12/2018
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** GGB099 **Exp:** 2/2018
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 0240 + 10min = 0250
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.16 in. x 25.4 = 766.06 mmHg - 15.169 = 750.89 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:
YSI – Serial Number: 13H100503

1. Specific Conductance: 14/3
2. ORP: 240.0
3. pH:
   - Point 1: 7.00
   - Point 2: 4.00
   - Point 3: 10.03
4. DO: 98.8 %

Turbidity Meter Model/Serial Number: Lamotte 2020We - 022207

RAMBOLL ENVIRON

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 6/10/2017

Calibrated by: Victoria Singleton

Turn on YSI. Note time on line 38!

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** LeGL243 **Exp:** 12/31/17

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 0207 **Exp:** 5/31/2021

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** LeGL570 **Exp:** 12/31/18
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** LeGL626 **Exp:** 12/31/18
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** LeGL709 **Exp:** 12/31/18
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: _____ + 10min =_____
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.15 in. x 25.4 = 765.81 mmHg - 15.169 = 750.641 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:

YSI – Serial Number: 1797

1. Specific Conductance: 1409
2. ORP: 262.0
3. pH:
   - Point 1: 0.98
   - Point 2: 3.99
   - Point 3: 10.02
4. DO: 98.7%

Turbidity Meter Model/Serial Number: 030493

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10-25-17

Calibrated by: JMP

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 768841 **Exp:** Feb 2018

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 1422 **Exp:** 0412022

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** 761561 **Exp:** 9/19
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** 76A211 **Exp:** 1/19
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** 768647 **Exp:** 02/19
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 0750 + 10min = 800
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.15 in. x 25.4 = 765.81 mmHg - 15.169 = 750.641 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:

YSI – Serial Number: 10B101572

1. Specific Conductance: 1.004
2. ORP: 252
3. pH:
   - 7 Point 1: 7.02
   - 4 Point 2: 4.00
   - Point 3: 10.03
4. DO: 0327894 99.9%

Turbidity Meter Model/Serial Number:

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Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10/26/2017

Calibrated by: Nick Martin

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 663307 **Exp:** 10/31/2017

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 1600 **Exp:** 5/2027

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** 66 1920 **Exp:** 9/2018
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** 66 1126 **Exp:** 12/2018
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** 66 B799 **Exp:** 2/2018
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 0720 + 10min = 0730
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   29.80 in. x 25.4 = 756.92 mmHg - 15.169 = 741.751 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:
YSI – Serial Number: 13W 100508

1. Specific Conductance: 1413
2. ORP: 240
3. pH:
   - Point 1: 7/7
   - Point 2: 4/4
   - Point 3: 10/10.02
4. DO: 97.6

Turbidity Meter Model/Serial Number: Lamotte 2020 we - 022207

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10/26/17 0715

Calibrated by: NZ

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 6GL243 **Exp:** 12/31/17

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 0647 **Exp:** 10/21

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** 6GL570 **Exp:** 12/31/18
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** 6GL126 **Exp:** 12/31/18
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** 62L207 **Exp:** 12/31/18
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes): 0715 + 10min = 0725

1. Ensure unit has been on for at least 10 minutes: Initial time: 0715 + 10min = 0725
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   29.8 in. x 25.4 = 756.92 mmHg - 15.169 = 741.75 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:

YSI – Serial Number: 08K101206

1. Specific Conductance: 1,413 µS/cm
2. ORP: 240 mV
3. pH:
   - Point 1: 7.00
   - Point 2: 4.00
   - Point 3: 10.62
4. DO: ~~760.0~~ NZ 97.6%

Turbidity Meter Model/Serial Number: 5886

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Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10/26/17

Calibrated by: J Keck

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 661243 **Exp:** 12/31/17

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 0207 **Exp:** 5/31/21

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** 661570 **Exp:** 12/31/18
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** 661426 **Exp:** 12/31/18
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** 661207 **Exp:** 12/31/18
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 730 + 10min = 740
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   29.80 in. x 25.4 = 756.92 mmHg - 15.169 = 741.75 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:

YSI – Serial Number: 01B1251AE

1. Specific Conductance: 1422 → 1413
2. ORP: 236.0 → 240.0
3. pH:
   - Point 1: 6.96 → 7.00
   - Point 2: 4.06 → 4.00
   - Point 3: 10.08 → 10.01
4. DO: 99.2 → 97.6

Turbidity Meter Model/Serial Number: La Motte 2020 we turbidimeter SN: 1854-0412

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: Updated 10/26/17

Calibrated by: Victoria Singh

Turn on YSI. Note time on line 38!

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 6GL243 **Exp:** 12/31/17

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 0207 ~~6GL570~~ V7 **Exp:** ~~12/31/18~~ 5/31/21

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** V7 6GL570 ~~6GL720~~ **Exp:** 12/31/18
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** V7 6GL720 ~~6GL207~~ **Exp:** 12/31/18
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** 6GL207 **Exp:** 12/31/18
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 0718 + 10min = 0728
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   29.58 in. x 25.4 = 751.33 mmHg - 15.169 = 736.16 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:

YSI – Serial Number: 1797

1. Specific Conductance: 1419
2. ORP: 242.80
3. pH:
   - Point 1: 7.13
   - Point 2: 4.03
   - Point 3: 9.99
4. DO: 91.7%

Turbidity Meter Model/Serial Number: 830493

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10-26-17

Calibrated by: JO PAVLOWSKY

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 76B841 **Exp:** Feb 2018

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 1422 **Exp:** 04/2022

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** 769561 **Exp:** 9/19
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** 76A211 **Exp:** 1/19
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** 76B847 **Exp:** 02/19
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 0742 + 10min = 0752
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   30.15 in. x 25.4 = 765.54 mmHg - 15.169 = 750.641 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:

YSI – Serial Number: 10B101572

1. Specific Conductance: 1.914
2. ORP: 231.1
3. pH:
   - 4 Point 1: 4.00
   - 7 Point 2: 7.00
   - 10 Point 3: 9.99
4. DO: 98.6

Turbidity Meter Model/Serial Number: 0 32789

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 10/24/17

Calibrated by: H. Anders

Turn on YSI. Note time in DO section Line 1.

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 7GA091 **Exp:** 1/2018

1. Pour conductivity standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in specific conductance. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

ORP calibration (should take *at least* 1.5 minutes): **Lot #:** 0207 **Exp:** 5/2021

1. Pour ORP (Zobell) standard into calibration cup and immerse sensor.
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in ORP. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.

3-Point pH calibration (should take *at least* 4.5 minutes):

1. Pour pH 7.0 standard into the calibration cup and immerse pH sensor. **Lot #** 7GA929 **Exp:** 1/2019
2. Allow *1 minute* for temperature stabilization.
3. Press "calibrate" after *30 seconds* of no significant change in pH. Note below.
4. Discard used calibration standard, and rinse calibration cup and probes with DI water.
5. Pour pH 4.0 standard into the calibration cup and immerse pH sensor. **Lot #** 9GJ010 **Exp:** 10/2018
6. Allow *1 minute* for temperature stabilization.
7. Press "calibrate" after *30 seconds* of no significant change in pH. Note standard below.
8. Discard used calibration standard, and rinse calibration cup and probes with DI water.
9. Pour pH 10.0 standard into the calibration cup and immerse pH sensor. **Lot #** 6GA282 **Exp:** 10/2012
10. Allow *1 minute* for temperature stabilization.
11. Press "calibrate" after *30 seconds* of no significant change in pH. Note below
12. Discard used calibration standard, and rinse calibration cup and probes with DI water.

Dissolved Oxygen (% DO) calibration (should take *at least* 10 minutes):

1. Ensure unit has been on for at least 10 minutes: Initial time: 0733 + 10min = 0743
2. Enter the local barometric pressure.
   (Note: to convert from inches (common on a weather app or forecast) to mmHg, multiply by 25.4, then to correct to Ft. Smith's altitude, subtract 15.169 mmHg.)
   29.80 in. x 25.4 = 756.92mmHg - 15.169 = 741.751 mmHg
3. Place ~3mm of DI water in the bottom of the calibration cup.
4. Lightly screw on the calibration cup (only 1 or 2 threads!)
5. Allow *10 minutes* for the air in the cup to become water-saturated and temp to stabilize.
6. Press "calibrate" after *30 seconds* of no significant change in DO. Note below.
7. Discard used DI water, and rinse calibration cup and probes with DI water.

Turbidity calibration:

1. Select "measure" on the main menu, then "Turbidity – With Blank"
2. Scan a sample using the 0.0 NTU Blank solution. "Scan Blank"
3. Scan a sample using the 10 NTU standard. "Scan Sample"
4. Select "Calibrate," then use the arrow buttons to adjust the value to the standard (10.0 NTU).

Field Notebook calibration entry:

YSI – Serial Number: 12L101300

1. Specific Conductance: 1,413 µS/cm³
2. ORP: 240.0 mV
3. pH:
   - Point 1: 7.01
   - Point 2: 3.99
   - Point 3: 9.98
4. DO: 97.6%

Turbidity Meter Model/Serial Number: 5229-5014

Attachment B

Annual 2017 Soil Vapor Monitoring and Vapor Intrusion Assessment Report



ATTACHMENT B
Annual 2017 Soil Vapor Monitoring and Vapor Intrusion Assessment Report
Whirlpool Corporation
Fort Smith, Arkansas

Prepared for:
Whirlpool Corporation

Prepared by:
Ramboll Environ US Corporation

Date:
January 2018

Project Number:
1690006146

RAMBOLL ENVIRON

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1 Introduction

Ramboll Environ US Corporation (Ramboll Environ) has prepared this Annual 2017 Soil Vapor Monitoring and Vapor Intrusion Assessment Report for the Fort Smith, Arkansas, Site (Site) on behalf of Whirlpool Corporation, in accordance with the December 27, 2013, Remedial Action Decision Document (RADD) issued by the Arkansas Department of Environmental Quality (ADEQ 2013) and the Revised Groundwater Monitoring Plan (Ramboll Environ 2016d). This report is Attachment B of the Annual 2017 Progress Report for the Site.

Whirlpool has been monitoring groundwater at the Site since 1989. In 2012, the potential for vapor intrusion from groundwater into buildings in the neighborhood north of the Site was evaluated using multiple lines of evidence in a human health risk assessment, which was presented as Appendix A of the Revised Risk Management Plan (RRMP) (ENVIRON 2013). The risk assessment included the use of groundwater and soil vapor data in the evaluation of the potential for vapor intrusion. In January 2016, the risk assessment was updated with data collected after the 2013 risk assessment (Ramboll Environ 2016a). The use of multiple lines of evidence in these risk assessments is consistent with United States Environmental Protection Agency's (USEPA's) recommendations in its 2015 vapor intrusion guidance documents (USEPA 2015a and 2015b).

Data collected during the 2017 annual sampling event from groundwater monitoring wells and vapor monitoring points are evaluated in this report, using the methods and assumptions described in the 2013 and 2016 risk assessment reports.

2 Vapor Intrusion Assessment Sampling

Samples for vapor intrusion assessment were collected on October 24-25, 2017, in accordance with the Revised Groundwater Monitoring Plan, section "Shallow Groundwater Monitoring for Vapor Intrusion Assessment" and Table 1 (Ramboll Environ 2016d). Groundwater samples for vapor intrusion assessment[1] were collected from MW-175, MW-176, MW-178 and MW-179, which are located at two parcels (Parcels 2 and 3) in the neighborhood and one parcel (Parcel 5) south of the neighborhood. Soil vapor sampling was attempted at associated soil vapor monitoring points VP-7, VP-8, VP-9, VP-10 and VP-14. Water was encountered in all of the soil vapor monitoring points, except VP-9. The sampling was performed following USEPA and industry standard methods.

Soil vapor sampling was also attempted at VP-12 (at Parcel 4), although Parcel 4 is not included for vapor intrusion assessment in the Revised Groundwater Monitoring Plan (2016d). Data from this location are evaluated in this assessment.

Perched water filled the vapor monitoring points VP-7, VP-8, VP-10, VP-12 and VP-14 and the water from these monitoring points could not be purged from the sampling train. Water samples were collected from these vapor points, per the sampling modifications discussed in the Second Quarter 2014 Soil Vapor Monitoring/Vapor Intrusion Report. Table 1a summarizes the matrices encountered at the vapor monitoring points and the types of samples that were collected during the October 2017 sampling event, as well as the sampling events since 2014.

Table 1b summarizes the groundwater monitoring wells and vapor monitoring points sampled in October 2017, or in a previous sampling event. The table includes a column that indicates whether a sampling location is for vapor intrusion assessment per the Revised Groundwater Monitoring Plan (Ramboll Environ 2016d). These sampling locations are shown on Figure 1.

Information regarding the installation of the vapor monitoring points can be found in the Fourth Quarter 2015 Soil Vapor Monitoring and Vapor Intrusion Assessment Report (Ramboll Environ 2015). The field procedures used during the soil vapor sampling attempts were consistent with the methodology described in the First Quarter 2014 Soil Vapor Monitoring/Vapor Intrusion Report (ENVIRON 2014a) and the modifications discussed in the Second Quarter 2014 Soil Vapor Monitoring/Vapor Intrusion Report (ENVIRON 2014b), except the sampling attempts on October 24-25 were not preceded by at least five consecutive days with less than 0.1 inch of rain: 1.70 inches of rain were recorded on October 22, 2017. Precipitation data for October 2017 are provided in Appendix B.

The volatile organic compound (VOC) results for the groundwater, soil vapor and perched water samples collected during the 2017 annual sampling event are discussed in Section 3. The analytical data reports for the samples are provided in Appendix A.

[1] According to the Revised Groundwater Monitoring Plan (2016b), MW-55R (in Parcel 6) is sampled for purposes other than vapor intrusion assessment. Parcel 6 is no longer included for vapor intrusion assessment.

3 Results

3.1 Summary of Prior Assessments

Groundwater and soil vapor data collected prior to October 2017 were evaluated and the results were presented in the RRMP, RADD[2], the 2016 human health risk assessment and the 2017 semi-annual report.

The data collected over the groundwater plume in the neighborhood through April/May 2017 continued to show that trichloroethene (TCE) vapor intrusion from groundwater is not indicative of a public health concern. These findings, based on multiple lines of evidence involving the evaluation of groundwater, soil vapor and indoor air data, corroborate the original groundwater vapor intrusion modeling results which indicate vapor intrusion from groundwater is not occurring at levels that would present a public health concern. Details of the 2016 assessments were provided in the First Quarter and Second Quarter 2016 Soil Vapor Monitoring and Vapor Intrusion Assessment Reports (Ramboll Environ 2016b and c) and in the Annual 2016 Soil Vapor Monitoring and Vapor Intrusion Assessment Report (Ramboll Environ 2017a). Details of the April/May 2017 vapor intrusion assessment can be found in the Semi-Annual 2017 Soil Vapor Monitoring and Vapor Intrusion Assessment Report (Ramboll Environ 2017b)

3.2 Current Assessment

Groundwater data from monitoring wells (which have identifiers beginning with “MW-”) in the neighborhood collected during the 2017 annual sampling event are summarized in Table 2a. Groundwater data from the monitoring wells south of the neighborhood are summarized on Table 2b. Figure 2 shows the locations of the groundwater monitoring wells included in Tables 2a and 2b. Perched water data and soil vapor data from soil vapor points sampled during the 2017 annual sampling event are included in Table 3a and Table 3b, respectively. As discussed in Attachment A of this report, the TCE groundwater concentrations in the neighborhood have been stable or decreasing since May 2012.

The maximum detected groundwater concentrations among the monitoring wells in the neighborhood that were sampled in October 2017 are summarized in Table 4. These concentrations were used to calculate upper-bound risk estimates for potential vapor intrusion from groundwater into residences in the neighborhood, using the approach in Section 6.5.2 of the ADEQ-approved RRMP which was also used in the 2016 risk assessment. The calculation of and input parameters for these risk estimates are included as Appendix C. As shown in Table 4, the calculations resulted in upper-bound cumulative cancer risk and non-cancer hazard index (HI) estimates of 3×10^{-6} and 0.6, respectively. These risk estimates are below ADEQ’s risk management limits of 10^{-4} and 1, respectively (ADEQ 2005). The calculations for risk estimates discussed in this section are included in Appendix C. Toxicity values used in the risk calculations are current as of December 2017.

[2] Included in Appendix A of the April 2013 RRMP (ENVIRON 2013) and Section 3.A of the December 2013 Remedial Action Decision Document (ADEQ 2013).

Soil vapor monitoring points and nearby groundwater monitoring wells were installed at five parcels in January 2015 and one additional parcel in June 2015 to provide additional lines of evidence to evaluate the potential for vapor intrusion from groundwater. Where soil vapor data could not be collected but perched water samples could be collected from the soil vapor monitoring points, data from these samples were used to confirm the conclusions of the groundwater vapor intrusion risk assessment.

The following sections describe the evaluation of groundwater, soil vapor and perched water data from the co-located vapor points and monitoring wells at each of the three parcels sampled for vapor intrusion assessment in October 2017 per the Revised Groundwater Monitoring Plan. Perched water data from Parcel 4 are also evaluated. The parcels within the neighborhood are discussed in Section 3.2.1 and the parcel south of the neighborhood is discussed in Section 3.2.2.

3.2.1 Parcels in the Neighborhood

3.2.1.1 Parcel 2

At Parcel 2, vapor intrusion risks were estimated based on the groundwater data from MW-175 and the approach discussed above for groundwater. As shown in Table 5, the upper-bound cumulative cancer risk and non-cancer HI estimates for groundwater water at MW-175 are 3 x 10^{-7} and 0.06, respectively, which are well within ADEQ's risk management limits for reasonable maximum exposure (RME) risks.

Upper-bound risk estimates were also calculated using the perched water data from VP-7 and VP-8 as an additional line of evidence for assessing the degree of vapor intrusion from groundwater. The risk estimates were calculated using the approach discussed above for groundwater, except the depth to water was decreased to 5.5 feet below ground surface (bgs) for VP-7 and 10.5 feet bgs for VP-8. As shown in Table 5, the upper-bound cumulative cancer risk and non-cancer HI estimates for perched water at VP-7 are 8 x 10^{-9} and 0.0006, respectively; the upper-bound cumulative cancer risk and non-cancer HI estimates for perched water at VP-8 are 2 x 10^{-8} and 0.002, respectively. These risk estimates are well within ADEQ's risk management limits for RME risks.

These results confirm that vapor intrusion from groundwater does not pose an unacceptable risk at Parcel 2. Only perched water data were evaluated at Parcel 2 because a soil vapor sample could not be collected from the vapor monitoring points at this location.

3.2.1.2 Parcel 3

At Parcel 3, vapor intrusion risks were estimated based on the groundwater data from MW-176 and the approach discussed above for groundwater. As shown in Table 5, the upper-bound cumulative cancer risk and non-cancer HI estimates for groundwater at MW-176 are 1 x 10^{-6} and 0.2, respectively, which are well within ADEQ's risk management limits for RME risks.

Vapor intrusion risks were also calculated based on the perched water data from VP-10, which is located adjacent to MW-176, as an additional line of evidence. The risk estimates were

calculated using the approach discussed above for groundwater, except the depth to water was decreased to 11 feet bgs. As shown in Table 5, the upper-bound cumulative cancer risk and non-cancer HI estimates for water at VP-10 are 8×10^{-7} and 0.2, respectively, which are within ADEQ's risk management limits for RME risks.

Upper-bound risk estimates were also calculated using the soil vapor concentrations from VP-9, which is located adjacent to VP-10, as an additional line of evidence for assessing the degree of vapor intrusion from groundwater. These risk estimates were calculated using USEPA's highly conservative 95th percentile sub-slab soil vapor attenuation factor of 0.03 (USEPA 2015). As shown in Table 5, the upper-bound cumulative cancer risk and non-cancer HI estimates for soil vapor at VP-9 are 3×10^{-5} and 6, respectively. The upper-bound HI estimate exceeds ADEQ's non-cancer risk management limit of 1 for RME risks.

The elevated HI is the result of TCE that was detected at a concentration of 400 micrograms per cubic meter (µg/m^3) on October 25, 2017. This concentration is the same as that in May 2017 and represents a decrease from the Fourth Quarter 2016 TCE soil vapor concentration of 464 µg/m^3. As discussed in the Annual 2016 Soil Vapor Monitoring and Vapor Intrusion Assessment Report (Ramboll Environ 2017a), prior to Fourth Quarter 2016, VP-9 was last sampled for soil vapor in Fourth Quarter 2015. At that time, TCE was detected at a higher concentration of 1,200 µg/m^3, which was over three orders of magnitude higher than the concentrations detected at this parcel since 2012.

Because of the large increase in the TCE soil vapor concentration in 2015, outdoor, crawl space and indoor air samples were collected at this parcel on November 4 and 5, 2015. As discussed in Section 3.2.1.3 of the Fourth Quarter 2015 Soil Vapor Monitoring and Vapor Intrusion Assessment Report, the low TCE concentrations detected in the outdoor, crawl space and indoor air samples were determined to not be associated with groundwater conditions related to the Site (Ramboll Environ 2015). The absence of detectable plume-related concentrations in the air data indicated an incomplete vapor intrusion pathway from the groundwater plume.

These findings from the November 2015 vapor intrusion assessment are still considered to be valid, since the new TCE soil vapor concentration at VP-9 is lower than that in 2015. The upper-bound risk estimates in Table 5 are lower than those in November 2015 when air sampling data demonstrated that the vapor intrusion pathway from groundwater did not actually exist.

The upper-bound risk estimates for soil vapor from VP-9 are higher than the risk estimates based on the perched water data from VP-10. These higher risk estimates should not be interpreted as an indication that the risk estimates from the water data are not adequately conservative. Rather, the interpretation should be that the risk estimates based on the soil vapor data are upper-bound rather than reasonable worst-case and thus, are more conservative than necessary. As discussed in Section 6.8.2 of the RRMP, these risk estimates ignore the substantial attenuation due to the approximately 5 feet of silty clay between the soil vapor sample depth and ground surface. Accounting for such attenuation would result in risk estimates for VP-9 that are substantially lower than those shown in Table 5.

Using multiple lines of evidence, these results confirm that vapor intrusion from groundwater does not pose an unacceptable risk at Parcel 3.

3.2.1.3 Parcel 4

At Parcel 4, vapor intrusion risks were estimated based on the perched water data from VP-12 and the approach discussed above for groundwater, except the depth to water was increased to 12.5 feet bgs. As shown in Table 5, the upper-bound cumulative cancer risk and non-cancer HI estimates from groundwater at VP-12 are 1×10^{-9} and 0.0004, respectively, which are well within ADEQ's risk management limits for RME risks.

The results from VP-12 confirm that vapor intrusion from groundwater does not pose an unacceptable risk at Parcel 4. Only perched water data were evaluated at Parcel 4 because a soil vapor sample could not be collected from the vapor monitoring point at this location.

3.2.2 South of the Neighborhood – Parcel 5

Risk estimates for potential vapor intrusion from groundwater into residential buildings were estimated based on the data collected at Parcel 5, which is a vacant non-residential property located south of Ingersoll Avenue and the residential neighborhood. Groundwater vapor intrusion risks were calculated using the groundwater data from MW-179 and the approach discussed above for groundwater. As shown in Table 6, the upper-bound cumulative cancer risk and non-cancer HI estimates from groundwater at MW-179 are 4×10^{-8} and 0.008, respectively, which are below ADEQ's risk management limits for RME risks.

Upper-bound risk estimates were also calculated using the perched water data from VP-14 and MW-178, which are located adjacent to MW-179. The risk estimates were calculated using the approach discussed above for groundwater, except the depth to water was decreased to 7.5 feet bgs and 10.5 feet bgs, respectively. As shown in Table 6, the upper-bound cumulative cancer risk and non-cancer HI estimates for groundwater at VP-14 are 3×10^{-7} and 0.05, respectively; the upper-bound cumulative cancer risk and non-cancer HI estimates for groundwater at MW-178 are 2×10^{-8} and 0.003, respectively. The risk estimates at both of these sample points are well within ADEQ's risk management limits for RME risks.

In previous quarters, vapor intrusion risk was also calculated using groundwater data from MW-33R as an additional line of evidence (see Table 1b). However, MW-33R was abandoned during the 2016 annual event due to road construction.

The results from MW-179, VP-14 and MW-178 confirm that vapor intrusion from groundwater would not pose an unacceptable risk if there was a residence at Parcel 5.

4 Summary and Conclusion

- The concentrations of TCE in groundwater are stable or decreasing compared to previous reporting periods and historic results.
- Risk estimates for vapor intrusion from groundwater in the neighborhood are below ADEQ's risk management limits of 10^{-4} and 1 for cumulative cancer risk and non-cancer hazards, respectively.
- Vapor intrusion modeling using perched water and soil gas confirms the modeling results using VOC concentrations in water collected from groundwater monitoring wells, except at Parcel 3 where the TCE vapor concentration in VP-9 resulted in an upper-bound HI that exceeds 1. However, the current TCE concentration at VP-9 (400 µg/m^3) is lower than the TCE concentration in November 2015 (1,200 µg/m^3), when data from outdoor, crawl space and indoor air sampling demonstrated that vapor intrusion from groundwater was actually not occurring.

5 References

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Tables

TABLE 1a
SUMMARY OF MATRICES ENCOUNTERED AND SAMPLED AT SOIL VAPOR MONITORING POINTS
Whirlpool Facility - Fort Smith, Arkansas

Quarter of Collection	Date of Collection	In Neighborhood										South of Neighborhood	
		Parcel 1		Parcel 2		Parcel 3			Parcel 4		Parcel 6	Parcel 5	
		VP-5	VP-6	VP-7	VP-8	OA/CS/IA~	VP-9	VP-10	VP-1S+	VP-1D / VP-12#	VP-15	VP-2S+	VP-2D / VP-14#
Annual 2017	10/2017	--	--	**Water**	**Water**	NS	**Air**	**Water**	--	**Water**	--	--	**Water**
Semi-Annual 2017	5/2017	--	--	**Water**	**Water**	NS	**Air**	**Water**	--	**Water**	--	--	**Water**
Annual 2016	11/2016	**Water**	**Water**	**Water**	**Water**	NS	**Air**	**Water**	--	**Water**	NS	--	NS
2nd Q 2016	5/2016	**Water**	**Water**	**Water**	**Water**	NS	NS	**Water**	--	**Water**	**Water**	--	**Water**
1st Q 2016	1/2016	**Water**	**Water**	**Water**	**Water**	NS	NS	**Water**	--	**Water**	**Water**	--	**Water**
4th Q 2015	10/2015	**Water**	**Water**	**Air**	**Water**	**Air**	**Air**	**Water**	--	**Water**	**Water**	--	**Water**
3rd Q 2015	7/2015	**Water**	**Water**	**Air**	**Water**	NS	**Water**	**Water**	--	**Water**	**Water**	--	**Water**
2nd Q 2015	4/2015	**Water**	**Water**	**Air**	**Water**	**Air**	**Air**	**Water**	--	**Water**	--	--	*Water*
1st Q 2015	1/2015	**Air**	**Water**	**Air**	*Water*	--	**Air**	**Water**	--	**Water**	--	--	**Air**
4th Q 2014	10/2014	--	--	--	--	--	--	--	**Water**	*Air*	--	**Water**	**Water**
3rd Q 2014	9/2014	--	--	--	--	--	--	--	**Water**	*Air**	--	**Water**	**Water**
3rd Q 2014	7/2014	--	--	--	--	--	--	--	*Water*	*Water*	--	**Water**	**Water**
2nd Q 2014	5/2014	--	--	--	--	--	--	--	Water	**Air**	--	Water	Water
1st Q 2014	3/2014	--	--	--	--	--	--	--	**Air**	**Air**	--	Water	**Air**

Notes:

Shaded and **bolded** cells indicate that a sample was collected.

Italicized cells indicate that insufficient volume was available for sample collection.

Dashes ("--") indicate the location was not installed or was abandoned during this sampling event.

Prior to the Third Quarter 2014, water encountered in the soil vapor monitoring points was not sampled per the quarterly sampling plan.

Per the September 2016 RMP, only vapor points associated with groundwater wells MW-175 through MW-179 will be sampled. In the Semi-Annual 2017 sampling, VP-12 was sampled.

"NS" indicates the location was not sampled during this sampling event.

* During the September 2014 sampling event, no air or water sample could be collected at VP-1D; a water sample was collected at the nearby port SV-04D to characterize VOC concentrations in the area.

~ Outdoor ("OA"), crawl space ("CS"), and indoor air ("IA") samples were collected in the Second Quarter 2015 and Fourth Quarter 2015 at Parcel 3 at the request of the property owner

+ During the First Quarter 2015, VP-1S and VP-2S were abandoned and installation of VP-11 and VP-13 was attempted in Parcels 4 and 5, respectively. However, because of water in the borings for VP-11 and VP-13, monitoring wells MW-181 and MW-180, respectively, were installed.

During the First Quarter 2015, locations VP-1D and VP-2D were replaced by VP-12 and VP-14, respectively.

TABLE 1b
SUMMARY OF SCREEN INTERVALS AT SOIL VAPOR MONITORING POINTS
Whirlpool Facility - Fort Smith, Arkansas

Area	Parcel	Location	Screen Interval (ft bgs)	Included in 2016 Revised Groundwater Sampling Plan for Vapor Intrusion Assessment	Notes	Annual 2017
						10/2017
In Neighborhood	1	MW-173	5-6	No		NS
In Neighborhood	1	VP-5	7.25-7.75	No		NS
In Neighborhood	1	MW-174	10-11	No		NS
In Neighborhood	1	VP-6	13.75-14.25	No		NS
In Neighborhood	2	VP-7	5.25-5.75	Yes	Water in VP	Water
In Neighborhood	2	VP-8	10.25-10.75	Yes	Water in VP	Water
In Neighborhood	2	MW-175	14-15	Yes		Water
In Neighborhood	3	VP-9	5.25-5.75	Yes		Air
In Neighborhood	3	VP-10	10.75-11.25	Yes	Water in VP	Water
In Neighborhood	3	MW-176	13.5-14.5	Yes		Water
In Neighborhood	4	MW-181 (VP-11)+	5.5-6.5	No		NS
In Neighborhood	4	MW-177	9-10	No		NS
In Neighborhood	4	MW-71	12#	No		NS
In Neighborhood	4	VP-12 (VP-1D)*	12.25-12.75	No	Water in VP	Water
In Neighborhood	6	VP-15	5.25-5.75	No		NS
In Neighborhood	6	MW-55R	19-21	No&		Water
South of Neighborhood	5	MW-180 (VP-13)+	6-7	No		NS
South of Neighborhood	5	MW-178	7-8	Yes		Water
South of Neighborhood	5	VP-14 (VP-2D)*	10.25-10.75	Yes	Water in VP	Water
South of Neighborhood	5	MW-179	12-13	Yes		Water
South of Neighborhood	5	MW-33R^	19-21	No		NS

Notes:

Italicized cells indicate that insufficient volume was available for sample collection.

Dashes ("--") indicate the location was not installed or was abandoned during this sampling event.

Prior to the Third Quarter 2014, water encountered in the soil vapor monitoring points was not sampled per the quarterly sampling plan.

"NS" indicates the location was not sampled during this sampling event.

* During the First Quarter 2015, locations VP-1D and VP-2D were replaced by VP-12 and VP-14, respectively.

+ During the First Quarter 2015, VP-1S and VP-2S were abandoned and installation of VP-11 and VP-13 was attempted in Parcels 4 and 5, respectively. However, because of water in the borings for VP-11 and VP-13, monitoring wells MW-181 and MW-180, respectively, were installed.

Well screen information is not available for MW-71. The typical depth to groundwater of 12 feet bgs was substituted for the screen depth.

& MW-55R is included in the Revised Groundwater Monitoring Plan for purposes other than the Vapor Intrusion Assessment.

^ MW-33R was abandoned in April 2016.

TABLE 2a
ANNUAL 2017 GROUNDWATER VOC DATA FOR MONITORING WELLS IN THE NEIGHBORHOOD
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-39R	MW-39R	MW-40R	MW-46R	MW-50	MW-55R	MW-56R
Field Sample ID	MW-39R-201710	FD-05-201710	MW-40R-201710	MW-46R-201710	MW-50-201710	MW-55R-201710	MW-56R-201710
Lab Sample ID	60256510021	60256510022	60256365021	60256365015	60256266010	60256510007	60256365009
Sample Date	10/25/2017	10/25/2017	10/24/2017	10/24/2017	10/23/2017	10/25/2017	10/24/2017
Comments		Field Duplicate					
VOC							
Acetone	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)
Benzene	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)
Bromoform	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)
Bromomethane	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	0.53 U (0.16)
2-Butanone	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
Chloroform	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Chloromethane	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)
1,1-Dichloroethane	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	U (0.20)	U (0.20)	U (0.20)	1.2 (0.20)	U (0.20)	0.28 J (0.20)	2.7 (0.20)
cis-1,2-Dichloroethene	U (0.080)	U (0.080)	U (0.080)	10.7 (0.080)	U (0.080)	0.77 J (0.080)	33.8 (0.080)
trans-1,2-Dichloroethene	U (0.20)	U (0.20)	U (0.20)	0.32 J (0.20)	U (0.20)	U (0.20)	U (0.20)
2-Hexanone	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)
4-Methyl-2-pentanone	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Tetrachloroethene	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
Trichloroethene	U (0.17)	U (0.17)	0.31 J (0.17)	408 (1.7)	0.26 J (0.17)	10.9 (0.17)	815 (1.7)
Vinyl Chloride	U (0.13)	U (0.13)	U (0.13)	0.51 J (0.13)	U (0.13)	0.15 J (0.13)	U (0.13)

Notes:

1 All concentrations are presented in µg/L (ppb).

2 Only chemicals with at least one detection in any water or soil vapor sample are shown.

U = Not detected

J = Estimated concentration

( ) = Detection limit

µg/L = Micrograms per liter

TABLE 2a
ANNUAL 2017 GROUNDWATER VOC DATA FOR MONITORING WELLS IN THE NEIGHBORHOOD
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-57R	MW-58R	MW-60R	MW-61R	MW-62R	MW-62R	MW-63R
Field Sample ID	MW-57R-201710	MW-58R-201710	MW-60R-201710	MW-61R-201710	MW-62R-201710	FD-02-201710	MW-63R-201710
Lab Sample ID	60256365008	60256365017	60256365001	60256266011	60256510001	60256365007	60256266001
Sample Date	10/24/2017	10/24/2017	10/24/2017	10/23/2017	10/25/2017	10/24/2017	10/23/2017
Comments						Field Duplicate	
VOC							
Acetone	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)
Benzene	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)
Bromoform	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)
Bromomethane	0.37 U (0.16)	U (0.16)	0.53 U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
2-Butanone	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
Chloroform	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	0.15 J (0.14)
Chloromethane	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)
1,1-Dichloroethane	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	2.1 (0.20)	1.9 (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
cis-1,2-Dichloroethene	17.5 (0.080)	10.0 (0.080)	U (0.080)	2.1 (0.080)	0.17 J (0.080)	U (0.080)	0.85 J (0.080)
trans-1,2-Dichloroethene	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
2-Hexanone	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)
4-Methyl-2-pentanone	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Tetrachloroethene	U (0.10)	0.13 J (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
Trichloroethene	441 (1.7)	360 (0.85)	0.83 J (0.17)	2.9 (0.17)	0.38 U (0.17)	U (0.17)	4.4 (0.17)
Vinyl Chloride	U (0.13)	0.65 J (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)

Notes:

1 All concentrations are presented in µg/L (ppb).

2 Only chemicals with at least one detection in any water or soil vapor sample are shown.

U = Not detected

J = Estimated concentration

( ) = Detection limit

µg/L = Micrograms per liter

TABLE 2a
ANNUAL 2017 GROUNDWATER VOC DATA FOR MONITORING WELLS IN THE NEIGHBORHOOD
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-68	MW-82	MW-82	MW-96	MW-97	MW-98	MW-99
Field Sample ID	MW-68-201710	MW-82-201710	FD-03-201710	MW-96-201710	MW-97-201710	MW-98-201710	MW-99-201710
Lab Sample ID	60256365006	60256365019	60256365020	60256510002	60256510003	60256365025	60256365024
Sample Date	10/24/2017	10/24/2017	10/24/2017	10/25/2017	10/25/2017	10/24/2017	10/24/2017
Comments			Field Duplicate				
VOC							
Acetone	U (1.9)	14.7 (1.9)	14.1 (1.9)	U (1.9)	U (1.9)	2.7 U (1.9)	U (1.9)
Benzene	U (0.060)	0.18 J (0.060)	0.18 J (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)
Bromoform	U (0.070)	1.0 (0.070)	1.1 (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)
Bromomethane	0.28 U (0.16)	0.76 J (0.16)	0.81 J (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
2-Butanone	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
Chloroform	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Chloromethane	U (0.080)	3.5 (0.080)	3.3 (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)
1,1-Dichloroethane	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
cis-1,2-Dichloroethene	U (0.080)	0.80 J (0.080)	0.80 J (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)
trans-1,2-Dichloroethene	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
2-Hexanone	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)
4-Methyl-2-pentanone	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Tetrachloroethene	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
Trichloroethene	0.31 J (0.17)	34.3 (0.17)	34.1 (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
Vinyl Chloride	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)

Notes:

1 All concentrations are presented in µg/L (ppb).

2 Only chemicals with at least one detection in any water or soil vapor sample are shown.

U = Not detected

J = Estimated concentration

( ) = Detection limit

µg/L = Micrograms per liter

TABLE 2a
ANNUAL 2017 GROUNDWATER VOC DATA FOR MONITORING WELLS IN THE NEIGHBORHOOD
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-175	MW-176	MW-183	MW-184	MW-194	MW-195	MW-196
Field Sample ID	MW-175-201710	MW-176-201710	MW-183-201710	MW-184-201710	MW-194-201710	MW-195-201710	MW-196-201710
Lab Sample ID	60256365010	60256365014	60256510004	60256365026	60256266002	60256266005	60256365023
Sample Date	10/24/2017	10/24/2017	10/25/2017	10/24/2017	10/23/2017	10/23/2017	10/24/2017
Comments							
VOC							
Acetone	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)
Benzene	0.12 J (0.060)	0.11 J (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)
Bromoform	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)
Bromomethane	0.38 U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
2-Butanone	3.2 J (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
Chloroform	U (0.14)	U (0.14)	0.16 J (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Chloromethane	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)
1,1-Dichloroethane	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	U (0.20)	3.3 (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
cis-1,2-Dichloroethene	0.27 J (0.080)	187 (0.080)	0.24 J (0.080)	U (0.080)	1.1 (0.080)	U (0.080)	U (0.080)
trans-1,2-Dichloroethene	U (0.20)	1.3 (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
2-Hexanone	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)	U (1.2)
4-Methyl-2-pentanone	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Tetrachloroethene	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
Trichloroethene	72.2 (0.17)	281 (1.7)	2.8 (0.17)	U (0.17)	15.4 (0.17)	U (0.17)	U (0.17)
Vinyl Chloride	U (0.13)	0.29 J (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)

Notes:

1 All concentrations are presented in µg/L (ppb).

2 Only chemicals with at least one detection in any water or soil vapor sample are shown.

U = Not detected

J = Estimated concentration

( ) = Detection limit

µg/L = Micrograms per liter

TABLE 2b
ANNUAL 2017 GROUNDWATER VOC DATA FOR MONITORING WELLS SOUTH OF THE NEIGHBORHOOD
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-178	MW-178	MW-179
Field Sample ID	MW-178-201710	FD-06-201710	MW-179-201710
Lab Sample ID	60256510019	60256510020	60256590010
Sample Date	10/25/2017	10/25/2017	10/26/2017
Comments		Field Duplicate	
VOC			
Acetone	U (1.9)	2.0 J (1.9)	2.2 J (1.9)
Benzene	0.14 J (0.060)	0.15 J (0.060)	U (0.060)
Bromoform	U (0.070)	U (0.070)	U (0.070)
Bromomethane	U (0.16)	U (0.16)	U (0.16)
2-Butanone	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	U (0.12)	U (0.12)	U (0.12)
Chloroform	U (0.14)	U (0.14)	U (0.14)
Chloromethane	0.12 J (0.080)	U (0.080)	U (0.080)
1,1-Dichloroethane	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	U (0.20)	U (0.20)	U (0.20)
cis-1,2-Dichloroethene	0.97 J (0.080)	0.96 J (0.080)	0.35 J (0.080)
trans-1,2-Dichloroethene	U (0.20)	U (0.20)	U (0.20)
2-Hexanone	U (1.2)	U (1.2)	U (1.2)
4-Methyl-2-pentanone	U (0.42)	U (0.42)	U (0.42)
Tetrachloroethene	U (0.10)	U (0.10)	U (0.10)
Toluene	U (0.17)	U (0.17)	U (0.17)
Trichloroethene	3.9 (0.17)	3.6 (0.17)	10.7 (0.17)
Vinyl Chloride	U (0.13)	U (0.13)	U (0.13)

Notes:

1 All concentrations are presented in µg/L (ppb).

2 Only chemicals with at least one detection in any water or soil vapor sample are shown.

U = Not detected

J = Estimated concentration

( ) = Detection limit

µg/L = Micrograms per liter

TABLE 3a
ANNUAL 2017
WATER DATA FROM SOIL VAPOR MONITORING POINTS
Whirlpool Facility - Fort Smith, Arkansas

Parcel	2	2	3	4	5
Location	VP-7	VP-8	VP-10	VP-12	VP-14
Field Sample ID	VP-07-201710	VP-08-201710	VP-10-201710	VP-12-201710	VP-14-201710
Lab Sample ID	60256529001	60256529002	60256529003	60256529004	60256529005
Collection Depth (ft bgs)	5.25-5.75	10.25-10.75	10.75-11.25	12.25-12.75	10.25-10.75
Sample Date	10/25/2017	10/25/2017	10/25/2017	10/25/2017	10/25/2017
Comments					
VOC					
Acetone	36.2 (1.9)	75.1 (1.9)	U (1.9)	2.2 J (1.9)	U (1.9)
Benzene	1.1 (0.060)	0.73 J (0.060)	0.21 J (0.060)	0.15 J (0.060)	0.18 J (0.060)
Bromoform	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)
Bromomethane	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
2-Butanone	4.5 J (0.59)	11.8 (0.59)	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	U (0.12)	U (0.12)	0.56 J (0.12)	U (0.12)	U (0.12)
Chloroform	U (0.14)	U (0.14)	0.61 J (0.14)	U (0.14)	0.44 J (0.14)
Chloromethane	U (0.080)	0.66 J (0.080)	U (0.080)	U (0.080)	U (0.080)
1,1-Dichloroethane	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	U (0.20)	U (0.20)	1.6 (0.20)	U (0.20)	0.93 J (0.20)
cis-1,2-Dichloroethene	U (0.080)	U (0.080)	12.7 (0.080)	U (0.080)	3.3 (0.080)
trans-1,2-Dichloroethene	U (0.20)	U (0.20)	0.27 J (0.20)	U (0.20)	0.27 J (0.20)
2-Hexanone	U (1.2)	3.0 J (1.2)	U (1.2)	U (1.2)	U (1.2)
4-Methyl-2-pentanone	1.0 J (0.42)	0.62 J (0.42)	U (0.42)	U (0.42)	U (0.42)
Tetrachloroethene	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	0.25 J (0.17)	0.28 J (0.17)	0.42 J (0.17)	U (0.17)	U (0.17)
Trichloroethene	0.71 J (0.17)	2.9 (0.17)	211 (0.85)	0.22 J (0.17)	69.0 (0.17)
Vinyl Chloride	U (0.13)	0.18 J (0.13)	0.42 J (0.13)	U (0.13)	U (0.13)

Notes:

1 All concentrations are presented in µg/L (ppb).

2 Only chemicals with at least one detection in any water or soil vapor sample are shown.

U = Not detected

J = Estimated concentration

B = Blank contamination

( ) = Method detection limit

µg/L = Micrograms per liter

TABLE 3b
ANNUAL 2017 SOIL VAPOR DATA
Whirlpool Corporation; Fort Smith, Arkansas

Parcel	Parcel 3
Location	VP-9
Field Sample ID	VP-09-201710
Lab Sample ID	P1705345-001
Collection Depth (ft bgs)	5.25-5.75
Sample Date	10/25/2017
Comments	
VOC	
1,1-Dichloroethane	0.31 (0.037)
1,2-Dichloroethane	0.28 (0.037)
1,1-Dichloroethene	0.19 (0.037)
cis-1,2-Dichloroethene	0.16 (0.037)
trans-1,2-Dichloroethene	0.59 (0.037)
Tetrachloroethene	0.28 (0.037)
Trichloroethene	400 D (1.5)
Vinyl Chloride	0.46 (0.037)

Notes:

1 All concentrations are presented in µg/m^3.

2 Only analyzed chemicals with at least one detection in any water or soil vapor sample are shown.

D = Compound quantitated on a diluted sample

( ) = Method detection limit

µg/m^3 = Micrograms per cubic meter

ft bgs = Feet below ground surface

TABLE 4
UPPER-BOUND VAPOR INTRUSION RISK ESTIMATES
BASED ON SEMI-ANNUAL 2017 GROUNDWATER DATA IN THE NEIGHBORHOOD
Whirlpool Facility - Fort Smith, Arkansas

Chem Group	Chemical	CASRN	Maximum Detected Concentration in Groundwater in Neighborhood (mg/L)	Location of Maximum Detected Concentration in Groundwater in Neighborhood	Residential VI	
					Risk	HQ
VOC	Acetone	67-64-1	1.47E-02	MW-82		9.7E-08
VOC	Benzene	71-43-2	1.80E-04	MW-82	7.9E-10	7.9E-06
VOC	Bromoform	75-25-2	1.10E-03	MW-82	1.2E-10	
VOC	Bromomethane	74-83-9	8.10E-04	MW-82		2.5E-04
VOC	2-Butanone	78-93-3	3.20E-03	MW-175		1.3E-07
VOC	Chloroform	67-66-3	1.60E-04	MW-183	1.9E-09	3.9E-06
VOC	Chloromethane	74-87-3	3.50E-03	MW-82		6.1E-05
VOC	1,1-Dichloroethene	75-35-4	3.30E-03	MW-176		4.3E-05
VOC	cis-1,2-Dichloroethene	156-59-2	1.87E-01	MW-176		
VOC	trans-1,2-Dichloroethene	156-60-5	1.30E-03	MW-176		
VOC	Tetrachloroethene	127-18-4	1.30E-04	MW-58R	2.5E-11	5.5E-06
VOC	Trichloroethene	79-01-6	8.15E-01	MW-56R	3.0E-06	6.3E-01
VOC	Vinyl Chloride	75-01-4	6.50E-04	MW-58R	1.3E-08	2.1E-05

Cumulative Risk and HI:	3E-06	6E-01

Note:
Only COCs detected in monitoring wells in the neighborhood are shown.
Detected concentrations are from samples collected from groundwater monitoring wells in the 2017 Annual Sampling Event.
Risks were calculated using the model derived by Johnson & Ettinger (1991), as discussed in Section 3.3.1 of the April 2013 Revised Risk Management Plan.

TABLE 5
EVALUATION OF VOCS IN WATER AT PARCELS IN THE NEIGHBORHOOD
Whirlpool Facility - Fort Smith, Arkansas

Chem Group	Chemical	CASRN	Parcel 2						Parcel 3						Parcel 4	
			5.5 ft bgs		10.5 ft bgs		12 ft bgs		5.5 ft bgs		11 ft bgs		12 ft bgs		12.5 ft bgs	
			VP-7		VP-8		MW-175		VP-9		VP-10		MW-176		VP-12	
			Perched Water		Perched Water		Groundwater		Soil Vapor		Perched Water		Groundwater		Groundwater	
			Risk	HQ	Risk	HQ	Risk	HQ	Risk	HQ	Risk	HQ	Risk	HQ	Risk	HQ
VOC	Acetone	67-64-1		5.4E-07		5.6E-07										1.4E-08
VOC	Benzene	71-43-2	5.4E-09	5.4E-05	3.3E-09	3.2E-05	5.3E-10	5.3E-06			9.4E-10	9.4E-06	4.9E-10	4.8E-06	6.6E-10	6.6E-06
VOC	Bromomethane	74-83-9						1.2E-04								
VOC	2-Butanone	78-93-3		3.9E-07		5.2E-07		1.3E-07								
VOC	Carbon Disulfide	75-15-0										2.2E-06				
VOC	Chloroform	67-66-3									7.4E-09	1.5E-05				
VOC	Chloromethane	74-87-3				1.1E-05										
VOC	1,1-Dichloroethane	75-34-3								1.8E-05						
VOC	1,2-Dichloroethane	107-06-2							9.0E-08	1.2E-03						
VOC	1,1-Dichloroethene	75-35-4								2.7E-05		2.1E-05		4.3E-05		
VOC	cis-1,2-Dichloroethene	156-59-2														
VOC	trans-1,2-Dichloroethene	156-60-5														
VOC	2-Hexanone	591-78-6				2.4E-05										
VOC	4-Methyl-2-pentanone	108-10-1		1.4E-07		5.1E-08										
VOC	Tetrachloroethene	127-18-4							9.0E-10	2.0E-04						
VOC	Toluene	108-88-3		7.0E-08		7.2E-08						1.1E-07				
VOC	Trichloroethene	79-01-6	2.8E-09	5.9E-04	1.1E-08	2.2E-03	2.7E-07	5.6E-02	2.8E-05	5.8E+00	7.9E-07	1.6E-01	1.0E-06	2.2E-01	8.1E-10	1.7E-04
VOC	Vinyl Chloride	75-01-4			3.7E-09	5.7E-06			8.6E-08	1.3E-04	8.6E-09	1.3E-05	5.9E-09	9.2E-06		
	Cumulative Risk and HI:		8E-09	6E-04	2E-08	2E-03	3E-07	6E-02	3E-05	**6E+00**	8E-07	2E-01	1E-06	2E-01	1E-09	2E-04

Notes:
Only COCs detected in the 2017 Annual Sampling Event samples at locations listed on the table are shown.
Risk and HQ estimates were not calculated for detected chemicals with inadequate toxicity or physical/chemical parameters or where chemical concentrations were non-detect.
Risks based on soil vapor data were calculated using USEPA's default attenuation factor for subslab gas to indoor air of 0.03, as discussed in Section 6.8.2 of the April 2013 Revised Risk Management Plan.
Risks based on concentrations measured in groundwater were calculated using the model derived by Johnson & Ettinger (1991), as discussed in Section 3.3.1 of the April 2013 Revised Risk Management Plan.
Risks based on concentrations measured in water from the soil vapor ports or shallow groundwater were calculated using the same approach used for groundwater, except the depth was assumed to be the depth of the port or the depth of the screen, respectively, as discussed in Section 3 of the Annual 2016 Vapor Intrusion Report.
Upper-bound cumulative cancer risk and HI estimates in excess of Arkansas Department of Environmental Quality (ADEQ)'s RME cumulative cancer and noncancer risk limits (1E-4 and 1, respectively) are shaded in bold.

TABLE 6
EVALUATION OF VOCS IN WATER AT PARCEL 5 (SOUTH OF NEIGHBORHOOD)
Whirlpool Facility - Fort Smith, Arkansas

Chem Group	Chemical	CASRN	7.5 ft bgs MW-178 Perched Water		10.5 ft bgs VP-14 Perched Water		12 ft bgs MW-179 Groundwater	
			Risk	HQ	Risk	HQ	Risk	HQ
VOC	Acetone	67-64-1		2.1E-08				1.4E-08
VOC	Benzene	71-43-2	7.0E-10	7.0E-06	8.0E-10	8.0E-06		
VOC	Chloroform	67-66-3			5.3E-09	1.1E-05		
VOC	Chloromethane	74-87-3		2.1E-06				
VOC	1,1-Dichloroethene	75-35-4				1.2E-05		
VOC	cis-1,2-Dichloroethene	156-59-2						
VOC	trans-1,2-Dichloroethene	156-60-5						
VOC	Trichloroethene	79-01-6	1.5E-08	3.1E-03	2.6E-07	5.3E-02	4.0E-08	8.2E-03
	Cumulative Risk and HI:		2E-08	3E-03	3E-07	5E-02	4E-08	8E-03

Notes:

Only COCs detected in the Annual 2017 Samping Event samples at locations listed on the table are shown.

Risk and HQ estimates were not calculated for detected chemicals with inadequate toxicity or physical/chemical parameters or where chemical concentrations were non-detect.

Risks based on concentrations measured in groundwater were calculated using the model derived by Johnson & Ettinger (1991), as discussed in Section 3.3.1 of the April 2013 Revised Risk Management Plan.

Risks based on concentrations measured in shallow groundwater were calculated using the same approach used for groundwater, except the depth was assumed to be the depth of the screen, as discussed in Section 3 of the Annual 2017 Vapor Intrusion Report.

Cumulative cancer risk and HI estimates were below Arkansas Department of Environmental Quality (ADEQ)'s risk limits (1E-4 and 1, respectively).

Figures

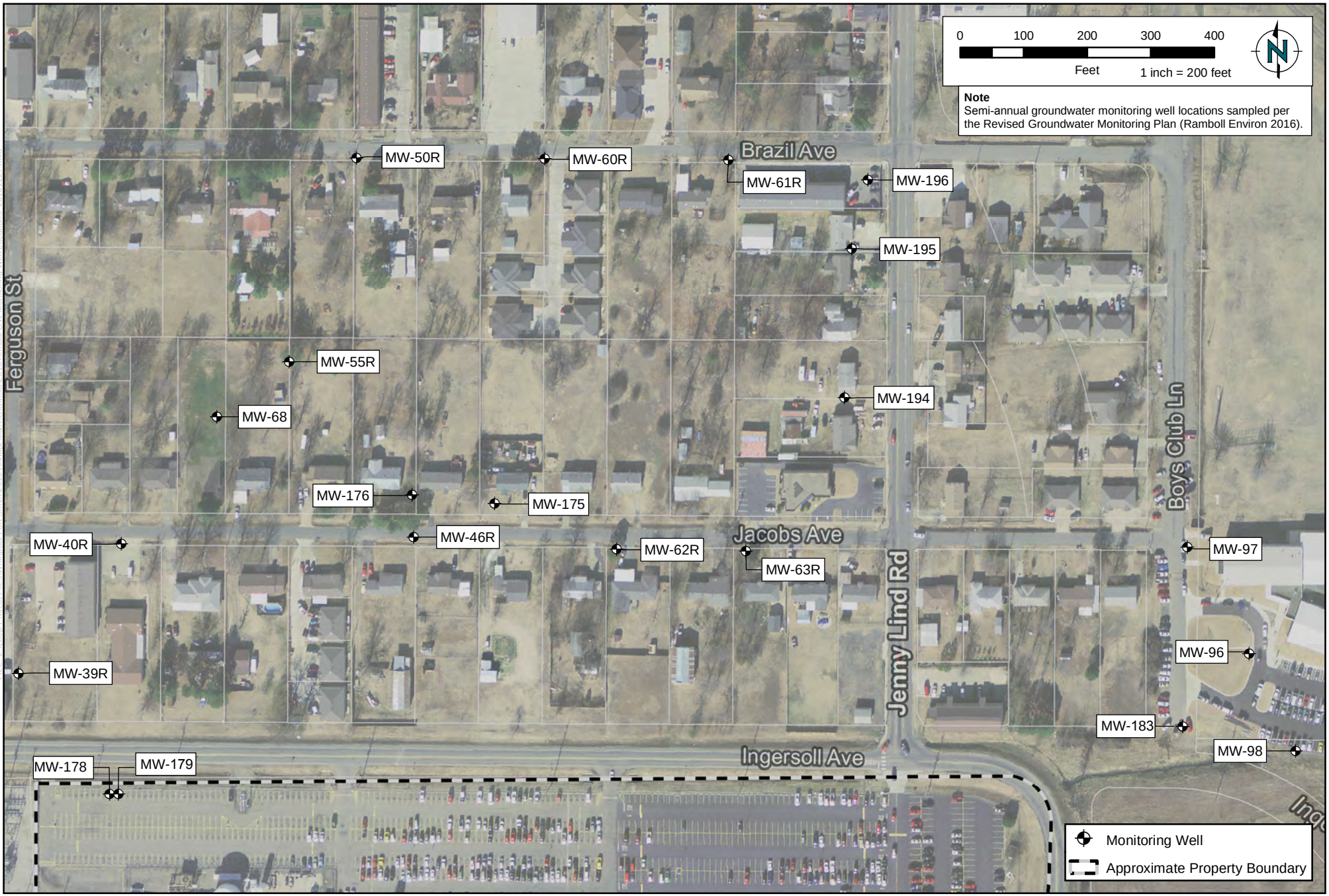
RAMBOLL ENVIRON

SHALLOW GROUNDWATER MONITORING WELLS AND VAPOR POINTS SAMPLED DURING ANNUAL SAMPLING 2017

Whirlpool Facility - Fort Smith, Arkansas

Figure 1

DRAFTED BY: FK | DATE: 6/6/2017 | PROJECT: 34375000



FILE: L:\Loop Project Files\Whirlpool Fort Smith\2016 Annual M&RGIS\mxd\2016 Annual GW Monitoring Well Locations_20161227.mxd

RAMBOLL ENVIRON

DRAFTED BY: FK | DATE: 6/6/2017

GROUNDWATER MONITORING WELL LOCATIONS

Whirlpool Facility - Fort Smith, Arkansas

Figure 2

PROJECT: 3437500Q

Appendix A

Laboratory Analytical Data

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

November 06, 2017

Nick Zurweller
Ramboll Environ
7500 College Blvd.
Ste. 295
Overland Park, KS 66210

RE: Project: FT SMITH
Pace Project No.: 60256266

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on October 24, 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,

Richard Mannz
richard.mannz@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: M. Wilson

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: FT SMITH
Pace Project No.: 60256266

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 17-016-0
Illinois Certification #: 200030
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212018-1
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587
Missouri Certification: 10070

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: FT SMITH
Pace Project No.: 60256266

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60256266001	**MW-63R-201710**	Water	10/23/17 16:46	10/24/17 07:00
60256266002	**MW-194-201710**	Water	10/23/17 16:12	10/24/17 07:00
60256266003	**TMW-29-201710**	Water	10/23/17 15:25	10/24/17 07:00
60256266004	**TB-03-201710**	Water	10/23/17 08:00	10/24/17 07:00
60256266005	**MW-195-201710**	Water	10/23/17 16:30	10/24/17 07:00
60256266006	**TMW-20-201710**	Water	10/23/17 17:20	10/24/17 07:00
60256266007	**FD-01-201710**	Water	10/23/17 17:20	10/24/17 07:00
60256266008	**EB-01-201710**	Water	10/23/17 17:50	10/24/17 07:00
60256266009	**TMW-11-201710**	Water	10/23/17 16:00	10/24/17 07:00
60256266010	**MW-50-201710**	Water	10/23/17 17:10	10/24/17 07:00
60256266011	**MW-61R-201710**	Water	10/23/17 16:52	10/24/17 07:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE ANALYTE COUNT

Project: FT SMITH
Pace Project No.: 60256266

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60256266001	**MW-63R-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256266002	**MW-194-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256266003	**TMW-29-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256266004	**TB-03-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256266005	**MW-195-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256266006	**TMW-20-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256266007	**FD-01-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256266008	**EB-01-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256266009	**TMW-11-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256266010	**MW-50-201710**	EPA 6010	TDS	2	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 2320B	JSS	3	PASI-K
		SM 4500-S-2 D	JSS	1	PASI-K
		EPA 300.0	OL	2	PASI-K
		EPA 350.1	CRS	1	PASI-K
		EPA 353.2	RAD	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256266011	**MW-61R-201710**	EPA 6010	TDS	2	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 2320B	JSS	3	PASI-K
		SM 4500-S-2 D	JSS	1	PASI-K
		EPA 300.0	OL	2	PASI-K
		EPA 350.1	CRS	1	PASI-K
		EPA 353.2	RAD	3	PASI-K
		SM 5310C	LDF	1	PASI-K

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: FT SMITH
Pace Project No.: 60256266

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Ramboll Environ_AR
Date: November 06, 2017

General Information:
2 samples were analyzed for EPA 6010. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 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.

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

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

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

Additional Comments:

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: FT SMITH
Pace Project No.: 60256266

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: November 06, 2017

General Information:
11 samples were analyzed for EPA 5030B/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: 500583

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: FT SMITH
Pace Project No.: 60256266

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: Ramboll Environ_AR
Date: November 06, 2017

General Information:
2 samples were analyzed for SM 2320B. 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.

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.

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

Additional Comments:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: FT SMITH
Pace Project No.: 60256266

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: Ramboll Environ_AR
Date: November 06, 2017

General Information:
2 samples were analyzed for SM 4500-S-2 D. 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.

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.

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

Additional Comments:

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PROJECT NARRATIVE

Project: FT SMITH
Pace Project No.: 60256266

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Ramboll Environ_AR
Date: November 06, 2017

General Information:
2 samples were analyzed for EPA 300.0. 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.

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: FT SMITH
Pace Project No.: 60256266

Method: **EPA 350.1**
Description: 350.1 Ammonia
Client: Ramboll Environ_AR
Date: November 06, 2017

General Information:
2 samples were analyzed for EPA 350.1. 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.

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.

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

Additional Comments:

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PROJECT NARRATIVE

Project: FT SMITH
Pace Project No.: 60256266

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Ramboll Environ_AR
Date: November 06, 2017

General Information:
2 samples were analyzed for EPA 353.2. 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.

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: 500221

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60256266011,60256361008

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

- MS (Lab ID: 2047158)
  - Nitrogen, Nitrate
  - Nitrogen, Nitrite
- MS (Lab ID: 2047160)
  - Nitrogen, Nitrate
  - Nitrogen, Nitrite

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

Additional Comments:

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: FT SMITH
Pace Project No.: 60256266

Method: **SM 5310C**
Description: 5310C TOC
Client: Ramboll Environ_AR
Date: November 06, 2017

General Information:
2 samples were analyzed for SM 5310C. 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.

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.

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.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: MW-63R-201710 **Lab ID: 60256266001** Collected: 10/23/17 16:46 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 04:56	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 04:56	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 04:56	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 04:56	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 04:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 04:56	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 04:56	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 04:56	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 04:56	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 04:56	75-00-3	
Chloroform	**0.15J**	ug/L	1.0	0.14	1		10/28/17 04:56	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 04:56	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 04:56	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 04:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 04:56	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 04:56	75-35-4	
cis-1,2-Dichloroethene	**0.85J**	ug/L	1.0	0.080	1		10/28/17 04:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 04:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 04:56	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 04:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 04:56	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 04:56	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 04:56	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 04:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 04:56	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 04:56	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 04:56	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 04:56	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 04:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 04:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 04:56	79-00-5	
Trichloroethene	**4.4**	ug/L	1.0	0.17	1		10/28/17 04:56	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 04:56	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 04:56	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/28/17 04:56	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		1		10/28/17 04:56	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		10/28/17 04:56	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 04:56		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: MW-194-201710 **Lab ID: 60256266002** Collected: 10/23/17 16:12 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 05:10	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 05:10	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 05:10	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 05:10	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 05:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 05:10	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 05:10	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 05:10	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 05:10	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 05:10	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 05:10	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 05:10	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 05:10	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 05:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 05:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 05:10	75-35-4	
cis-1,2-Dichloroethene	**1.1**	ug/L	1.0	0.080	1		10/28/17 05:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 05:10	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 05:10	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 05:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 05:10	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 05:10	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 05:10	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 05:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 05:10	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 05:10	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 05:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 05:10	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 05:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 05:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 05:10	79-00-5	
Trichloroethene	**15.4**	ug/L	1.0	0.17	1		10/28/17 05:10	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 05:10	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 05:10	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/28/17 05:10	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		1		10/28/17 05:10	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/28/17 05:10	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 05:10		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: TMW-29-201710 **Lab ID: 60256266003** Collected: 10/23/17 15:25 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 05:25	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 05:25	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 05:25	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 05:25	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 05:25	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 05:25	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 05:25	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 05:25	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 05:25	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 05:25	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 05:25	67-66-3	
Chloromethane	**0.16J**	ug/L	1.0	0.080	1		10/28/17 05:25	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 05:25	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 05:25	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 05:25	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 05:25	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/28/17 05:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 05:25	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 05:25	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 05:25	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 05:25	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 05:25	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 05:25	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 05:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 05:25	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 05:25	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 05:25	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 05:25	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 05:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 05:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 05:25	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/28/17 05:25	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 05:25	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 05:25	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/28/17 05:25	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/28/17 05:25	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		10/28/17 05:25	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 05:25		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: TB-03-201710 **Lab ID: 60256266004** Collected: 10/23/17 08:00 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 02:50	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 02:50	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 02:50	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 02:50	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 02:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 02:50	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 02:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 02:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 02:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 02:50	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 02:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 02:50	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 02:50	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 02:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 02:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 02:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/28/17 02:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 02:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 02:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 02:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 02:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 02:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 02:50	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 02:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 02:50	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 02:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 02:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 02:50	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 02:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 02:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 02:50	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/28/17 02:50	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 02:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 02:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/28/17 02:50	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/28/17 02:50	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/28/17 02:50	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 02:50		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: MW-195-201710 **Lab ID: 60256266005** Collected: 10/23/17 16:30 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 05:39	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 05:39	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 05:39	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 05:39	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 05:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 05:39	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 05:39	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 05:39	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 05:39	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 05:39	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 05:39	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 05:39	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 05:39	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 05:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 05:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 05:39	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/28/17 05:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 05:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 05:39	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 05:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 05:39	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 05:39	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 05:39	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 05:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 05:39	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 05:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 05:39	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 05:39	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 05:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 05:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 05:39	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/28/17 05:39	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 05:39	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 05:39	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-120		1		10/28/17 05:39	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/28/17 05:39	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/28/17 05:39	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 05:39		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: TMW-20-201710 **Lab ID: 60256266006** Collected: 10/23/17 17:20 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 05:53	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 05:53	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 05:53	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 05:53	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 05:53	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 05:53	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 05:53	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 05:53	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 05:53	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 05:53	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 05:53	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 05:53	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 05:53	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 05:53	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 05:53	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 05:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/28/17 05:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 05:53	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 05:53	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 05:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 05:53	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 05:53	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 05:53	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 05:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 05:53	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 05:53	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 05:53	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 05:53	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 05:53	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 05:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 05:53	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/28/17 05:53	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 05:53	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 05:53	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/28/17 05:53	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/28/17 05:53	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/28/17 05:53	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 05:53		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: FD-01-201710 **Lab ID: 60256266007** Collected: 10/23/17 17:20 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 06:35	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 06:35	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 06:35	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 06:35	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 06:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 06:35	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 06:35	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 06:35	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 06:35	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 06:35	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 06:35	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 06:35	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 06:35	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 06:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 06:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 06:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/28/17 06:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 06:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 06:35	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 06:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 06:35	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 06:35	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 06:35	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 06:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 06:35	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 06:35	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 06:35	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 06:35	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 06:35	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 06:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 06:35	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/28/17 06:35	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 06:35	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 06:35	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/28/17 06:35	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/28/17 06:35	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/28/17 06:35	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 06:35		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: EB-01-201710 **Lab ID: 60256266008** Collected: 10/23/17 17:50 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 03:04	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 03:04	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 03:04	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 03:04	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 03:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 03:04	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 03:04	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 03:04	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 03:04	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 03:04	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 03:04	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 03:04	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 03:04	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 03:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 03:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 03:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/28/17 03:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 03:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 03:04	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 03:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 03:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 03:04	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 03:04	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 03:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 03:04	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 03:04	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 03:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 03:04	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 03:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 03:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 03:04	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/28/17 03:04	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 03:04	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 03:04	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/28/17 03:04	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/28/17 03:04	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		10/28/17 03:04	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 03:04		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: TMW-11-201710 **Lab ID: 60256266009** Collected: 10/23/17 16:00 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 06:21	67-64-1	
Benzene	**0.11J**	ug/L	1.0	0.060	1		10/28/17 06:21	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 06:21	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 06:21	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 06:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 06:21	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 06:21	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 06:21	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 06:21	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 06:21	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 06:21	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 06:21	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 06:21	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 06:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 06:21	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 06:21	75-35-4	
cis-1,2-Dichloroethene	**1.7**	ug/L	1.0	0.080	1		10/28/17 06:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 06:21	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 06:21	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 06:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 06:21	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 06:21	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 06:21	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 06:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 06:21	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 06:21	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 06:21	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 06:21	127-18-4	
Toluene	**0.47J**	ug/L	1.0	0.17	1		10/28/17 06:21	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 06:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 06:21	79-00-5	
Trichloroethene	**0.62J**	ug/L	1.0	0.17	1		10/28/17 06:21	79-01-6	
Vinyl chloride	**0.70J**	ug/L	1.0	0.13	1		10/28/17 06:21	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 06:21	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/28/17 06:21	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		10/28/17 06:21	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/28/17 06:21	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 06:21		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: MW-50-201710 **Lab ID: 60256266010** Collected: 10/23/17 17:10 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**919**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 18:58	7439-89-6	
Manganese	**17.3**	ug/L	5.0	1.8	1	10/30/17 11:47	10/30/17 18:58	7439-96-5	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 06:49	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 06:49	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 06:49	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 06:49	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 06:49	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 06:49	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 06:49	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 06:49	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 06:49	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 06:49	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 06:49	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 06:49	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 06:49	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 06:49	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 06:49	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 06:49	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/28/17 06:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 06:49	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 06:49	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 06:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 06:49	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 06:49	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 06:49	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 06:49	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 06:49	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 06:49	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 06:49	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 06:49	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 06:49	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 06:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 06:49	79-00-5	
Trichloroethene	**0.26J**	ug/L	1.0	0.17	1		10/28/17 06:49	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 06:49	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 06:49	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/28/17 06:49	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		1		10/28/17 06:49	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/28/17 06:49	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 06:49		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**250**	mg/L	20.0	4.9	1		10/26/17 14:28		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: MW-50-201710 **Lab ID: 60256266010** Collected: 10/23/17 17:10 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Carbonate (CaCO3)	ND	mg/L	20.0	4.9	1		10/26/17 14:28		
Alkalinity, Total as CaCO3	**250**	mg/L	20.0	4.9	1		10/26/17 14:28		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**0.0070J**	mg/L	0.050	0.0048	1		10/25/17 13:00	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**224**	mg/L	20.0	10.0	20		11/03/17 16:25	16887-00-6	
Sulfate	**17.1**	mg/L	1.0	0.50	1		11/02/17 00:27	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	ND	mg/L	0.10	0.039	1		10/31/17 14:12	7664-41-7	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.050	1		10/25/17 11:35		
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/25/17 11:35		
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.050	1		10/25/17 11:35		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.33J**	mg/L	1.0	0.13	1		10/27/17 09:55	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: MW-61R-201710 **Lab ID: 60256266011** Collected: 10/23/17 16:52 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**12000**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:00	7439-89-6	
Manganese	**1120**	ug/L	5.0	1.8	1	10/30/17 11:47	10/30/17 19:00	7439-96-5	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 06:07	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 06:07	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 06:07	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 06:07	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 06:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 06:07	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 06:07	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 06:07	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 06:07	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 06:07	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 06:07	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 06:07	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 06:07	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 06:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 06:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 06:07	75-35-4	
cis-1,2-Dichloroethene	**2.1**	ug/L	1.0	0.080	1		10/28/17 06:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 06:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 06:07	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 06:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 06:07	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 06:07	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 06:07	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 06:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 06:07	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 06:07	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 06:07	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 06:07	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 06:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 06:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 06:07	79-00-5	
Trichloroethene	**2.9**	ug/L	1.0	0.17	1		10/28/17 06:07	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 06:07	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 06:07	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/28/17 06:07	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/28/17 06:07	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/28/17 06:07	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 06:07		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**411**	mg/L	20.0	4.9	1		10/26/17 14:44		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: MW-61R-201710 **Lab ID: 60256266011** Collected: 10/23/17 16:52 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Carbonate (CaCO3)	ND	mg/L	20.0	4.9	1		10/26/17 14:44		
Alkalinity, Total as CaCO3	**411**	mg/L	20.0	4.9	1		10/26/17 14:44		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**0.021J**	mg/L	0.050	0.0048	1		10/25/17 13:01	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**96.5**	mg/L	10.0	5.0	10		11/03/17 16:39	16887-00-6	
Sulfate	**8.9**	mg/L	1.0	0.50	1		11/02/17 01:11	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.87**	mg/L	0.10	0.039	1		10/31/17 14:14	7664-41-7	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.050	1		10/25/17 11:36		M1
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/25/17 11:36		M1
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.050	1		10/25/17 11:36		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.2**	mg/L	1.0	0.13	1		10/27/17 10:08	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 500794 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 60256266010, 60256266011

METHOD BLANK: 2050410 Matrix: Water
Associated Lab Samples: 60256266010, 60256266011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	50.0	12.4	10/30/17 18:42	
Manganese	ug/L	ND	5.0	1.8	10/30/17 18:42	

LABORATORY CONTROL SAMPLE: 2050411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9760	98	80-120	
Manganese	ug/L	1000	1010	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2050412 2050413

Parameter	Units	60256450001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	159	10000	10000	10100	9670	100	95	75-125	5	20	
Manganese	ug/L	ND	1000	1000	991	959	99	96	75-125	3	20	

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 500583 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256266001, 60256266002, 60256266003, 60256266004, 60256266005, 60256266006, 60256266007, 60256266008, 60256266009, 60256266010, 60256266011

METHOD BLANK: 2049109 Matrix: Water
Associated Lab Samples: 60256266001, 60256266002, 60256266003, 60256266004, 60256266005, 60256266006, 60256266007, 60256266008, 60256266009, 60256266010, 60256266011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/28/17 02:36	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/28/17 02:36	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/28/17 02:36	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/28/17 02:36	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/28/17 02:36	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/28/17 02:36	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/28/17 02:36	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/28/17 02:36	
2-Hexanone	ug/L	ND	10.0	1.2	10/28/17 02:36	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/28/17 02:36	
Acetone	ug/L	ND	10.0	1.9	10/28/17 02:36	
Benzene	ug/L	ND	1.0	0.060	10/28/17 02:36	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/28/17 02:36	
Bromoform	ug/L	ND	1.0	0.070	10/28/17 02:36	
Bromomethane	ug/L	ND	5.0	0.16	10/28/17 02:36	
Carbon disulfide	ug/L	ND	5.0	0.12	10/28/17 02:36	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/28/17 02:36	
Chlorobenzene	ug/L	ND	1.0	0.21	10/28/17 02:36	
Chloroethane	ug/L	ND	1.0	0.15	10/28/17 02:36	
Chloroform	ug/L	ND	1.0	0.14	10/28/17 02:36	
Chloromethane	ug/L	ND	1.0	0.080	10/28/17 02:36	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/28/17 02:36	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/28/17 02:36	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/28/17 02:36	
Ethylbenzene	ug/L	ND	1.0	0.18	10/28/17 02:36	
Methylene chloride	ug/L	ND	1.0	0.15	10/28/17 02:36	
Styrene	ug/L	ND	1.0	0.12	10/28/17 02:36	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/28/17 02:36	
Toluene	ug/L	ND	1.0	0.17	10/28/17 02:36	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/28/17 02:36	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/28/17 02:36	
Trichloroethene	ug/L	ND	1.0	0.17	10/28/17 02:36	
Vinyl chloride	ug/L	ND	1.0	0.13	10/28/17 02:36	
Xylene (Total)	ug/L	ND	3.0	0.42	10/28/17 02:36	
1,2-Dichloroethane-d4 (S)	%	97	80-120		10/28/17 02:36	
4-Bromofluorobenzene (S)	%	99	80-120		10/28/17 02:36	
Toluene-d8 (S)	%	101	80-120		10/28/17 02:36	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

LABORATORY CONTROL SAMPLE: 2049110

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.2	101	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	19.2	96	74-124	
1,1,2-Trichloroethane	ug/L	20	21.0	105	81-118	
1,1-Dichloroethane	ug/L	20	21.2	106	82-122	
1,1-Dichloroethene	ug/L	20	20.0	100	78-123	
1,2-Dichloroethane	ug/L	20	20.0	100	78-117	
1,2-Dichloropropane	ug/L	20	21.4	107	81-118	
2-Butanone (MEK)	ug/L	100	99.5	100	72-117	
2-Hexanone	ug/L	100	103	103	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	100	100	77-124	
Acetone	ug/L	100	99.4	99	66-127	
Benzene	ug/L	20	20.7	103	82-115	
Bromodichloromethane	ug/L	20	20.3	102	83-123	
Bromoform	ug/L	20	20.3	102	79-126	
Bromomethane	ug/L	20	23.2	116	39-146	
Carbon disulfide	ug/L	20	19.9	100	75-121	
Carbon tetrachloride	ug/L	20	21.6	108	82-117	
Chlorobenzene	ug/L	20	20.3	102	89-114	
Chloroethane	ug/L	20	18.7	94	71-133	
Chloroform	ug/L	20	20.2	101	78-117	
Chloromethane	ug/L	20	20.6	103	19-181	
cis-1,2-Dichloroethene	ug/L	20	19.6	98	78-119	
cis-1,3-Dichloropropene	ug/L	20	20.4	102	81-116	
Dibromochloromethane	ug/L	20	19.6	98	81-122	
Ethylbenzene	ug/L	20	20.2	101	83-112	
Methylene chloride	ug/L	20	22.0	110	78-127	
Styrene	ug/L	20	21.0	105	88-117	
Tetrachloroethene	ug/L	20	20.1	101	80-121	
Toluene	ug/L	20	20.4	102	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.1	100	79-120	
trans-1,3-Dichloropropene	ug/L	20	19.4	97	81-119	
Trichloroethene	ug/L	20	19.9	100	78-118	
Vinyl chloride	ug/L	20	20.4	102	66-133	
Xylene (Total)	ug/L	60	63.4	106	83-114	
1,2-Dichloroethane-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			101	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 500420 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 60256266010, 60256266011

METHOD BLANK: 2048178 Matrix: Water
Associated Lab Samples: 60256266010, 60256266011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Carbonate (CaCO3)	mg/L	ND	20.0	4.9	10/26/17 13:46	
Alkalinity, Total as CaCO3	mg/L	ND	20.0	4.9	10/26/17 13:46	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	20.0	4.9	10/26/17 13:46	

LABORATORY CONTROL SAMPLE: 2048179

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	531	106	90-110	

SAMPLE DUPLICATE: 2048180

Parameter	Units	60255952003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Carbonate (CaCO3)	mg/L	ND	ND		10	
Alkalinity, Total as CaCO3	mg/L	293	279	5	10	
Alkalinity,Bicarbonate (CaCO3)	mg/L	293	279	5	10	

SAMPLE DUPLICATE: 2048182

Parameter	Units	60256331002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Carbonate (CaCO3)	mg/L	ND	ND		10	
Alkalinity, Total as CaCO3	mg/L	81.3	80.3	1	10	
Alkalinity,Bicarbonate (CaCO3)	mg/L	81.3	80.3	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 500239 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 60256266010, 60256266011

METHOD BLANK: 2047298 Matrix: Water
Associated Lab Samples: 60256266010, 60256266011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	ND	0.050	0.0048	10/25/17 12:36	

LABORATORY CONTROL SAMPLE: 2047299

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	.5	0.45	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2047300 2047301

Parameter	Units	60256300001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	ND	.5	.5	0.64	0.64	119	119	75-125	0	20	

SAMPLE DUPLICATE: 2047302

Parameter	Units	60256331002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.39	0.39	1	20	

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 501190 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60256266010, 60256266011

METHOD BLANK: 2051682 Matrix: Water
Associated Lab Samples: 60256266010, 60256266011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	0.50	11/01/17 20:43	

LABORATORY CONTROL SAMPLE: 2051683

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.0	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2051684 2051685

Parameter	Units	60256473001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	ND	1000	1000	1080	1060	96	94	80-120	2	15	

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 501399 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60256266010, 60256266011

METHOD BLANK: 2052396 Matrix: Water
Associated Lab Samples: 60256266010, 60256266011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.50	11/03/17 11:51	

LABORATORY CONTROL SAMPLE: 2052397

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	94	90-110	

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 500772 Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60256266010, 60256266011

METHOD BLANK: 2050349 Matrix: Water
Associated Lab Samples: 60256266010, 60256266011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	0.039	10/31/17 13:46	

LABORATORY CONTROL SAMPLE: 2050350

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	5.3	105	90-110	

MATRIX SPIKE SAMPLE: 2050351

Parameter	Units	2064075001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2.3	5	7.4	102	90-110	

SAMPLE DUPLICATE: 2050352

Parameter	Units	60256002003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	ND	ND		18	

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 500221
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 60256266010, 60256266011

METHOD BLANK: 2047156 Matrix: Water
Associated Lab Samples: 60256266010, 60256266011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.050	10/25/17 11:00	
Nitrogen, Nitrite	mg/L	ND	0.10	0.030	10/25/17 11:00	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.050	10/25/17 11:00	

LABORATORY CONTROL SAMPLE: 2047157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.2	116	70-130	
Nitrogen, Nitrite	mg/L	1	1.0	104	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	2.2	110	90-110	

MATRIX SPIKE SAMPLE: 2047158

Parameter	Units	60256266011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	1.7	168	70-130	M1
Nitrogen, Nitrite	mg/L	ND	1	0.40	39	90-110	M1
Nitrogen, NO2 plus NO3	mg/L	ND	2	2.1	104	90-110	

MATRIX SPIKE SAMPLE: 2047160

Parameter	Units	60256361008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	1.7	172	70-130	M1
Nitrogen, Nitrite	mg/L	ND	1	0.40	38	90-110	M1
Nitrogen, NO2 plus NO3	mg/L	ND	2	2.1	106	90-110	

SAMPLE DUPLICATE: 2047159

Parameter	Units	60256357002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	ND	ND		20	
Nitrogen, Nitrite	mg/L	ND	0.032J		20	
Nitrogen, NO2 plus NO3	mg/L	ND	ND		20	

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 500485 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon
Associated Lab Samples: 60256266010, 60256266011

METHOD BLANK: 2048506 Matrix: Water
Associated Lab Samples: 60256266010, 60256266011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.13	10/27/17 09:16	

LABORATORY CONTROL SAMPLE: 2048507

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.5	111	80-120	

MATRIX SPIKE SAMPLE: 2048508

Parameter	Units	60256331001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	ND	5	6.0	110	80-120	

SAMPLE DUPLICATE: 2048509

Parameter	Units	60256331002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	ND	0.48J		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

Pace Analytical Services, LLC
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Lenexa, KS 66219
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QUALIFIERS

Project: FT SMITH
Pace Project No.: 60256266

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.

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-K Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: 500583

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FT SMITH
Pace Project No.: 60256266

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60256266010	**MW-50-201710**	EPA 3010	500794	EPA 6010	500920
60256266011	**MW-61R-201710**	EPA 3010	500794	EPA 6010	500920
60256266001	**MW-63R-201710**	EPA 5030B/8260	500583		
60256266002	**MW-194-201710**	EPA 5030B/8260	500583		
60256266003	**TMW-29-201710**	EPA 5030B/8260	500583		
60256266004	**TB-03-201710**	EPA 5030B/8260	500583		
60256266005	**MW-195-201710**	EPA 5030B/8260	500583		
60256266006	**TMW-20-201710**	EPA 5030B/8260	500583		
60256266007	**FD-01-201710**	EPA 5030B/8260	500583		
60256266008	**EB-01-201710**	EPA 5030B/8260	500583		
60256266009	**TMW-11-201710**	EPA 5030B/8260	500583		
60256266010	**MW-50-201710**	EPA 5030B/8260	500583		
60256266011	**MW-61R-201710**	EPA 5030B/8260	500583		
60256266010	**MW-50-201710**	SM 2320B	500420		
60256266011	**MW-61R-201710**	SM 2320B	500420		
60256266010	**MW-50-201710**	SM 4500-S-2 D	500239		
60256266011	**MW-61R-201710**	SM 4500-S-2 D	500239		
60256266010	**MW-50-201710**	EPA 300.0	501190		
60256266010	**MW-50-201710**	EPA 300.0	501399		
60256266011	**MW-61R-201710**	EPA 300.0	501190		
60256266011	**MW-61R-201710**	EPA 300.0	501399		
60256266010	**MW-50-201710**	EPA 350.1	500772		
60256266011	**MW-61R-201710**	EPA 350.1	500772		
60256266010	**MW-50-201710**	EPA 353.2	500221		
60256266011	**MW-61R-201710**	EPA 353.2	500221		
60256266010	**MW-50-201710**	SM 5310C	500485		
60256266011	**MW-61R-201710**	SM 5310C	500485		

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Sample Condition Upon Receipt

WO# : 60256266

60256266

Client Name: ~~PASI Pittsburgh~~ Environ Ramboll

Courier: FedEx ☐ UPS ☐ VIA ☑ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☑ No ☐

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☑ Bubble Bags ☑ Foam ☐ None ☐ Other ☐

Thermometer Used: CF 0.0 T-266 / CF +0.3 T-239 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 2.0 **Corr. Factor** (CF 0.0) CF +0.3 **Corrected** 2.0

Date and initials of person examining contents: CS 10/24/17

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	NO_2/NO_3 - 48 hr
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	☑Yes ☐No ☐N/A	
Cyanide water sample checks: ☑N/A Lead acetate strip turns dark? (Record only) Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No ☐Yes ☐No	
Trip Blank present:	☑Yes ☐No ☐N/A	
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace Analytical
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220 William Pitt Way
Pittsburgh, PA 15238
412-826-5245

CHAIN-OF-CUSTODY / Analytical Request Document

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

009858

Section A Required Client Information:

Company: Ramboll
Address: 124 W. Capitol Ave
Suite 1400, Little Rock, AR
Email To: thauxknight@ramboll.com
Phone: 501-907-9437 Fax:
Requested Due Date/TAT: STD

Section B Required Project Information:

Report To: Tamara Haux-Knight
Copy To:
Purchase Order No.:
Project Name: Ft. Smith
Project Number:

Section C Invoice Information:

Attention: Tamara Haux Knight
Company Name: 124 W. Capitol Ave
Address: Suite 1400, Little Rock, AR
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

RamDoll

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
UST RCRA OTHER

Site Location STATE: AR

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	TSP	BAK	Zinc Acetate & NaOH	Other	Analysis Test Y/N: 8260 VOCs	Sulfate, Alkalinity, Chloride	Sulfide	Metals (Mn, Fe)	Phosphate, NH_3, Nitrate	TOC	Chlorinated Hydrocarbons	6010 - Iron	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60256266
1	MW-163R-201710	W	G			10/23/17	1646		3				X					X									3DG9H	001
2	MW-194-201710	W	G			10/23/17	1612		3				X					X										002
3	TMW-29-201710	W	G			10/23/17	1525		3				X					X										003
4	TB-03-201710	W	G			10/23/17	0800		2				X					X									2	004
5	MW-195-201710	W	G			10/23/17	1630		3				X					X									3	005
6	TMW-20-201710	W	G			10/23/17	1720		3				X					X										006
7	~~DEEP~~-01-201710	W	G			10/23/17	1720		3				X					X										007
8	EB-01-201710	W	G			10/23/17	1750		3				X					X										008
9	TMW-11-201710	W	G		1600	10/23/17	~~1700~~ 1800		3				X					X									BP3U	AG3S	BP3Z	BP3N 009 010 011
10	MW-50-201710	WT	G			10/23/17	1710		5	X	X	X	X			X		X	X	X	X	X		X	X	X			
11	MW-612R-201710	WT	G			10/23/17	1652		7	X	X	X	X			X		X	X	X	X	X		X		X			
12																													

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Victoria Siegler/REIT	10/23/17	~~1600~~ 1800	/PASI	10/24/17	0700	2.0	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Siegler
SIGNATURE of SAMPLER: Victoria Siegler
DATE Signed (MM/DD/YY): 10/23/17

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

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

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

November 06, 2017

Nick Zurweller
Ramboll Environ
7500 College Blvd.
Ste. 295
Overland Park, KS 66210

RE: Project: FORT SMITH, AR
Pace Project No.: 60256365

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on October 25, 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,

Richard Mannz
richard.mannz@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: M. Wilson

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 17-016-0
Illinois Certification #: 200030
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212018-1
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587
Missouri Certification: 10070

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SAMPLE SUMMARY

Project: FORT SMITH, AR
Pace Project No.: 60256365

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60256365001	MW-60R-201710	Water	10/24/17 09:25	10/25/17 02:30
60256365002	TMW-16-201710	Water	10/24/17 10:58	10/25/17 02:30
60256365003	TMW-26-201710	Water	10/24/17 12:48	10/25/17 02:30
60256365004	MW-182-201710	Water	10/24/17 15:05	10/25/17 02:30
60256365005	TMW-30-201710	Water	10/24/17 16:58	10/25/17 02:30
60256365006	MW-68-201710	Water	10/24/17 17:08	10/25/17 02:30
60256365007	FD-02-201710	Water	10/24/17 15:36	10/25/17 02:30
60256365008	MW-57R-201710	Water	10/24/17 15:20	10/25/17 02:30
60256365009	MW-56R-201710	Water	10/24/17 16:00	10/25/17 02:30
60256365010	MW-17S-201710	Water	10/24/17 16:40	10/25/17 02:30
60256365011	TMW-21-201710	Water	10/24/17 14:26	10/25/17 02:30
60256365012	TMW-24-201710	Water	10/24/17 12:50	10/25/17 02:30
60256365013	MW-185-201710	Water	10/24/17 15:20	10/25/17 02:30
60256365014	MW-176-201710	Water	10/24/17 09:35	10/25/17 02:30
60256365015	MW-46R-201710	Water	10/24/17 10:43	10/25/17 02:30
60256365016	RW-69-201710	Water	10/24/17 09:40	10/25/17 02:30
60256365017	MW-58R-201710	Water	10/24/17 12:20	10/25/17 02:30
60256365018	IW-73-201710	Water	10/24/17 11:25	10/25/17 02:30
60256365019	MW-82-201710	Water	10/24/17 15:25	10/25/17 02:30
60256365020	FD-03-201710	Water	10/24/17 15:25	10/25/17 02:30
60256365021	MW-40R-201710	Water	10/24/17 13:00	10/25/17 02:30
60256365022	IW-77-201710	Water	10/24/17 16:55	10/25/17 02:30
60256365023	MW-196-201710	Water	10/24/17 09:35	10/25/17 02:30
60256365024	MW-99-201710	Water	10/24/17 09:48	10/25/17 02:30
60256365025	MW-98-201710	Water	10/24/17 12:36	10/25/17 02:30
60256365026	MW-184-201710	Water	10/24/17 10:57	10/25/17 02:30
60256365027	TMW-19-201710	Water	10/24/17 09:40	10/25/17 02:30
60256365028	MW-186-201710	Water	10/24/17 10:40	10/25/17 02:30
60256365029	FD-04-201710	Water	10/24/17 10:40	10/25/17 02:30
60256365030	MW-187-201710	Water	10/24/17 12:00	10/25/17 02:30
60256365031	MW-188-201710	Water	10/24/17 13:05	10/25/17 02:30
60256365032	TMW-10-201710	Water	10/24/17 14:50	10/25/17 02:30
60256365033	TMW-22-201710	Water	10/24/17 16:50	10/25/17 02:30
60256365034	EB-02-201710	Water	10/24/17 17:25	10/25/17 02:30
60256365035	TB-02-201710	Water	10/24/17 09:35	10/25/17 02:30
60256365036	TB-03-201710	Water	10/24/17 09:35	10/25/17 02:30

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60256365

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60256365001	MW-60R-201710	EPA 5030B/8260	EAG	38	PASI-K
60256365002	TMW-16-201710	EPA 5030B/8260	EAG	38	PASI-K
60256365003	TMW-26-201710	EPA 5030B/8260	EAG	38	PASI-K
60256365004	MW-182-201710	EPA 5030B/8260	EAG	38	PASI-K
60256365005	TMW-30-201710	EPA 5030B/8260	EAG	38	PASI-K
60256365006	MW-68-201710	EPA 5030B/8260	EAG	38	PASI-K
60256365007	FD-02-201710	EPA 5030B/8260	EAG, PGH	38	PASI-K
60256365008	MW-57R-201710	EPA 5030B/8260	EAG, PGH	38	PASI-K
60256365009	MW-56R-201710	EPA 5030B/8260	EAG, PGH	38	PASI-K
60256365010	MW-17S-201710	EPA 5030B/8260	EAG	38	PASI-K
60256365011	TMW-21-201710	EPA 5030B/8260	EAG, PGH	38	PASI-K
60256365012	TMW-24-201710	EPA 5030B/8260	EAG, PGH	38	PASI-K
60256365013	MW-185-201710	EPA 5030B/8260	EAG	38	PASI-K
60256365014	MW-176-201710	EPA 5030B/8260	EAG	38	PASI-K
60256365015	MW-46R-201710	EPA 5030B/8260	PGH	38	PASI-K
60256365016	RW-69-201710	EPA 6010	TDS	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	2	PASI-K
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256365017	MW-58R-201710	EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	2	PASI-K
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256365018	IW-73-201710	EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	2	PASI-K
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256365019	MW-82-201710	EPA 5030B/8260	PGH	38	PASI-K
60256365020	FD-03-201710	EPA 5030B/8260	PGH	38	PASI-K
60256365021	MW-40R-201710	EPA 5030B/8260	PGH	38	PASI-K
60256365022	IW-77-201710	EPA 5030B/8260	PGH	38	PASI-K
60256365023	MW-196-201710	EPA 5030B/8260	PGH	38	PASI-K
60256365024	MW-99-201710	EPA 5030B/8260	PGH	38	PASI-K

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60256365

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60256365025	**MW-98-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256365026	**MW-184-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256365027	**TMW-19-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256365028	**MW-186-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256365029	**FD-04-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256365030	**MW-187-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256365031	**MW-188-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256365032	**TMW-10-201710**	EPA 6010	TDS	2	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	2	PASI-K
		EPA 353.2	CRS	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256365033	**TMW-22-201710**	EPA 5030B/8260	EAG, PGH	38	PASI-K
60256365034	**EB-02-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256365035	**TB-02-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256365036	**TB-03-201710**	EPA 5030B/8260	PGH	38	PASI-K

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256365

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Ramboll Environ_AR
Date: November 06, 2017

General Information:
2 samples were analyzed for EPA 6010. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 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.

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

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

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

Additional Comments:

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256365

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: November 06, 2017

General Information:
36 samples were analyzed for EPA 5030B/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.

QC Batch: 500633

B: Analyte was detected in the associated method blank.
- BLANK for HBN 500633 [MSV/8566 (Lab ID: 2049409)
  - Bromomethane

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

QC Batch: 500633

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: 2049410)
  - Bromoform
  - Carbon tetrachloride
  - Dibromochloromethane
  - Tetrachloroethene

QC Batch: 501472

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: 2052654)
  - Bromoform

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256365

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: November 06, 2017

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

QC Batch: 500633
A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 500637
A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 500793
A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 500795
A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 500837
A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 501009
A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 501472
A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256365

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: Ramboll Environ_AR
Date: November 06, 2017

General Information:
4 samples were analyzed for SM 4500-S-2 D. 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.

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.

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

Additional Comments:

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256365

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Ramboll Environ_AR
Date: November 06, 2017

General Information:
4 samples were analyzed for EPA 300.0. 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.

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256365

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Ramboll Environ_AR
Date: November 06, 2017

General Information:
4 samples were analyzed for EPA 353.2. 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.

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: 500272

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60256363012,60256369001

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

- MS (Lab ID: 2047451)
  - Nitrogen, Nitrate
  - Nitrogen, Nitrite
- MS (Lab ID: 2047453)
  - Nitrogen, NO2 plus NO3
  - Nitrogen, Nitrite

QC Batch: 500371

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60256422001,60256491001

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

- MS (Lab ID: 2047956)
  - Nitrogen, NO2 plus NO3
  - Nitrogen, Nitrate
  - Nitrogen, Nitrite
- MS (Lab ID: 2047958)
  - Nitrogen, NO2 plus NO3
  - Nitrogen, Nitrite

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: FORT SMITH, AR
Pace Project No.: 60256365

Method: **SM 5310C**
Description: 5310C TOC
Client: Ramboll Environ_AR
Date: November 06, 2017

General Information:
4 samples were analyzed for SM 5310C. 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.

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.

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.

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-60R-201710 **Lab ID: 60256365001** Collected: 10/24/17 09:25 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 20:46	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 20:46	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 20:46	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 20:46	75-25-2	L1
Bromomethane	**0.53J**	ug/L	5.0	0.16	1		10/27/17 20:46	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 20:46	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 20:46	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 20:46	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 20:46	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 20:46	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 20:46	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 20:46	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 20:46	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 20:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 20:46	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 20:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/27/17 20:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 20:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 20:46	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 20:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 20:46	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 20:46	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 20:46	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 20:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 20:46	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 20:46	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 20:46	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 20:46	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 20:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 20:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 20:46	79-00-5	
Trichloroethene	**0.83J**	ug/L	1.0	0.17	1		10/27/17 20:46	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 20:46	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 20:46	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/27/17 20:46	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-120		1		10/27/17 20:46	17060-07-0	
Toluene-d8 (S)	104	%	80-120		1		10/27/17 20:46	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 20:46		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TMW-16-201710 **Lab ID: 60256365002** Collected: 10/24/17 10:58 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 17:57	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 17:57	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 17:57	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 17:57	75-25-2	L1
Bromomethane	**0.69J**	ug/L	5.0	0.16	1		10/27/17 17:57	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 17:57	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 17:57	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 17:57	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 17:57	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 17:57	75-00-3	
Chloroform	**1.5**	ug/L	1.0	0.14	1		10/27/17 17:57	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 17:57	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 17:57	124-48-1	L1
1,1-Dichloroethane	**0.39J**	ug/L	1.0	0.050	1		10/27/17 17:57	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 17:57	107-06-2	
1,1-Dichloroethene	**1.6**	ug/L	1.0	0.20	1		10/27/17 17:57	75-35-4	
cis-1,2-Dichloroethene	**10.4**	ug/L	1.0	0.080	1		10/27/17 17:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 17:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 17:57	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 17:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 17:57	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 17:57	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 17:57	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 17:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 17:57	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 17:57	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 17:57	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 17:57	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 17:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 17:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 17:57	79-00-5	
Trichloroethene	**956**	ug/L	10.0	1.7	10		10/27/17 18:26	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 17:57	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 17:57	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/27/17 17:57	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	80-120		1		10/27/17 17:57	17060-07-0	
Toluene-d8 (S)	104	%	80-120		1		10/27/17 17:57	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 17:57		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TMW-26-201710 **Lab ID: 60256365003** Collected: 10/24/17 12:48 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 20:18	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 20:18	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 20:18	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 20:18	75-25-2	L1
Bromomethane	**0.75J**	ug/L	5.0	0.16	1		10/27/17 20:18	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 20:18	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 20:18	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 20:18	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 20:18	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 20:18	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 20:18	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 20:18	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 20:18	124-48-1	L1
1,1-Dichloroethane	**0.22J**	ug/L	1.0	0.050	1		10/27/17 20:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 20:18	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 20:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/27/17 20:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 20:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 20:18	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 20:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 20:18	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 20:18	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 20:18	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 20:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 20:18	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 20:18	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 20:18	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 20:18	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 20:18	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 20:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 20:18	79-00-5	
Trichloroethene	**36.3**	ug/L	1.0	0.17	1		10/27/17 20:18	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 20:18	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 20:18	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/27/17 20:18	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/27/17 20:18	17060-07-0	
Toluene-d8 (S)	104	%	80-120		1		10/27/17 20:18	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 20:18		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-182-201710 **Lab ID: 60256365004** Collected: 10/24/17 15:05 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 20:32	67-64-1	
Benzene	**0.15J**	ug/L	1.0	0.060	1		10/27/17 20:32	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 20:32	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 20:32	75-25-2	L1
Bromomethane	**0.38J**	ug/L	5.0	0.16	1		10/27/17 20:32	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 20:32	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 20:32	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 20:32	56-23-5	L1
Chlorobenzene	**3.2**	ug/L	1.0	0.21	1		10/27/17 20:32	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 20:32	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 20:32	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 20:32	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 20:32	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 20:32	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 20:32	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 20:32	75-35-4	
cis-1,2-Dichloroethene	**5.7**	ug/L	1.0	0.080	1		10/27/17 20:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 20:32	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 20:32	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 20:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 20:32	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 20:32	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 20:32	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 20:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 20:32	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 20:32	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 20:32	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 20:32	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 20:32	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 20:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 20:32	79-00-5	
Trichloroethene	**92.2**	ug/L	1.0	0.17	1		10/27/17 20:32	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 20:32	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 20:32	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/27/17 20:32	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-120		1		10/27/17 20:32	17060-07-0	
Toluene-d8 (S)	104	%	80-120		1		10/27/17 20:32	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 20:32		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TMW-30-201710 **Lab ID: 60256365005** Collected: 10/24/17 16:58 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 21:00	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 21:00	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 21:00	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 21:00	75-25-2	L1
Bromomethane	**1.3J**	ug/L	5.0	0.16	1		10/27/17 21:00	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 21:00	78-93-3	
Carbon disulfide	**1.0J**	ug/L	5.0	0.12	1		10/27/17 21:00	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 21:00	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 21:00	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 21:00	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 21:00	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 21:00	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 21:00	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 21:00	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 21:00	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 21:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/27/17 21:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 21:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 21:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 21:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 21:00	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 21:00	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 21:00	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 21:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 21:00	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 21:00	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 21:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 21:00	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 21:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 21:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 21:00	79-00-5	
Trichloroethene	**0.55J**	ug/L	1.0	0.17	1		10/27/17 21:00	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 21:00	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 21:00	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/27/17 21:00	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		10/27/17 21:00	17060-07-0	
Toluene-d8 (S)	103	%	80-120		1		10/27/17 21:00	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 21:00		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-68-201710 **Lab ID: 60256365006** Collected: 10/24/17 17:08 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 21:14	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 21:14	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 21:14	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 21:14	75-25-2	L1
Bromomethane	**0.28J**	ug/L	5.0	0.16	1		10/27/17 21:14	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 21:14	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 21:14	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 21:14	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 21:14	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 21:14	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 21:14	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 21:14	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 21:14	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 21:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 21:14	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 21:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/27/17 21:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 21:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 21:14	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 21:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 21:14	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 21:14	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 21:14	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 21:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 21:14	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 21:14	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 21:14	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 21:14	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 21:14	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 21:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 21:14	79-00-5	
Trichloroethene	**0.31J**	ug/L	1.0	0.17	1		10/27/17 21:14	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 21:14	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 21:14	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/27/17 21:14	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	80-120		1		10/27/17 21:14	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/27/17 21:14	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 21:14		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: FD-02-201710 **Lab ID: 60256365007** Collected: 10/24/17 15:36 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 20:04	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 20:04	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 20:04	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 20:04	75-25-2	L1
Bromomethane	ND	ug/L	5.0	0.16	1		10/27/17 20:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 20:04	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 20:04	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 20:04	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 20:04	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 20:04	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 20:04	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 20:04	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 20:04	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 20:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 20:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 20:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/27/17 20:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 20:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 20:04	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 20:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 20:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 20:04	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 20:04	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 20:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 20:04	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 20:04	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 20:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 20:04	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 20:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 20:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 20:04	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 14:39	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 20:04	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 20:04	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/27/17 20:04	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-120		1		10/27/17 20:04	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		10/27/17 20:04	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 20:04		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-57R-201710 **Lab ID: 60256365008** Collected: 10/24/17 15:20 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 18:54	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 18:54	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 18:54	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 18:54	75-25-2	L1
Bromomethane	**0.37J**	ug/L	5.0	0.16	1		10/27/17 18:54	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 18:54	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 18:54	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 18:54	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 18:54	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 18:54	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 18:54	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 18:54	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 18:54	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 18:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 18:54	107-06-2	
1,1-Dichloroethene	**2.1**	ug/L	1.0	0.20	1		10/27/17 18:54	75-35-4	
cis-1,2-Dichloroethene	**17.5**	ug/L	1.0	0.080	1		10/27/17 18:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 18:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 18:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 18:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 18:54	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 18:54	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 18:54	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 18:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 18:54	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 18:54	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 18:54	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 18:54	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 18:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 18:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 18:54	79-00-5	
Trichloroethene	**441**	ug/L	10.0	1.7	10		10/30/17 14:53	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 18:54	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 18:54	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/27/17 18:54	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	80-120		1		10/27/17 18:54	17060-07-0	
Toluene-d8 (S)	103	%	80-120		1		10/27/17 18:54	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 18:54		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-56R-201710 **Lab ID: 60256365009** Collected: 10/24/17 16:00 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 19:08	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 19:08	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 19:08	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 19:08	75-25-2	L1
Bromomethane	**0.53J**	ug/L	5.0	0.16	1		10/27/17 19:08	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 19:08	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 19:08	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 19:08	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 19:08	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 19:08	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 19:08	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 19:08	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 19:08	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 19:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 19:08	107-06-2	
1,1-Dichloroethene	**2.7**	ug/L	1.0	0.20	1		10/27/17 19:08	75-35-4	
cis-1,2-Dichloroethene	**33.8**	ug/L	1.0	0.080	1		10/27/17 19:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 19:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 19:08	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 19:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 19:08	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 19:08	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 19:08	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 19:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 19:08	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 19:08	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 19:08	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 19:08	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 19:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 19:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 19:08	79-00-5	
Trichloroethene	**815**	ug/L	10.0	1.7	10		10/30/17 20:02	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 19:08	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 19:08	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/27/17 19:08	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	80-120		1		10/27/17 19:08	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/27/17 19:08	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 19:08		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-17S-201710 **Lab ID: 60256365010** Collected: 10/24/17 16:40 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 19:22	67-64-1	
Benzene	**0.12J**	ug/L	1.0	0.060	1		10/27/17 19:22	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 19:22	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 19:22	75-25-2	L1
Bromomethane	**0.38J**	ug/L	5.0	0.16	1		10/27/17 19:22	74-83-9	B
2-Butanone (MEK)	**3.2J**	ug/L	10.0	0.59	1		10/27/17 19:22	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 19:22	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 19:22	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 19:22	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 19:22	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 19:22	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 19:22	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 19:22	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 19:22	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 19:22	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 19:22	75-35-4	
cis-1,2-Dichloroethene	**0.27J**	ug/L	1.0	0.080	1		10/27/17 19:22	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 19:22	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 19:22	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 19:22	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 19:22	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 19:22	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 19:22	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 19:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 19:22	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 19:22	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 19:22	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 19:22	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 19:22	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 19:22	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 19:22	79-00-5	
Trichloroethene	**72.2**	ug/L	1.0	0.17	1		10/27/17 19:22	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 19:22	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 19:22	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/27/17 19:22	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		10/27/17 19:22	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/27/17 19:22	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 19:22		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TMW-21-201710 **Lab ID: 60256365011** Collected: 10/24/17 14:26 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 19:36	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 19:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 19:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 19:36	75-25-2	L1
Bromomethane	ND	ug/L	5.0	0.16	1		10/27/17 19:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 19:36	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 19:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 19:36	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 19:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 19:36	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 19:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 19:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 19:36	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 19:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 19:36	107-06-2	
1,1-Dichloroethene	**1.3**	ug/L	1.0	0.20	1		10/27/17 19:36	75-35-4	
cis-1,2-Dichloroethene	**9.2**	ug/L	1.0	0.080	1		10/27/17 19:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 19:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 19:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 19:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 19:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 19:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 19:36	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 19:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 19:36	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 19:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 19:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 19:36	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 19:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 19:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 19:36	79-00-5	
Trichloroethene	**461**	ug/L	10.0	1.7	10		10/30/17 20:16	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 19:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 19:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/27/17 19:36	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	80-120		1		10/27/17 19:36	17060-07-0	
Toluene-d8 (S)	103	%	80-120		1		10/27/17 19:36	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 19:36		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TMW-24-201710 **Lab ID: 60256365012** Collected: 10/24/17 12:50 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 19:50	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 19:50	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 19:50	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 19:50	75-25-2	L1
Bromomethane	**0.21J**	ug/L	5.0	0.16	1		10/27/17 19:50	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 19:50	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 19:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 19:50	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 19:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 19:50	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 19:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 19:50	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 19:50	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 19:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 19:50	107-06-2	
1,1-Dichloroethene	**1.4**	ug/L	1.0	0.20	1		10/27/17 19:50	75-35-4	
cis-1,2-Dichloroethene	**8.1**	ug/L	1.0	0.080	1		10/27/17 19:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 19:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 19:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 19:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 19:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 19:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 19:50	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 19:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 19:50	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 19:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 19:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 19:50	127-18-4	L1
Toluene	**0.27J**	ug/L	1.0	0.17	1		10/27/17 19:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 19:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 19:50	79-00-5	
Trichloroethene	**385**	ug/L	10.0	1.7	10		10/30/17 20:30	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 19:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 19:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/27/17 19:50	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-120		1		10/27/17 19:50	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/27/17 19:50	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 19:50		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-185-201710 **Lab ID: 60256365013** Collected: 10/24/17 15:20 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 21:28	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 21:28	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 21:28	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 21:28	75-25-2	L1
Bromomethane	ND	ug/L	5.0	0.16	1		10/27/17 21:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 21:28	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 21:28	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 21:28	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 21:28	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 21:28	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 21:28	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 21:28	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 21:28	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 21:28	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 21:28	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 21:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/27/17 21:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 21:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 21:28	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 21:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 21:28	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 21:28	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 21:28	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 21:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 21:28	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 21:28	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 21:28	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 21:28	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 21:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 21:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 21:28	79-00-5	
Trichloroethene	**12.7**	ug/L	1.0	0.17	1		10/27/17 21:28	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 21:28	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 21:28	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/27/17 21:28	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/27/17 21:28	17060-07-0	
Toluene-d8 (S)	103	%	80-120		1		10/27/17 21:28	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 21:28		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-176-201710 **Lab ID: 60256365014** Collected: 10/24/17 09:35 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 18:12	67-64-1	
Benzene	**0.11J**	ug/L	1.0	0.060	1		10/27/17 18:12	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 18:12	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 18:12	75-25-2	L1
Bromomethane	ND	ug/L	5.0	0.16	1		10/27/17 18:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 18:12	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 18:12	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 18:12	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 18:12	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 18:12	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 18:12	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 18:12	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 18:12	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 18:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 18:12	107-06-2	
1,1-Dichloroethene	**3.3**	ug/L	1.0	0.20	1		10/27/17 18:12	75-35-4	
cis-1,2-Dichloroethene	**187**	ug/L	1.0	0.080	1		10/27/17 18:12	156-59-2	
trans-1,2-Dichloroethene	**1.3**	ug/L	1.0	0.20	1		10/27/17 18:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 18:12	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 18:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 18:12	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 18:12	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 18:12	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 18:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 18:12	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 18:12	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 18:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 18:12	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 18:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 18:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 18:12	79-00-5	
Trichloroethene	**281**	ug/L	10.0	1.7	10		10/27/17 18:40	79-01-6	
Vinyl chloride	**0.29J**	ug/L	1.0	0.13	1		10/27/17 18:12	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 18:12	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/27/17 18:12	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	80-120		1		10/27/17 18:12	17060-07-0	
Toluene-d8 (S)	103	%	80-120		1		10/27/17 18:12	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 18:12		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-46R-201710 **Lab ID: 60256365015** Collected: 10/24/17 10:43 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 19:20	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 19:20	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 19:20	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 19:20	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 19:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 19:20	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 19:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 19:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 19:20	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 19:20	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 19:20	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 19:20	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 19:20	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 19:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 19:20	107-06-2	
1,1-Dichloroethene	**1.2**	ug/L	1.0	0.20	1		10/30/17 19:20	75-35-4	
cis-1,2-Dichloroethene	**10.7**	ug/L	1.0	0.080	1		10/30/17 19:20	156-59-2	
trans-1,2-Dichloroethene	**0.32J**	ug/L	1.0	0.20	1		10/30/17 19:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 19:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 19:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 19:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 19:20	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 19:20	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 19:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 19:20	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 19:20	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 19:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 19:20	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 19:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 19:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 19:20	79-00-5	
Trichloroethene	**408**	ug/L	10.0	1.7	10		10/31/17 13:55	79-01-6	
Vinyl chloride	**0.51J**	ug/L	1.0	0.13	1		10/30/17 19:20	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 19:20	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/30/17 19:20	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/30/17 19:20	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/30/17 19:20	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 19:20		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: RW-69-201710 **Lab ID: 60256365016** Collected: 10/24/17 09:40 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**276**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:10	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 19:06	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 19:06	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 19:06	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 19:06	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 19:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 19:06	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 19:06	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 19:06	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 19:06	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 19:06	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 19:06	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 19:06	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 19:06	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 19:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 19:06	107-06-2	
1,1-Dichloroethene	**0.74J**	ug/L	1.0	0.20	1		10/30/17 19:06	75-35-4	
cis-1,2-Dichloroethene	**5.2**	ug/L	1.0	0.080	1		10/30/17 19:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 19:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 19:06	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 19:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 19:06	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 19:06	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 19:06	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 19:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 19:06	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 19:06	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 19:06	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 19:06	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 19:06	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 19:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 19:06	79-00-5	
Trichloroethene	**159**	ug/L	1.0	0.17	1		10/30/17 19:06	79-01-6	
Vinyl chloride	**0.21J**	ug/L	1.0	0.13	1		10/30/17 19:06	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 19:06	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 19:06	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/30/17 19:06	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/30/17 19:06	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 19:06		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:10	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: RW-69-201710 **Lab ID: 60256365016** Collected: 10/24/17 09:40 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**272**	mg/L	20.0	10.0	20		11/04/17 11:10	16887-00-6	
Sulfate	**1.7**	mg/L	1.0	0.50	1		11/04/17 10:27	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.050	1		10/25/17 15:45		
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/25/17 15:45		
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.050	1		10/25/17 15:45		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.23J**	mg/L	1.0	0.13	1		10/27/17 12:44	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-58R-201710 **Lab ID: 60256365017** Collected: 10/24/17 12:20 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/29/17 18:44	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/29/17 18:44	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/29/17 18:44	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/29/17 18:44	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/29/17 18:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/29/17 18:44	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/29/17 18:44	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/29/17 18:44	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/29/17 18:44	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/29/17 18:44	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/29/17 18:44	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/29/17 18:44	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/29/17 18:44	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/29/17 18:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/17 18:44	107-06-2	
1,1-Dichloroethene	**1.9**	ug/L	1.0	0.20	1		10/29/17 18:44	75-35-4	
cis-1,2-Dichloroethene	**10.0**	ug/L	1.0	0.080	1		10/29/17 18:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 18:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/29/17 18:44	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/29/17 18:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/29/17 18:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/29/17 18:44	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/29/17 18:44	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/29/17 18:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/29/17 18:44	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/17 18:44	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/17 18:44	79-34-5	
Tetrachloroethene	**0.13J**	ug/L	1.0	0.10	1		10/29/17 18:44	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/29/17 18:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/17 18:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/29/17 18:44	79-00-5	
Trichloroethene	**360**	ug/L	5.0	0.85	5		10/30/17 17:14	79-01-6	
Vinyl chloride	**0.65J**	ug/L	1.0	0.13	1		10/29/17 18:44	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/29/17 18:44	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/29/17 18:44	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/29/17 18:44	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/29/17 18:44	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/29/17 18:44		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:10	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**235**	mg/L	20.0	10.0	20		11/04/17 13:25	16887-00-6	
Sulfate	**1.4**	mg/L	1.0	0.50	1		11/04/17 12:56	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-58R-201710 **Lab ID: 60256365017** Collected: 10/24/17 12:20 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.050	1		10/25/17 15:56		
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/25/17 15:56		
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.050	1		10/25/17 15:56		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.16J**	mg/L	1.0	0.13	1		10/27/17 12:57	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: IW-73-201710 **Lab ID: 60256365018** Collected: 10/24/17 11:25 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/29/17 18:58	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/29/17 18:58	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/29/17 18:58	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/29/17 18:58	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/29/17 18:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/29/17 18:58	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/29/17 18:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/29/17 18:58	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/29/17 18:58	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/29/17 18:58	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/29/17 18:58	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/29/17 18:58	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/29/17 18:58	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/29/17 18:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/17 18:58	107-06-2	
1,1-Dichloroethene	**0.39J**	ug/L	1.0	0.20	1		10/29/17 18:58	75-35-4	
cis-1,2-Dichloroethene	**3.3**	ug/L	1.0	0.080	1		10/29/17 18:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 18:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/29/17 18:58	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/29/17 18:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/29/17 18:58	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/29/17 18:58	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/29/17 18:58	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/29/17 18:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/29/17 18:58	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/17 18:58	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/17 18:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/29/17 18:58	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/29/17 18:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/17 18:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/29/17 18:58	79-00-5	
Trichloroethene	**126**	ug/L	1.0	0.17	1		10/29/17 18:58	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/29/17 18:58	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/29/17 18:58	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/29/17 18:58	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/29/17 18:58	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/29/17 18:58	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/29/17 18:58		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:11	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**284**	mg/L	20.0	10.0	20		11/04/17 14:09	16887-00-6	
Sulfate	**14.4**	mg/L	1.0	0.50	1		11/04/17 13:54	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: IW-73-201710 **Lab ID: 60256365018** Collected: 10/24/17 11:25 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.050	1		10/25/17 15:51		
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/25/17 15:51		
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.050	1		10/25/17 15:51		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.28J**	mg/L	1.0	0.13	1		10/27/17 13:10	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-82-201710 **Lab ID: 60256365019** Collected: 10/24/17 15:25 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**14.7**	ug/L	10.0	1.9	1		10/30/17 11:23	67-64-1	
Benzene	**0.18J**	ug/L	1.0	0.060	1		10/30/17 11:23	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 11:23	75-27-4	
Bromoform	**1.0**	ug/L	1.0	0.070	1		10/30/17 11:23	75-25-2	
Bromomethane	**0.76J**	ug/L	5.0	0.16	1		10/30/17 11:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 11:23	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 11:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 11:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 11:23	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 11:23	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 11:23	67-66-3	
Chloromethane	**3.5**	ug/L	1.0	0.080	1		10/30/17 11:23	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 11:23	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 11:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 11:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 11:23	75-35-4	
cis-1,2-Dichloroethene	**0.80J**	ug/L	1.0	0.080	1		10/30/17 11:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 11:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 11:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 11:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 11:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 11:23	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 11:23	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 11:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 11:23	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 11:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 11:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 11:23	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 11:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 11:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 11:23	79-00-5	
Trichloroethene	**34.3**	ug/L	1.0	0.17	1		10/30/17 11:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 11:23	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 11:23	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/30/17 11:23	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/30/17 11:23	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/30/17 11:23	2037-26-5	
Preservation pH	**4.0**		0.10	0.10	1		10/30/17 11:23		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: FD-03-201710 **Lab ID: 60256365020** Collected: 10/24/17 15:25 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**14.1**	ug/L	10.0	1.9	1		10/30/17 11:37	67-64-1	
Benzene	**0.18J**	ug/L	1.0	0.060	1		10/30/17 11:37	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 11:37	75-27-4	
Bromoform	**1.1**	ug/L	1.0	0.070	1		10/30/17 11:37	75-25-2	
Bromomethane	**0.81J**	ug/L	5.0	0.16	1		10/30/17 11:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 11:37	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 11:37	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 11:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 11:37	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 11:37	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 11:37	67-66-3	
Chloromethane	**3.3**	ug/L	1.0	0.080	1		10/30/17 11:37	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 11:37	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 11:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 11:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 11:37	75-35-4	
cis-1,2-Dichloroethene	**0.80J**	ug/L	1.0	0.080	1		10/30/17 11:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 11:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 11:37	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 11:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 11:37	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 11:37	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 11:37	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 11:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 11:37	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 11:37	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 11:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 11:37	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 11:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 11:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 11:37	79-00-5	
Trichloroethene	**34.1**	ug/L	1.0	0.17	1		10/30/17 11:37	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 11:37	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 11:37	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/30/17 11:37	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/30/17 11:37	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/30/17 11:37	2037-26-5	
Preservation pH	**4.0**		0.10	0.10	1		10/30/17 11:37		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-40R-201710 **Lab ID: 60256365021** Collected: 10/24/17 13:00 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/29/17 18:16	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/29/17 18:16	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/29/17 18:16	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/29/17 18:16	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/29/17 18:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/29/17 18:16	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/29/17 18:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/29/17 18:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/29/17 18:16	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/29/17 18:16	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/29/17 18:16	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/29/17 18:16	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/29/17 18:16	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/29/17 18:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/17 18:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 18:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/29/17 18:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 18:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/29/17 18:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/29/17 18:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/29/17 18:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/29/17 18:16	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/29/17 18:16	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/29/17 18:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/29/17 18:16	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/17 18:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/17 18:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/29/17 18:16	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/29/17 18:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/17 18:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/29/17 18:16	79-00-5	
Trichloroethene	**0.31J**	ug/L	1.0	0.17	1		10/29/17 18:16	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/29/17 18:16	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/29/17 18:16	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/29/17 18:16	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/29/17 18:16	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/29/17 18:16	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/29/17 18:16		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: IW-77-201710 **Lab ID: 60256365022** Collected: 10/24/17 16:55 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**13.7**	ug/L	10.0	1.9	1		10/30/17 11:51	67-64-1	
Benzene	**0.10J**	ug/L	1.0	0.060	1		10/30/17 11:51	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 11:51	75-27-4	
Bromoform	**0.39J**	ug/L	1.0	0.070	1		10/30/17 11:51	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 11:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 11:51	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 11:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 11:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 11:51	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 11:51	75-00-3	
Chloroform	**0.17J**	ug/L	1.0	0.14	1		10/30/17 11:51	67-66-3	
Chloromethane	**1.0**	ug/L	1.0	0.080	1		10/30/17 11:51	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 11:51	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 11:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 11:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 11:51	75-35-4	
cis-1,2-Dichloroethene	**2.9**	ug/L	1.0	0.080	1		10/30/17 11:51	156-59-2	
trans-1,2-Dichloroethene	**0.49J**	ug/L	1.0	0.20	1		10/30/17 11:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 11:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 11:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 11:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 11:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 11:51	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 11:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 11:51	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 11:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 11:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 11:51	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 11:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 11:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 11:51	79-00-5	
Trichloroethene	**161**	ug/L	1.0	0.17	1		10/30/17 11:51	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 11:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 11:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/30/17 11:51	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/30/17 11:51	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 11:51	2037-26-5	
Preservation pH	**7.0**		0.10	0.10	1		10/30/17 11:51		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-196-201710 **Lab ID: 60256365023** Collected: 10/24/17 09:35 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 01:17	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 01:17	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 01:17	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 01:17	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 01:17	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 01:17	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 01:17	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 01:17	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 01:17	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 01:17	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 01:17	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 01:17	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 01:17	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 01:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 01:17	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 01:17	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 01:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 01:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 01:17	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 01:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 01:17	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 01:17	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 01:17	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 01:17	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 01:17	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 01:17	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 01:17	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 01:17	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 01:17	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 01:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 01:17	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 01:17	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 01:17	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 01:17	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/30/17 01:17	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/30/17 01:17	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 01:17	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 01:17		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-99-201710 **Lab ID: 60256365024** Collected: 10/24/17 09:48 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/29/17 18:30	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/29/17 18:30	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/29/17 18:30	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/29/17 18:30	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/29/17 18:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/29/17 18:30	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/29/17 18:30	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/29/17 18:30	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/29/17 18:30	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/29/17 18:30	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/29/17 18:30	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/29/17 18:30	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/29/17 18:30	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/29/17 18:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/17 18:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 18:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/29/17 18:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 18:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/29/17 18:30	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/29/17 18:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/29/17 18:30	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/29/17 18:30	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/29/17 18:30	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/29/17 18:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/29/17 18:30	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/17 18:30	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/17 18:30	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/29/17 18:30	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/29/17 18:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/17 18:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/29/17 18:30	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/29/17 18:30	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/29/17 18:30	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/29/17 18:30	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/29/17 18:30	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/29/17 18:30	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/29/17 18:30	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/29/17 18:30		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-98-201710 **Lab ID: 60256365025** Collected: 10/24/17 12:36 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.7J**	ug/L	10.0	1.9	1		10/30/17 00:07	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 00:07	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 00:07	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 00:07	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 00:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 00:07	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 00:07	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 00:07	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 00:07	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 00:07	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 00:07	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 00:07	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 00:07	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 00:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 00:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 00:07	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 00:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 00:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 00:07	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 00:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 00:07	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 00:07	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 00:07	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 00:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 00:07	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 00:07	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 00:07	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 00:07	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 00:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 00:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 00:07	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 00:07	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 00:07	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 00:07	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/30/17 00:07	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/30/17 00:07	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/30/17 00:07	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 00:07		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-184-201710 **Lab ID: 60256365026** Collected: 10/24/17 10:57 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 00:21	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 00:21	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 00:21	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 00:21	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 00:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 00:21	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 00:21	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 00:21	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 00:21	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 00:21	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 00:21	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 00:21	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 00:21	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 00:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 00:21	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 00:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 00:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 00:21	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 00:21	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 00:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 00:21	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 00:21	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 00:21	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 00:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 00:21	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 00:21	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 00:21	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 00:21	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 00:21	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 00:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 00:21	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 00:21	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 00:21	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 00:21	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/30/17 00:21	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/30/17 00:21	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 00:21	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 00:21		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TMW-19-201710 **Lab ID: 60256365027** Collected: 10/24/17 09:40 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 00:35	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 00:35	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 00:35	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 00:35	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 00:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 00:35	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 00:35	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 00:35	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 00:35	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 00:35	75-00-3	
Chloroform	**0.31J**	ug/L	1.0	0.14	1		10/30/17 00:35	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 00:35	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 00:35	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 00:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 00:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 00:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 00:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 00:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 00:35	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 00:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 00:35	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 00:35	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 00:35	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 00:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 00:35	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 00:35	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 00:35	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 00:35	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 00:35	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 00:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 00:35	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 00:35	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 00:35	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 00:35	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/30/17 00:35	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/30/17 00:35	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		10/30/17 00:35	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 00:35		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-186-201710 **Lab ID: 60256365028** Collected: 10/24/17 10:40 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 00:49	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 00:49	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 00:49	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 00:49	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 00:49	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 00:49	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 00:49	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 00:49	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 00:49	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 00:49	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 00:49	67-66-3	
Chloromethane	**0.17J**	ug/L	1.0	0.080	1		10/30/17 00:49	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 00:49	124-48-1	
1,1-Dichloroethane	**1.1**	ug/L	1.0	0.050	1		10/30/17 00:49	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 00:49	107-06-2	
1,1-Dichloroethene	**0.55J**	ug/L	1.0	0.20	1		10/30/17 00:49	75-35-4	
cis-1,2-Dichloroethene	**4.1**	ug/L	1.0	0.080	1		10/30/17 00:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 00:49	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 00:49	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 00:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 00:49	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 00:49	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 00:49	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 00:49	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 00:49	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 00:49	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 00:49	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 00:49	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 00:49	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 00:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 00:49	79-00-5	
Trichloroethene	**7.8**	ug/L	1.0	0.17	1		10/30/17 00:49	79-01-6	
Vinyl chloride	**0.14J**	ug/L	1.0	0.13	1		10/30/17 00:49	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 00:49	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 00:49	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/30/17 00:49	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/30/17 00:49	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 00:49		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: FD-04-201710 **Lab ID: 60256365029** Collected: 10/24/17 10:40 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 01:45	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 01:45	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 01:45	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 01:45	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 01:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 01:45	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 01:45	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 01:45	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 01:45	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 01:45	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 01:45	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 01:45	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 01:45	124-48-1	
1,1-Dichloroethane	**1.1**	ug/L	1.0	0.050	1		10/30/17 01:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 01:45	107-06-2	
1,1-Dichloroethene	**0.45J**	ug/L	1.0	0.20	1		10/30/17 01:45	75-35-4	
cis-1,2-Dichloroethene	**3.8**	ug/L	1.0	0.080	1		10/30/17 01:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 01:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 01:45	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 01:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 01:45	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 01:45	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 01:45	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 01:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 01:45	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 01:45	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 01:45	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 01:45	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 01:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 01:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 01:45	79-00-5	
Trichloroethene	**7.8**	ug/L	1.0	0.17	1		10/30/17 01:45	79-01-6	
Vinyl chloride	**0.16J**	ug/L	1.0	0.13	1		10/30/17 01:45	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 01:45	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 01:45	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		1		10/30/17 01:45	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		10/30/17 01:45	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 01:45		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-187-201710 **Lab ID: 60256365030** Collected: 10/24/17 12:00 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 01:03	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 01:03	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 01:03	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 01:03	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 01:03	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 01:03	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 01:03	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 01:03	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 01:03	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 01:03	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 01:03	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 01:03	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 01:03	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 01:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 01:03	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 01:03	75-35-4	
cis-1,2-Dichloroethene	**0.73J**	ug/L	1.0	0.080	1		10/30/17 01:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 01:03	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 01:03	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 01:03	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 01:03	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 01:03	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 01:03	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 01:03	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 01:03	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 01:03	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 01:03	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 01:03	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 01:03	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 01:03	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 01:03	79-00-5	
Trichloroethene	**0.65J**	ug/L	1.0	0.17	1		10/30/17 01:03	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 01:03	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 01:03	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/30/17 01:03	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/30/17 01:03	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/30/17 01:03	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 01:03		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-188-201710 **Lab ID: 60256365031** Collected: 10/24/17 13:05 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 01:31	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 01:31	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 01:31	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 01:31	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 01:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 01:31	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 01:31	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 01:31	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 01:31	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 01:31	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 01:31	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 01:31	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 01:31	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 01:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 01:31	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 01:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 01:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 01:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 01:31	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 01:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 01:31	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 01:31	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 01:31	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 01:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 01:31	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 01:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 01:31	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 01:31	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 01:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 01:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 01:31	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 01:31	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 01:31	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 01:31	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 01:31	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/30/17 01:31	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/30/17 01:31	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 01:31		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TMW-10-201710 **Lab ID: 60256365032** Collected: 10/24/17 14:50 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**276**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:13	7439-89-6	
Manganese	**37.8**	ug/L	5.0	1.8	1	10/30/17 11:47	10/30/17 19:13	7439-96-5	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 02:00	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 02:00	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 02:00	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 02:00	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 02:00	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 02:00	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 02:00	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 02:00	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 02:00	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 02:00	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 02:00	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 02:00	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 02:00	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 02:00	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 02:00	107-06-2	
1,1-Dichloroethene	**0.22J**	ug/L	1.0	0.20	1		10/30/17 02:00	75-35-4	
cis-1,2-Dichloroethene	**4.5**	ug/L	1.0	0.080	1		10/30/17 02:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 02:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 02:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 02:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 02:00	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 02:00	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 02:00	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 02:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 02:00	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 02:00	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 02:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 02:00	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 02:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 02:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 02:00	79-00-5	
Trichloroethene	**89.5**	ug/L	1.0	0.17	1		10/30/17 02:00	79-01-6	
Vinyl chloride	**0.91J**	ug/L	1.0	0.13	1		10/30/17 02:00	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 02:00	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 02:00	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		1		10/30/17 02:00	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/30/17 02:00	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 02:00		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:11	18496-25-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TMW-10-201710 **Lab ID: 60256365032** Collected: 10/24/17 14:50 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**167**	mg/L	10.0	5.0	10		11/03/17 18:58	16887-00-6	
Sulfate	**2.0**	mg/L	1.0	0.50	1		11/04/17 14:23	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.050	1		10/26/17 09:45		
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/26/17 09:45		
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.050	1		10/26/17 09:45		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.26J**	mg/L	1.0	0.13	1		10/27/17 13:22	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TMW-22-201710 **Lab ID: 60256365033** Collected: 10/24/17 16:50 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**149**	ug/L	10.0	1.9	1		11/02/17 13:52	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		11/02/17 13:52	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/02/17 13:52	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/02/17 13:52	75-25-2	L1
Bromomethane	ND	ug/L	5.0	0.16	1		11/02/17 13:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/02/17 13:52	78-93-3	
Carbon disulfide	**1.2J**	ug/L	5.0	0.12	1		11/02/17 13:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/02/17 13:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/02/17 13:52	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/02/17 13:52	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		11/02/17 13:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/02/17 13:52	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/02/17 13:52	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		11/02/17 13:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/02/17 13:52	107-06-2	
1,1-Dichloroethene	**0.87J**	ug/L	1.0	0.20	1		11/02/17 13:52	75-35-4	
cis-1,2-Dichloroethene	**9.8**	ug/L	1.0	0.080	1		11/02/17 13:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		11/02/17 13:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/02/17 13:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/02/17 13:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/02/17 13:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/02/17 13:52	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/02/17 13:52	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		11/02/17 13:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	**1.3J**	ug/L	10.0	0.42	1		11/02/17 13:52	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/02/17 13:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/02/17 13:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		11/02/17 13:52	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		11/02/17 13:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/02/17 13:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		11/02/17 13:52	79-00-5	
Trichloroethene	**486**	ug/L	20.0	3.4	20		10/30/17 02:13	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/02/17 13:52	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/02/17 13:52	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	92	%	80-120		1		11/02/17 13:52	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	80-120		1		11/02/17 13:52	17060-07-0	
Toluene-d8 (S)	104	%	80-120		1		11/02/17 13:52	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/02/17 13:52		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: EB-02-201710 **Lab ID: 60256365034** Collected: 10/24/17 17:25 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.1J**	ug/L	10.0	1.9	1		10/29/17 23:11	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/29/17 23:11	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/29/17 23:11	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/29/17 23:11	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/29/17 23:11	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/29/17 23:11	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/29/17 23:11	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/29/17 23:11	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/29/17 23:11	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/29/17 23:11	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/29/17 23:11	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/29/17 23:11	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/29/17 23:11	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/29/17 23:11	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/17 23:11	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 23:11	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/29/17 23:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 23:11	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/29/17 23:11	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/29/17 23:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/29/17 23:11	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/29/17 23:11	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/29/17 23:11	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/29/17 23:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/29/17 23:11	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/17 23:11	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/17 23:11	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/29/17 23:11	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/29/17 23:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/17 23:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/29/17 23:11	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/29/17 23:11	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/29/17 23:11	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/29/17 23:11	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/29/17 23:11	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		1		10/29/17 23:11	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/29/17 23:11	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/29/17 23:11		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TB-02-201710 **Lab ID: 60256365035** Collected: 10/24/17 09:35 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/29/17 22:57	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/29/17 22:57	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/29/17 22:57	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/29/17 22:57	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/29/17 22:57	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/29/17 22:57	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/29/17 22:57	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/29/17 22:57	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/29/17 22:57	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/29/17 22:57	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/29/17 22:57	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/29/17 22:57	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/29/17 22:57	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/29/17 22:57	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/17 22:57	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 22:57	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/29/17 22:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 22:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/29/17 22:57	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/29/17 22:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/29/17 22:57	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/29/17 22:57	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/29/17 22:57	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/29/17 22:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/29/17 22:57	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/17 22:57	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/17 22:57	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/29/17 22:57	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/29/17 22:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/17 22:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/29/17 22:57	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/29/17 22:57	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/29/17 22:57	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/29/17 22:57	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/29/17 22:57	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/29/17 22:57	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/29/17 22:57	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/29/17 22:57		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TB-03-201710 **Lab ID: 60256365036** Collected: 10/24/17 09:35 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/29/17 22:42	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/29/17 22:42	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/29/17 22:42	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/29/17 22:42	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/29/17 22:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/29/17 22:42	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/29/17 22:42	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/29/17 22:42	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/29/17 22:42	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/29/17 22:42	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/29/17 22:42	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/29/17 22:42	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/29/17 22:42	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/29/17 22:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/17 22:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 22:42	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/29/17 22:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 22:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/29/17 22:42	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/29/17 22:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/29/17 22:42	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/29/17 22:42	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/29/17 22:42	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/29/17 22:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/29/17 22:42	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/17 22:42	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/17 22:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/29/17 22:42	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/29/17 22:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/17 22:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/29/17 22:42	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/29/17 22:42	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/29/17 22:42	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/29/17 22:42	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/29/17 22:42	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/29/17 22:42	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/29/17 22:42	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/29/17 22:42		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500794 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 60256365016, 60256365032

METHOD BLANK: 2050410 Matrix: Water
Associated Lab Samples: 60256365016, 60256365032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	50.0	12.4	10/30/17 18:42	
Manganese	ug/L	ND	5.0	1.8	10/30/17 18:42	

LABORATORY CONTROL SAMPLE: 2050411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9760	98	80-120	
Manganese	ug/L	1000	1010	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2050412 2050413

Parameter	Units	60256450001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	159	10000	10000	10100	9670	100	95	75-125	5	20	
Manganese	ug/L	ND	1000	1000	991	959	99	96	75-125	3	20	

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

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500633 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256365001, 60256365002, 60256365003, 60256365004, 60256365005, 60256365006, 60256365007, 60256365008, 60256365009, 60256365010, 60256365011, 60256365012, 60256365013, 60256365014

METHOD BLANK: 2049409 Matrix: Water
Associated Lab Samples: 60256365001, 60256365002, 60256365003, 60256365004, 60256365005, 60256365006, 60256365007, 60256365008, 60256365009, 60256365010, 60256365011, 60256365012, 60256365013, 60256365014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/27/17 17:43	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/27/17 17:43	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/27/17 17:43	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/27/17 17:43	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/27/17 17:43	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/27/17 17:43	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/27/17 17:43	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/27/17 17:43	
2-Hexanone	ug/L	ND	10.0	1.2	10/27/17 17:43	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/27/17 17:43	
Acetone	ug/L	ND	10.0	1.9	10/27/17 17:43	
Benzene	ug/L	ND	1.0	0.060	10/27/17 17:43	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/27/17 17:43	
Bromoform	ug/L	ND	1.0	0.070	10/27/17 17:43	
Bromomethane	ug/L	0.95J	5.0	0.16	10/27/17 17:43	
Carbon disulfide	ug/L	ND	5.0	0.12	10/27/17 17:43	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/27/17 17:43	
Chlorobenzene	ug/L	ND	1.0	0.21	10/27/17 17:43	
Chloroethane	ug/L	ND	1.0	0.15	10/27/17 17:43	
Chloroform	ug/L	ND	1.0	0.14	10/27/17 17:43	
Chloromethane	ug/L	ND	1.0	0.080	10/27/17 17:43	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/27/17 17:43	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/27/17 17:43	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/27/17 17:43	
Ethylbenzene	ug/L	ND	1.0	0.18	10/27/17 17:43	
Methylene chloride	ug/L	ND	1.0	0.15	10/27/17 17:43	
Styrene	ug/L	ND	1.0	0.12	10/27/17 17:43	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/27/17 17:43	
Toluene	ug/L	ND	1.0	0.17	10/27/17 17:43	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/27/17 17:43	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/27/17 17:43	
Trichloroethene	ug/L	ND	1.0	0.17	10/27/17 17:43	
Vinyl chloride	ug/L	ND	1.0	0.13	10/27/17 17:43	
Xylene (Total)	ug/L	ND	3.0	0.42	10/27/17 17:43	
1,2-Dichloroethane-d4 (S)	%	101	80-120		10/27/17 17:43	
4-Bromofluorobenzene (S)	%	97	80-120		10/27/17 17:43	
Toluene-d8 (S)	%	103	80-120		10/27/17 17:43	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

LABORATORY CONTROL SAMPLE: 2049410

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	23.7	119	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	19.8	99	74-124	
1,1,2-Trichloroethane	ug/L	20	21.4	107	81-118	
1,1-Dichloroethane	ug/L	20	20.6	103	82-122	
1,1-Dichloroethene	ug/L	20	23.2	116	78-123	
1,2-Dichloroethane	ug/L	20	22.8	114	78-117	
1,2-Dichloropropane	ug/L	20	20.8	104	81-118	
2-Butanone (MEK)	ug/L	100	93.1	93	72-117	
2-Hexanone	ug/L	100	95.4	95	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	94.0	94	77-124	
Acetone	ug/L	100	95.7	96	66-127	
Benzene	ug/L	20	20.3	101	82-115	
Bromodichloromethane	ug/L	20	23.0	115	83-123	
Bromoform	ug/L	20	26.0	130	79-126	L1
Bromomethane	ug/L	20	21.0	105	39-146	
Carbon disulfide	ug/L	20	22.2	111	75-121	
Carbon tetrachloride	ug/L	20	23.8	119	82-117	L1
Chlorobenzene	ug/L	20	22.2	111	89-114	
Chloroethane	ug/L	20	21.2	106	71-133	
Chloroform	ug/L	20	20.9	105	78-117	
Chloromethane	ug/L	20	15.8	79	19-181	
cis-1,2-Dichloroethene	ug/L	20	22.6	113	78-119	
cis-1,3-Dichloropropene	ug/L	20	20.2	101	81-116	
Dibromochloromethane	ug/L	20	25.7	128	81-122	L1
Ethylbenzene	ug/L	20	21.4	107	83-112	
Methylene chloride	ug/L	20	22.2	111	78-127	
Styrene	ug/L	20	22.5	113	88-117	
Tetrachloroethene	ug/L	20	24.5	122	80-121	L1
Toluene	ug/L	20	20.5	103	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.9	105	79-120	
trans-1,3-Dichloropropene	ug/L	20	21.1	105	81-119	
Trichloroethene	ug/L	20	21.3	106	78-118	
Vinyl chloride	ug/L	20	21.6	108	66-133	
Xylene (Total)	ug/L	60	65.3	109	83-114	
1,2-Dichloroethane-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			88	80-120	
Toluene-d8 (S)	%			102	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500637 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256365017, 60256365018, 60256365021, 60256365024

METHOD BLANK: 2049450 Matrix: Water
Associated Lab Samples: 60256365017, 60256365018, 60256365021, 60256365024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/29/17 16:51	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/29/17 16:51	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/29/17 16:51	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/29/17 16:51	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/29/17 16:51	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/29/17 16:51	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/29/17 16:51	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/29/17 16:51	
2-Hexanone	ug/L	ND	10.0	1.2	10/29/17 16:51	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/29/17 16:51	
Acetone	ug/L	ND	10.0	1.9	10/29/17 16:51	
Benzene	ug/L	ND	1.0	0.060	10/29/17 16:51	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/29/17 16:51	
Bromoform	ug/L	ND	1.0	0.070	10/29/17 16:51	
Bromomethane	ug/L	ND	5.0	0.16	10/29/17 16:51	
Carbon disulfide	ug/L	ND	5.0	0.12	10/29/17 16:51	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/29/17 16:51	
Chlorobenzene	ug/L	ND	1.0	0.21	10/29/17 16:51	
Chloroethane	ug/L	ND	1.0	0.15	10/29/17 16:51	
Chloroform	ug/L	ND	1.0	0.14	10/29/17 16:51	
Chloromethane	ug/L	ND	1.0	0.080	10/29/17 16:51	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/29/17 16:51	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/29/17 16:51	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/29/17 16:51	
Ethylbenzene	ug/L	ND	1.0	0.18	10/29/17 16:51	
Methylene chloride	ug/L	ND	1.0	0.15	10/29/17 16:51	
Styrene	ug/L	ND	1.0	0.12	10/29/17 16:51	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/29/17 16:51	
Toluene	ug/L	ND	1.0	0.17	10/29/17 16:51	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/29/17 16:51	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/29/17 16:51	
Trichloroethene	ug/L	ND	1.0	0.17	10/29/17 16:51	
Vinyl chloride	ug/L	ND	1.0	0.13	10/29/17 16:51	
Xylene (Total)	ug/L	ND	3.0	0.42	10/29/17 16:51	
1,2-Dichloroethane-d4 (S)	%	97	80-120		10/29/17 16:51	
4-Bromofluorobenzene (S)	%	98	80-120		10/29/17 16:51	
Toluene-d8 (S)	%	102	80-120		10/29/17 16:51	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

LABORATORY CONTROL SAMPLE: 2049451

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.2	101	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	18.6	93	74-124	
1,1,2-Trichloroethane	ug/L	20	19.3	96	81-118	
1,1-Dichloroethane	ug/L	20	20.4	102	82-122	
1,1-Dichloroethene	ug/L	20	20.4	102	78-123	
1,2-Dichloroethane	ug/L	20	19.7	99	78-117	
1,2-Dichloropropane	ug/L	20	20.8	104	81-118	
2-Butanone (MEK)	ug/L	100	96.0	96	72-117	
2-Hexanone	ug/L	100	93.4	93	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	98.9	99	77-124	
Acetone	ug/L	100	95.9	96	66-127	
Benzene	ug/L	20	20.4	102	82-115	
Bromodichloromethane	ug/L	20	20.3	102	83-123	
Bromoform	ug/L	20	20.0	100	79-126	
Bromomethane	ug/L	20	20.9	105	39-146	
Carbon disulfide	ug/L	20	19.6	98	75-121	
Carbon tetrachloride	ug/L	20	21.1	105	82-117	
Chlorobenzene	ug/L	20	19.8	99	89-114	
Chloroethane	ug/L	20	19.5	98	71-133	
Chloroform	ug/L	20	20.0	100	78-117	
Chloromethane	ug/L	20	19.8	99	19-181	
cis-1,2-Dichloroethene	ug/L	20	19.2	96	78-119	
cis-1,3-Dichloropropene	ug/L	20	19.7	99	81-116	
Dibromochloromethane	ug/L	20	19.6	98	81-122	
Ethylbenzene	ug/L	20	19.5	97	83-112	
Methylene chloride	ug/L	20	20.3	102	78-127	
Styrene	ug/L	20	20.6	103	88-117	
Tetrachloroethene	ug/L	20	19.9	100	80-121	
Toluene	ug/L	20	20.2	101	78-113	
trans-1,2-Dichloroethene	ug/L	20	19.1	96	79-120	
trans-1,3-Dichloropropene	ug/L	20	19.5	98	81-119	
Trichloroethene	ug/L	20	19.0	95	78-118	
Vinyl chloride	ug/L	20	21.0	105	66-133	
Xylene (Total)	ug/L	60	61.9	103	83-114	
1,2-Dichloroethane-d4 (S)	%			98	80-120	
4-Bromofluorobenzene (S)	%			98	80-120	
Toluene-d8 (S)	%			101	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500642 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256365023, 60256365025, 60256365026, 60256365027, 60256365028, 60256365029, 60256365030, 60256365031, 60256365032, 60256365033, 60256365034, 60256365035, 60256365036

METHOD BLANK: 2049461 Matrix: Water
Associated Lab Samples: 60256365023, 60256365025, 60256365026, 60256365027, 60256365028, 60256365029, 60256365030, 60256365031, 60256365032, 60256365033, 60256365034, 60256365035, 60256365036

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/29/17 22:28	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/29/17 22:28	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/29/17 22:28	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/29/17 22:28	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/29/17 22:28	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/29/17 22:28	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/29/17 22:28	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/29/17 22:28	
2-Hexanone	ug/L	ND	10.0	1.2	10/29/17 22:28	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/29/17 22:28	
Acetone	ug/L	ND	10.0	1.9	10/29/17 22:28	
Benzene	ug/L	ND	1.0	0.060	10/29/17 22:28	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/29/17 22:28	
Bromoform	ug/L	ND	1.0	0.070	10/29/17 22:28	
Bromomethane	ug/L	ND	5.0	0.16	10/29/17 22:28	
Carbon disulfide	ug/L	ND	5.0	0.12	10/29/17 22:28	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/29/17 22:28	
Chlorobenzene	ug/L	ND	1.0	0.21	10/29/17 22:28	
Chloroethane	ug/L	ND	1.0	0.15	10/29/17 22:28	
Chloroform	ug/L	ND	1.0	0.14	10/29/17 22:28	
Chloromethane	ug/L	ND	1.0	0.080	10/29/17 22:28	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/29/17 22:28	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/29/17 22:28	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/29/17 22:28	
Ethylbenzene	ug/L	ND	1.0	0.18	10/29/17 22:28	
Methylene chloride	ug/L	ND	1.0	0.15	10/29/17 22:28	
Styrene	ug/L	ND	1.0	0.12	10/29/17 22:28	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/29/17 22:28	
Toluene	ug/L	ND	1.0	0.17	10/29/17 22:28	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/29/17 22:28	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/29/17 22:28	
Trichloroethene	ug/L	ND	1.0	0.17	10/29/17 22:28	
Vinyl chloride	ug/L	ND	1.0	0.13	10/29/17 22:28	
Xylene (Total)	ug/L	ND	3.0	0.42	10/29/17 22:28	
1,2-Dichloroethane-d4 (S)	%	97	80-120		10/29/17 22:28	
4-Bromofluorobenzene (S)	%	96	80-120		10/29/17 22:28	
Toluene-d8 (S)	%	100	80-120		10/29/17 22:28	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

LABORATORY CONTROL SAMPLE: 2049462

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.5	97	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	18.2	91	74-124	
1,1,2-Trichloroethane	ug/L	20	19.5	98	81-118	
1,1-Dichloroethane	ug/L	20	20.3	101	82-122	
1,1-Dichloroethene	ug/L	20	20.1	101	78-123	
1,2-Dichloroethane	ug/L	20	19.4	97	78-117	
1,2-Dichloropropane	ug/L	20	20.7	104	81-118	
2-Butanone (MEK)	ug/L	100	92.7	93	72-117	
2-Hexanone	ug/L	100	92.6	93	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	98.6	99	77-124	
Acetone	ug/L	100	95.1	95	66-127	
Benzene	ug/L	20	20.3	102	82-115	
Bromodichloromethane	ug/L	20	20.2	101	83-123	
Bromoform	ug/L	20	19.1	95	79-126	
Bromomethane	ug/L	20	22.4	112	39-146	
Carbon disulfide	ug/L	20	19.3	97	75-121	
Carbon tetrachloride	ug/L	20	21.3	106	82-117	
Chlorobenzene	ug/L	20	19.8	99	89-114	
Chloroethane	ug/L	20	19.1	96	71-133	
Chloroform	ug/L	20	19.5	98	78-117	
Chloromethane	ug/L	20	19.8	99	19-181	
cis-1,2-Dichloroethene	ug/L	20	18.9	95	78-119	
cis-1,3-Dichloropropene	ug/L	20	19.7	98	81-116	
Dibromochloromethane	ug/L	20	18.9	94	81-122	
Ethylbenzene	ug/L	20	19.5	97	83-112	
Methylene chloride	ug/L	20	20.1	101	78-127	
Styrene	ug/L	20	20.3	102	88-117	
Tetrachloroethene	ug/L	20	19.1	96	80-121	
Toluene	ug/L	20	19.8	99	78-113	
trans-1,2-Dichloroethene	ug/L	20	19.3	97	79-120	
trans-1,3-Dichloropropene	ug/L	20	18.3	92	81-119	
Trichloroethene	ug/L	20	18.7	93	78-118	
Vinyl chloride	ug/L	20	20.8	104	66-133	
Xylene (Total)	ug/L	60	61.1	102	83-114	
1,2-Dichloroethane-d4 (S)	%			98	80-120	
4-Bromofluorobenzene (S)	%			98	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2049463 2049464

Parameter	Units	60256365023 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	20	20	18.4	18.6	92	93	49-167	1	11	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	17.2	16.8	86	84	75-118	2	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	18.4	18.1	92	90	76-116	2	13	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		2049463			2049464							
Parameter	Units	60256365023 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethane	ug/L	ND	20	20	19.5	20.1	98	100	82-127	3	15	
1,1-Dichloroethene	ug/L	ND	20	20	18.7	18.8	93	94	79-136	1	14	
1,2-Dichloroethane	ug/L	ND	20	20	18.6	18.3	93	92	58-133	1	14	
1,2-Dichloropropane	ug/L	ND	20	20	20.0	19.4	100	97	81-117	3	11	
2-Butanone (MEK)	ug/L	ND	100	100	85.2	85.9	85	86	64-114	1	21	
2-Hexanone	ug/L	ND	100	100	85.9	85.8	86	86	71-113	0	15	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	86.8	85.9	87	86	64-127	1	14	
Acetone	ug/L	ND	100	100	86.7	82.0	87	82	61-113	6	33	
Benzene	ug/L	ND	20	20	18.9	19.1	95	96	55-145	1	18	
Bromodichloromethane	ug/L	ND	20	20	18.5	18.8	93	94	81-120	1	11	
Bromoform	ug/L	ND	20	20	18.0	18.3	90	91	72-117	2	16	
Bromomethane	ug/L	ND	20	20	18.2	20.1	91	100	39-145	10	37	
Carbon disulfide	ug/L	ND	20	20	17.4	17.9	87	89	82-129	3	11	
Carbon tetrachloride	ug/L	ND	20	20	18.8	19.8	94	99	85-125	5	11	
Chlorobenzene	ug/L	ND	20	20	17.3	17.7	87	88	87-115	2	10	
Chloroethane	ug/L	ND	20	20	17.0	17.1	85	86	62-157	1	20	
Chloroform	ug/L	ND	20	20	18.6	18.3	93	92	79-117	2	12	
Chloromethane	ug/L	ND	20	20	16.7	17.1	84	86	22-194	3	59	
cis-1,2-Dichloroethene	ug/L	ND	20	20	17.9	18.3	90	91	70-134	2	12	
cis-1,3-Dichloropropene	ug/L	ND	20	20	15.0	15.8	75	79	70-117	5	12	
Dibromochloromethane	ug/L	ND	20	20	18.4	18.5	92	92	56-135	0	14	
Ethylbenzene	ug/L	ND	20	20	17.0	17.8	85	89	45-152	4	11	
Methylene chloride	ug/L	ND	20	20	17.8	18.0	89	90	77-123	1	13	
Styrene	ug/L	ND	20	20	16.6	17.7	83	88	64-134	6	11	
Tetrachloroethene	ug/L	ND	20	20	16.4	17.5	82	88	81-126	7	11	
Toluene	ug/L	ND	20	20	17.1	18.5	86	93	52-144	8	12	
trans-1,2-Dichloroethene	ug/L	ND	20	20	18.3	18.5	92	93	80-126	1	12	
trans-1,3-Dichloropropene	ug/L	ND	20	20	14.7	15.4	73	77	72-114	5	15	
Trichloroethene	ug/L	ND	20	20	17.4	18.0	87	90	70-131	3	16	
Vinyl chloride	ug/L	ND	20	20	21.1	21.1	105	106	64-153	0	23	
Xylene (Total)	ug/L	ND	60	60	51.1	54.3	85	91	54-146	6	12	
1,2-Dichloroethane-d4 (S)	%						98	100	80-120			
4-Bromofluorobenzene (S)	%						98	98	80-120			
Toluene-d8 (S)	%						99	101	80-120			
Preservation pH		1.0			1.0	1.0				0		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		2049465			2049466							
Parameter	Units	60256365031 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	20	20	19.9	20.9	99	104	49-167	5	11	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	18.0	17.7	90	89	75-118	2	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	18.1	19.6	91	98	76-116	8	13	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2049465 2049466

Parameter	Units	60256365031 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethane	ug/L	ND	20	20	20.2	20.6	101	103	82-127	2	15	
1,1-Dichloroethene	ug/L	ND	20	20	19.4	20.8	97	104	79-136	7	14	
1,2-Dichloroethane	ug/L	ND	20	20	18.6	19.6	93	98	58-133	5	14	
1,2-Dichloropropane	ug/L	ND	20	20	19.9	20.3	99	101	81-117	2	11	
2-Butanone (MEK)	ug/L	ND	100	100	85.9	88.3	86	88	64-114	3	21	
2-Hexanone	ug/L	ND	100	100	88.0	89.8	88	90	71-113	2	15	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	86.9	91.9	87	92	64-127	6	14	
Acetone	ug/L	ND	100	100	89.8	87.9	90	88	61-113	2	33	
Benzene	ug/L	ND	20	20	19.8	20.3	99	101	55-145	2	18	
Bromodichloromethane	ug/L	ND	20	20	19.5	20.0	97	100	81-120	3	11	
Bromoform	ug/L	ND	20	20	18.0	19.1	90	95	72-117	6	16	
Bromomethane	ug/L	ND	20	20	20.9	21.7	104	109	39-145	4	37	
Carbon disulfide	ug/L	ND	20	20	19.1	19.6	95	98	82-129	3	11	
Carbon tetrachloride	ug/L	ND	20	20	21.6	22.3	108	111	85-125	3	11	
Chlorobenzene	ug/L	ND	20	20	19.1	19.4	95	97	87-115	2	10	
Chloroethane	ug/L	ND	20	20	18.0	17.4	90	87	62-157	3	20	
Chloroform	ug/L	ND	20	20	19.0	19.9	95	100	79-117	5	12	
Chloromethane	ug/L	ND	20	20	18.3	17.4	91	87	22-194	5	59	
cis-1,2-Dichloroethene	ug/L	ND	20	20	18.5	19.0	92	95	70-134	3	12	
cis-1,3-Dichloropropene	ug/L	ND	20	20	15.9	16.5	80	82	70-117	3	12	
Dibromochloromethane	ug/L	ND	20	20	18.8	18.9	94	95	56-135	1	14	
Ethylbenzene	ug/L	ND	20	20	19.0	19.2	95	96	45-152	1	11	
Methylene chloride	ug/L	ND	20	20	18.2	18.9	91	94	77-123	4	13	
Styrene	ug/L	ND	20	20	18.9	18.7	95	93	64-134	1	11	
Tetrachloroethene	ug/L	ND	20	20	19.6	19.5	98	98	81-126	0	11	
Toluene	ug/L	ND	20	20	19.4	19.4	97	97	52-144	0	12	
trans-1,2-Dichloroethene	ug/L	ND	20	20	19.8	20.3	99	101	80-126	2	12	
trans-1,3-Dichloropropene	ug/L	ND	20	20	15.6	16.2	78	81	72-114	4	15	
Trichloroethene	ug/L	ND	20	20	19.0	18.8	95	94	70-131	1	16	
Vinyl chloride	ug/L	ND	20	20	22.2	21.8	111	109	64-153	2	23	
Xylene (Total)	ug/L	ND	60	60	58.2	58.8	97	98	54-146	1	12	
1,2-Dichloroethane-d4 (S)	%						98	99	80-120			
4-Bromofluorobenzene (S)	%						99	98	80-120			
Toluene-d8 (S)	%						101	102	80-120			
Preservation pH		1.0			1.0	1.0				0		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500795 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256365007, 60256365008

METHOD BLANK: 2050414 Matrix: Water
Associated Lab Samples: 60256365007, 60256365008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichloroethene	ug/L	ND	1.0	0.17	10/30/17 10:12	
1,2-Dichloroethane-d4 (S)	%	96	80-120		10/30/17 10:12	
4-Bromofluorobenzene (S)	%	96	80-120		10/30/17 10:12	
Toluene-d8 (S)	%	102	80-120		10/30/17 10:12	

LABORATORY CONTROL SAMPLE: 2050415

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/L	20	19.8	99	78-118	
1,2-Dichloroethane-d4 (S)	%			95	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			98	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500837 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256365009, 60256365011, 60256365012, 60256365015, 60256365016, 60256365017

METHOD BLANK: 2050615 Matrix: Water
Associated Lab Samples: 60256365009, 60256365011, 60256365012, 60256365015, 60256365016, 60256365017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/30/17 15:50	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/30/17 15:50	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/30/17 15:50	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/30/17 15:50	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 15:50	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/30/17 15:50	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/30/17 15:50	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/30/17 15:50	
2-Hexanone	ug/L	ND	10.0	1.2	10/30/17 15:50	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/30/17 15:50	
Acetone	ug/L	ND	10.0	1.9	10/30/17 15:50	
Benzene	ug/L	ND	1.0	0.060	10/30/17 15:50	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/30/17 15:50	
Bromoform	ug/L	ND	1.0	0.070	10/30/17 15:50	
Bromomethane	ug/L	ND	5.0	0.16	10/30/17 15:50	
Carbon disulfide	ug/L	ND	5.0	0.12	10/30/17 15:50	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/30/17 15:50	
Chlorobenzene	ug/L	ND	1.0	0.21	10/30/17 15:50	
Chloroethane	ug/L	ND	1.0	0.15	10/30/17 15:50	
Chloroform	ug/L	ND	1.0	0.14	10/30/17 15:50	
Chloromethane	ug/L	ND	1.0	0.080	10/30/17 15:50	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/30/17 15:50	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/30/17 15:50	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/30/17 15:50	
Ethylbenzene	ug/L	ND	1.0	0.18	10/30/17 15:50	
Methylene chloride	ug/L	ND	1.0	0.15	10/30/17 15:50	
Styrene	ug/L	ND	1.0	0.12	10/30/17 15:50	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/30/17 15:50	
Toluene	ug/L	ND	1.0	0.17	10/30/17 15:50	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 15:50	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/30/17 15:50	
Trichloroethene	ug/L	ND	1.0	0.17	10/30/17 15:50	
Vinyl chloride	ug/L	ND	1.0	0.13	10/30/17 15:50	
Xylene (Total)	ug/L	ND	3.0	0.42	10/30/17 15:50	
1,2-Dichloroethane-d4 (S)	%	98	80-120		10/30/17 15:50	
4-Bromofluorobenzene (S)	%	96	80-120		10/30/17 15:50	
Toluene-d8 (S)	%	99	80-120		10/30/17 15:50	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

LABORATORY CONTROL SAMPLE: 2050616

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.8	104	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	19.8	99	74-124	
1,1,2-Trichloroethane	ug/L	20	20.6	103	81-118	
1,1-Dichloroethane	ug/L	20	21.4	107	82-122	
1,1-Dichloroethene	ug/L	20	20.6	103	78-123	
1,2-Dichloroethane	ug/L	20	21.3	106	78-117	
1,2-Dichloropropane	ug/L	20	22.1	110	81-118	
2-Butanone (MEK)	ug/L	100	104	104	72-117	
2-Hexanone	ug/L	100	98.9	99	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	104	104	77-124	
Acetone	ug/L	100	99.4	99	66-127	
Benzene	ug/L	20	21.5	107	82-115	
Bromodichloromethane	ug/L	20	21.3	107	83-123	
Bromoform	ug/L	20	20.7	103	79-126	
Bromomethane	ug/L	20	22.8	114	39-146	
Carbon disulfide	ug/L	20	19.5	98	75-121	
Carbon tetrachloride	ug/L	20	21.6	108	82-117	
Chlorobenzene	ug/L	20	20.1	101	89-114	
Chloroethane	ug/L	20	18.7	94	71-133	
Chloroform	ug/L	20	20.9	104	78-117	
Chloromethane	ug/L	20	16.3	81	19-181	
cis-1,2-Dichloroethene	ug/L	20	20.2	101	78-119	
cis-1,3-Dichloropropene	ug/L	20	21.6	108	81-116	
Dibromochloromethane	ug/L	20	20.2	101	81-122	
Ethylbenzene	ug/L	20	19.9	99	83-112	
Methylene chloride	ug/L	20	20.2	101	78-127	
Styrene	ug/L	20	20.8	104	88-117	
Tetrachloroethene	ug/L	20	19.9	100	80-121	
Toluene	ug/L	20	20.7	104	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.0	100	79-120	
trans-1,3-Dichloropropene	ug/L	20	20.3	102	81-119	
Trichloroethene	ug/L	20	19.3	97	78-118	
Vinyl chloride	ug/L	20	22.6	113	66-133	
Xylene (Total)	ug/L	60	62.7	105	83-114	
1,2-Dichloroethane-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			101	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 501009 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256365015

METHOD BLANK: 2051042 Matrix: Water
Associated Lab Samples: 60256365015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichloroethene	ug/L	ND	1.0	0.17	10/31/17 09:57	
1,2-Dichloroethane-d4 (S)	%	100	80-120		10/31/17 09:57	
4-Bromofluorobenzene (S)	%	97	80-120		10/31/17 09:57	
Toluene-d8 (S)	%	97	80-120		10/31/17 09:57	

LABORATORY CONTROL SAMPLE: 2051043

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/L	20	19.9	99	78-118	
1,2-Dichloroethane-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			100	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 501472
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256365033

METHOD BLANK: 2052653
Matrix: Water
Associated Lab Samples: 60256365033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/02/17 11:07	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/02/17 11:07	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	11/02/17 11:07	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	11/02/17 11:07	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	11/02/17 11:07	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	11/02/17 11:07	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	11/02/17 11:07	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	11/02/17 11:07	
2-Hexanone	ug/L	ND	10.0	1.2	11/02/17 11:07	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	11/02/17 11:07	
Acetone	ug/L	ND	10.0	1.9	11/02/17 11:07	
Benzene	ug/L	ND	1.0	0.060	11/02/17 11:07	
Bromodichloromethane	ug/L	ND	1.0	0.19	11/02/17 11:07	
Bromoform	ug/L	ND	1.0	0.070	11/02/17 11:07	
Bromomethane	ug/L	ND	5.0	0.16	11/02/17 11:07	
Carbon disulfide	ug/L	ND	5.0	0.12	11/02/17 11:07	
Carbon tetrachloride	ug/L	ND	1.0	0.18	11/02/17 11:07	
Chlorobenzene	ug/L	ND	1.0	0.21	11/02/17 11:07	
Chloroethane	ug/L	ND	1.0	0.15	11/02/17 11:07	
Chloroform	ug/L	ND	1.0	0.14	11/02/17 11:07	
Chloromethane	ug/L	ND	1.0	0.080	11/02/17 11:07	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	11/02/17 11:07	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	11/02/17 11:07	
Dibromochloromethane	ug/L	ND	1.0	0.21	11/02/17 11:07	
Ethylbenzene	ug/L	ND	1.0	0.18	11/02/17 11:07	
Methylene chloride	ug/L	ND	1.0	0.15	11/02/17 11:07	
Styrene	ug/L	ND	1.0	0.12	11/02/17 11:07	
Tetrachloroethene	ug/L	ND	1.0	0.10	11/02/17 11:07	
Toluene	ug/L	ND	1.0	0.17	11/02/17 11:07	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	11/02/17 11:07	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	11/02/17 11:07	
Vinyl chloride	ug/L	ND	1.0	0.13	11/02/17 11:07	
Xylene (Total)	ug/L	ND	3.0	0.42	11/02/17 11:07	
1,2-Dichloroethane-d4 (S)	%	105	80-120		11/02/17 11:07	
4-Bromofluorobenzene (S)	%	96	80-120		11/02/17 11:07	
Toluene-d8 (S)	%	105	80-120		11/02/17 11:07	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

LABORATORY CONTROL SAMPLE: 2052654

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	22.6	113	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	16.2	81	74-124	
1,1,2-Trichloroethane	ug/L	20	19.3	96	81-118	
1,1-Dichloroethane	ug/L	20	18.0	90	82-122	
1,1-Dichloroethene	ug/L	20	23.1	116	78-123	
1,2-Dichloroethane	ug/L	20	20.3	101	78-117	
1,2-Dichloropropane	ug/L	20	17.4	87	81-118	
2-Butanone (MEK)	ug/L	100	74.6	75	72-117	
2-Hexanone	ug/L	100	80.7	81	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	76.7	77	77-124	
Acetone	ug/L	100	93.2	93	66-127	
Benzene	ug/L	20	17.3	87	82-115	
Bromodichloromethane	ug/L	20	21.6	108	83-123	
Bromoform	ug/L	20	26.9	135	79-126	L1
Bromomethane	ug/L	20	19.3	96	39-146	
Carbon disulfide	ug/L	20	23.3	117	75-121	
Carbon tetrachloride	ug/L	20	21.9	109	82-117	
Chlorobenzene	ug/L	20	20.3	101	89-114	
Chloroethane	ug/L	20	22.6	113	71-133	
Chloroform	ug/L	20	19.1	96	78-117	
Chloromethane	ug/L	20	17.4	87	19-181	
cis-1,2-Dichloroethene	ug/L	20	18.9	94	78-119	
cis-1,3-Dichloropropene	ug/L	20	18.6	93	81-116	
Dibromochloromethane	ug/L	20	23.2	116	81-122	
Ethylbenzene	ug/L	20	19.1	95	83-112	
Methylene chloride	ug/L	20	19.6	98	78-127	
Styrene	ug/L	20	20.5	103	88-117	
Tetrachloroethene	ug/L	20	24.0	120	80-121	
Toluene	ug/L	20	19.0	95	78-113	
trans-1,2-Dichloroethene	ug/L	20	17.3	87	79-120	
trans-1,3-Dichloropropene	ug/L	20	19.6	98	81-119	
Vinyl chloride	ug/L	20	21.7	108	66-133	
Xylene (Total)	ug/L	60	59.4	99	83-114	
1,2-Dichloroethane-d4 (S)	%			108	80-120	
4-Bromofluorobenzene (S)	%			87	80-120	
Toluene-d8 (S)	%			104	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500793 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 7 day
Associated Lab Samples: 60256365019, 60256365020, 60256365022

METHOD BLANK: 2050408 Matrix: Water
Associated Lab Samples: 60256365019, 60256365020, 60256365022

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/30/17 10:12	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/30/17 10:12	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/30/17 10:12	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/30/17 10:12	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 10:12	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/30/17 10:12	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/30/17 10:12	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/30/17 10:12	
2-Hexanone	ug/L	ND	10.0	1.2	10/30/17 10:12	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/30/17 10:12	
Acetone	ug/L	ND	10.0	1.9	10/30/17 10:12	
Benzene	ug/L	ND	1.0	0.060	10/30/17 10:12	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/30/17 10:12	
Bromoform	ug/L	ND	1.0	0.070	10/30/17 10:12	
Bromomethane	ug/L	ND	5.0	0.16	10/30/17 10:12	
Carbon disulfide	ug/L	ND	5.0	0.12	10/30/17 10:12	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/30/17 10:12	
Chlorobenzene	ug/L	ND	1.0	0.21	10/30/17 10:12	
Chloroethane	ug/L	ND	1.0	0.15	10/30/17 10:12	
Chloroform	ug/L	ND	1.0	0.14	10/30/17 10:12	
Chloromethane	ug/L	ND	1.0	0.080	10/30/17 10:12	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/30/17 10:12	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/30/17 10:12	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/30/17 10:12	
Ethylbenzene	ug/L	ND	1.0	0.18	10/30/17 10:12	
Methylene chloride	ug/L	ND	1.0	0.15	10/30/17 10:12	
Styrene	ug/L	ND	1.0	0.12	10/30/17 10:12	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/30/17 10:12	
Toluene	ug/L	ND	1.0	0.17	10/30/17 10:12	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 10:12	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/30/17 10:12	
Trichloroethene	ug/L	ND	1.0	0.17	10/30/17 10:12	
Vinyl chloride	ug/L	ND	1.0	0.13	10/30/17 10:12	
Xylene (Total)	ug/L	ND	3.0	0.42	10/30/17 10:12	
1,2-Dichloroethane-d4 (S)	%	96	80-120		10/30/17 10:12	
4-Bromofluorobenzene (S)	%	96	80-120		10/30/17 10:12	
Toluene-d8 (S)	%	102	80-120		10/30/17 10:12	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

LABORATORY CONTROL SAMPLE: 2050409

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.1	105	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	18.0	90	74-124	
1,1,2-Trichloroethane	ug/L	20	18.6	93	81-118	
1,1-Dichloroethane	ug/L	20	21.4	107	82-122	
1,1-Dichloroethene	ug/L	20	21.1	105	78-123	
1,2-Dichloroethane	ug/L	20	20.5	103	78-117	
1,2-Dichloropropane	ug/L	20	21.8	109	81-118	
2-Butanone (MEK)	ug/L	100	96.5	97	72-117	
2-Hexanone	ug/L	100	90.7	91	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.0	96	77-124	
Acetone	ug/L	100	103	103	66-127	
Benzene	ug/L	20	21.4	107	82-115	
Bromodichloromethane	ug/L	20	21.3	106	83-123	
Bromoform	ug/L	20	19.5	97	79-126	
Bromomethane	ug/L	20	25.0	125	39-146	
Carbon disulfide	ug/L	20	20.7	103	75-121	
Carbon tetrachloride	ug/L	20	22.1	111	82-117	
Chlorobenzene	ug/L	20	20.1	100	89-114	
Chloroethane	ug/L	20	20.2	101	71-133	
Chloroform	ug/L	20	20.7	103	78-117	
Chloromethane	ug/L	20	20.7	103	19-181	
cis-1,2-Dichloroethene	ug/L	20	20.2	101	78-119	
cis-1,3-Dichloropropene	ug/L	20	21.7	108	81-116	
Dibromochloromethane	ug/L	20	19.4	97	81-122	
Ethylbenzene	ug/L	20	20.0	100	83-112	
Methylene chloride	ug/L	20	20.4	102	78-127	
Styrene	ug/L	20	21.3	107	88-117	
Tetrachloroethene	ug/L	20	20.3	101	80-121	
Toluene	ug/L	20	19.9	99	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.8	104	79-120	
trans-1,3-Dichloropropene	ug/L	20	18.5	93	81-119	
Trichloroethene	ug/L	20	19.8	99	78-118	
Vinyl chloride	ug/L	20	23.1	116	66-133	
Xylene (Total)	ug/L	60	63.5	106	83-114	
1,2-Dichloroethane-d4 (S)	%			95	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			98	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500574 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 60256365016, 60256365017, 60256365018, 60256365032

METHOD BLANK: 2049045 Matrix: Water
Associated Lab Samples: 60256365016, 60256365017, 60256365018, 60256365032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	ND	0.050	0.0048	10/28/17 14:04	

LABORATORY CONTROL SAMPLE: 2049046

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	.5	0.54	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2049047 2049048

Parameter	Units	60256365016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	ND	.5	.5	0.44	0.44	87	88	75-125	0	20	

SAMPLE DUPLICATE: 2049049

Parameter	Units	60256365017 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 2049050

Parameter	Units	60256491006 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 501675 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60256365032

METHOD BLANK: 2053526 Matrix: Water
Associated Lab Samples: 60256365032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.50	11/03/17 13:40	

LABORATORY CONTROL SAMPLE: 2053527

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2053528 2053529

Parameter	Units	60256491001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	51.9	50	50	97.8	98.5	92	93	80-120	1	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 501760 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60256365016, 60256365017, 60256365018, 60256365032

METHOD BLANK: 2053939 Matrix: Water
Associated Lab Samples: 60256365016, 60256365017, 60256365018, 60256365032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.50	11/04/17 07:58	
Sulfate	mg/L	ND	1.0	0.50	11/04/17 07:58	

LABORATORY CONTROL SAMPLE: 2053940

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	96	90-110	
Sulfate	mg/L	5	5.1	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2053941 2053942

Parameter	Units	60256365016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	272	100	100	370	370	99	99	80-120	0	15	
Sulfate	mg/L	1.7	5	5	6.8	7.0	102	105	80-120	2	15	

MATRIX SPIKE SAMPLE: 2053943

Parameter	Units	60256365017 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	235	100	335	100	80-120	
Sulfate	mg/L	1.4	5	6.5	102	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500272 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 60256365016, 60256365017, 60256365018

METHOD BLANK: 2047449 Matrix: Water
Associated Lab Samples: 60256365016, 60256365017, 60256365018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.050	10/25/17 15:33	
Nitrogen, Nitrite	mg/L	ND	0.10	0.030	10/25/17 15:33	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.050	10/25/17 15:33	

LABORATORY CONTROL SAMPLE: 2047450

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.1	114	70-130	
Nitrogen, Nitrite	mg/L	1	1.0	102	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	2.2	108	90-110	

MATRIX SPIKE SAMPLE: 2047451

Parameter	Units	60256363012 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	1.8	177	70-130	M1
Nitrogen, Nitrite	mg/L	ND	1	0.40	40	90-110	M1
Nitrogen, NO2 plus NO3	mg/L	ND	2	2.2	109	90-110	

MATRIX SPIKE SAMPLE: 2047453

Parameter	Units	60256369001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	87.3	20	113	129	70-130	
Nitrogen, Nitrite	mg/L	<0.60	20	9.2	46	90-110	M1
Nitrogen, NO2 plus NO3	mg/L	87.3	40	122	88	90-110	M1

SAMPLE DUPLICATE: 2047452

Parameter	Units	60256419001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	48.5	48.8	1	20	
Nitrogen, Nitrite	mg/L	ND	ND		20	
Nitrogen, NO2 plus NO3	mg/L	48.5	48.8	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500371
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 60256365032

METHOD BLANK: 2047954 Matrix: Water
Associated Lab Samples: 60256365032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.050	10/26/17 09:36	
Nitrogen, Nitrite	mg/L	ND	0.10	0.030	10/26/17 09:36	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.050	10/26/17 09:36	

LABORATORY CONTROL SAMPLE: 2047955

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.2	117	70-130	
Nitrogen, Nitrite	mg/L	1	1.0	100	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	2.2	109	90-110	

MATRIX SPIKE SAMPLE: 2047956

Parameter	Units	60256491001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	6.2	2	7.5	61	70-130	H1,M1
Nitrogen, Nitrite	mg/L	ND	2	0.50	25	90-110	H1,M1
Nitrogen, NO2 plus NO3	mg/L	6.2	4	8.0	43	90-110	H1,M1

MATRIX SPIKE SAMPLE: 2047958

Parameter	Units	60256422001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	7.5	2	9.5	99	70-130	
Nitrogen, Nitrite	mg/L	0.25	2	0.79	27	90-110	M1
Nitrogen, NO2 plus NO3	mg/L	7.8	4	10.3	63	90-110	M1

SAMPLE DUPLICATE: 2047957

Parameter	Units	60256491003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	ND	ND		20	
Nitrogen, Nitrite	mg/L	ND	ND		20	
Nitrogen, NO2 plus NO3	mg/L	ND	ND		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500485 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon
Associated Lab Samples: 60256365016, 60256365017, 60256365018, 60256365032

METHOD BLANK: 2048506 Matrix: Water
Associated Lab Samples: 60256365016, 60256365017, 60256365018, 60256365032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.13	10/27/17 09:16	

LABORATORY CONTROL SAMPLE: 2048507

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.5	111	80-120	

MATRIX SPIKE SAMPLE: 2048508

Parameter	Units	60256331001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	ND	5	6.0	110	80-120	

SAMPLE DUPLICATE: 2048509

Parameter	Units	60256331002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	ND	0.48J		25	

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QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60256365

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.

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-K Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: 500633
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 500637
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 500793
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 500795
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 500837
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 501009
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 501472
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60256365

ANALYTE QUALIFIERS

H1	Analysis conducted outside the EPA method holding time.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60256365

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60256365016	**RW-69-201710**	EPA 3010	500794	EPA 6010	500920
60256365032	**TMW-10-201710**	EPA 3010	500794	EPA 6010	500920
60256365001	**MW-60R-201710**	EPA 5030B/8260	500633		
60256365002	**TMW-16-201710**	EPA 5030B/8260	500633		
60256365003	**TMW-26-201710**	EPA 5030B/8260	500633		
60256365004	**MW-182-201710**	EPA 5030B/8260	500633		
60256365005	**TMW-30-201710**	EPA 5030B/8260	500633		
60256365006	**MW-68-201710**	EPA 5030B/8260	500633		
60256365007	**FD-02-201710**	EPA 5030B/8260	500633		
60256365007	**FD-02-201710**	EPA 5030B/8260	500795		
60256365008	**MW-57R-201710**	EPA 5030B/8260	500633		
60256365008	**MW-57R-201710**	EPA 5030B/8260	500795		
60256365009	**MW-56R-201710**	EPA 5030B/8260	500633		
60256365009	**MW-56R-201710**	EPA 5030B/8260	500837		
60256365010	**MW-17S-201710**	EPA 5030B/8260	500633		
60256365011	**TMW-21-201710**	EPA 5030B/8260	500633		
60256365011	**TMW-21-201710**	EPA 5030B/8260	500837		
60256365012	**TMW-24-201710**	EPA 5030B/8260	500633		
60256365012	**TMW-24-201710**	EPA 5030B/8260	500837		
60256365013	**MW-185-201710**	EPA 5030B/8260	500633		
60256365014	**MW-176-201710**	EPA 5030B/8260	500633		
60256365015	**MW-46R-201710**	EPA 5030B/8260	500837		
60256365015	**MW-46R-201710**	EPA 5030B/8260	501009		
60256365016	**RW-69-201710**	EPA 5030B/8260	500837		
60256365017	**MW-58R-201710**	EPA 5030B/8260	500637		
60256365017	**MW-58R-201710**	EPA 5030B/8260	500837		
60256365018	**IW-73-201710**	EPA 5030B/8260	500637		
60256365021	**MW-40R-201710**	EPA 5030B/8260	500637		
60256365023	**MW-196-201710**	EPA 5030B/8260	500642		
60256365024	**MW-99-201710**	EPA 5030B/8260	500637		
60256365025	**MW-98-201710**	EPA 5030B/8260	500642		
60256365026	**MW-184-201710**	EPA 5030B/8260	500642		
60256365027	**TMW-19-201710**	EPA 5030B/8260	500642		
60256365028	**MW-186-201710**	EPA 5030B/8260	500642		
60256365029	**FD-04-201710**	EPA 5030B/8260	500642		
60256365030	**MW-187-201710**	EPA 5030B/8260	500642		
60256365031	**MW-188-201710**	EPA 5030B/8260	500642		
60256365032	**TMW-10-201710**	EPA 5030B/8260	500642		
60256365033	**TMW-22-201710**	EPA 5030B/8260	500642		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60256365

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60256365033	**TMW-22-201710**	EPA 5030B/8260	501472		
60256365034	**EB-02-201710**	EPA 5030B/8260	500642		
60256365035	**TB-02-201710**	EPA 5030B/8260	500642		
60256365036	**TB-03-201710**	EPA 5030B/8260	500642		
60256365019	**MW-82-201710**	EPA 5030B/8260	500793		
60256365020	**FD-03-201710**	EPA 5030B/8260	500793		
60256365022	**IW-77-201710**	EPA 5030B/8260	500793		
60256365016	**RW-69-201710**	SM 4500-S-2 D	500574		
60256365017	**MW-58R-201710**	SM 4500-S-2 D	500574		
60256365018	**IW-73-201710**	SM 4500-S-2 D	500574		
60256365032	**TMW-10-201710**	SM 4500-S-2 D	500574		
60256365016	**RW-69-201710**	EPA 300.0	501760		
60256365017	**MW-58R-201710**	EPA 300.0	501760		
60256365018	**IW-73-201710**	EPA 300.0	501760		
60256365032	**TMW-10-201710**	EPA 300.0	501675		
60256365032	**TMW-10-201710**	EPA 300.0	501760		
60256365016	**RW-69-201710**	EPA 353.2	500272		
60256365017	**MW-58R-201710**	EPA 353.2	500272		
60256365018	**IW-73-201710**	EPA 353.2	500272		
60256365032	**TMW-10-201710**	EPA 353.2	500371		
60256365016	**RW-69-201710**	SM 5310C	500485		
60256365017	**MW-58R-201710**	SM 5310C	500485		
60256365018	**IW-73-201710**	SM 5310C	500485		
60256365032	**TMW-10-201710**	SM 5310C	500485		

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Sample Condition Upon Receipt

WO# : 60256365

60256365

Client Name: Environ

Courier: FedEx ☐ UPS ☐ VIA ☑ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☑ Foam ☐ None ☐ Other ☐

Thermometer Used: CF 0.0 T-266 / CF +0.3 T-239 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 2.2/1.9 **Corr. Factor** CF 0.0 CF +0.3 **Corrected** 2.2/1.9

Date and initials of person examining contents: DV 10/25/17

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	NO2/NO3
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	OTHR= 40ml vial with Ascorbic Acid.
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	Receive with TB.
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	II= TB2
Containers requiring pH preservation in compliance? (HNO3, H2SO4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	☑Yes ☐No ☐N/A	III= TB3
Cyanide water sample checks: ☑ N/A Lead acetate strip turns dark? (Record only) Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No ☐Yes ☐No	
Trip Blank present:	☑Yes ☐No ☐N/A	
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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same as section L

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 4

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Environ	Report To: Tamara House-Knight	Attention: Tamara House-Knight
Address: ~~7600 College Blvd., Ste. 625~~ Overland Park, KS 66210	Copy To:	Company Name: Environ
		Address: 124 W. Capitol Avenue
Email To: -	Purchase Order No.: NA	Pace Quote Reference: Little Rock, AR 72201
Phone: ~~913-553-5926~~ Fax:	Project Name: Fort Smith, AR	Pace Project Manager: Colleen Clyne
Requested Due Date/TAT: STD	Project Number:	Pace Profile #: 7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	6010-Iron	Ferric Iron calc. (send field Ferrous)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60256365
1	MW-60R-201710	W	G			10/24/17	0925		3				X					X	X								001
2	TMW-11C-201710	W	G			10/24/17	1058		3				X					X	X								002
3	TMW-24-201710	W	G			10/24/17	1248		3				X					X	X								003
4	MW-18R-201710	W	G			10/24/17	1505		3				X					X	X								004
5	TMW-30-201710	W	G			10/24/17	1658		3				X					X	X								005
6	MW-68-201710	W	G			10/24/17	1708		3				X					X	X								006
7	FD-02-201710	W	G			10/24/17	1536		3				X					X	X								007
8	MW-57R-201710	W	G			10/24/17	1520		3				X					X	X								008
9	MW-51R-201710	W	G			10/24/17	1600		3				X					X	X								009
10	MW-17S-201710	W	G			10/24/17	1440		3				X					X	X								010
11	TMW-21-201710	W	G			10/24/17	1424		3				X					X	X								011
12	TMW-24-201710	W	G			10/24/17	1250		3				X					X	X								012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Victoria Siegler REH	1800	10/24/17		10/25/17	0230	2.2	Y	Y	Y
							1.9	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Siegler

SIGNATURE of SAMPLER: Victoria Siegler DATE Signed (MM/DD/YY): 10/24/17

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

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 2 of 4

Section A
Required Client Information: Same as Section C

Company:	Environ
Address:	~~7500 College Blvd., Ste. 925~~
	~~Overland Park, KS 66210~~
Email To:	-
Phone:	~~913-563-5926~~ Fax:
Requested Due Date/TAT:	STD

Section B
Required Project Information:

Report To:	Tamara House-Knight
Copy To:	
Purchase Order No.:	NA
Project Name:	Fort Smith, AR
Project Number:	

Section C
Invoice Information:

Attention:	Tamara House-Knight
Company Name:	Environ
Address:	124 W. Capitol Avenue
Pace Quote Reference:	Little Rock, AR 72201
Pace Project Manager:	Colleen Clyne
Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D
Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

Pace Project No./Lab I.D.: 60256365

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH +Zn Acetate	$Na_2S_2O_3$	Methanol	Other Ascorbic Acid	Analysis Test Y/N	8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	6010-Iron	Ferric Iron calc. (send field Ferrous)	Notes	Residual Chlorine (Y/N)	Pace Project No./Lab I.D.
1	MW-18S-~~2710~~ 201710	W	G			10/24/17	1520		3				X						X							3D69H		013
2	MW-17U-201710	W	G			10/24/17	0935		3				X						X									014
3	MW-46R-201710	W	G			10/24/17	1043		3				X						X	~~X~~	~~X~~	~~X~~	~~X~~			03		015
4	~~AA~~ RW-09-201710	W	G			10/24/17	0940		7	X	X	X	X	X					X	X	X	X	X	4		BP3U AG3S[20] BP3N[20] BP3Z[110]		016
5	MW-58R-201710	W	G			10/24/17	1220		7	X	X	X	X	X					X	X	X	X	X					017
6	IW-73-201710	W	G			10/24/17	1125		7	X	X	X	X	X					X	-	-	-	X					018
7	MW-82-201710	W	G			10/24/17	1525		~~7~~ 3	~~X~~	~~X~~	~~X~~		X			X		X							30THR 7day hold		019
8	FD-03-201710	W	G			10/24/17	1525		7	~~X~~	~~X~~	~~X~~		X			X		X							7day hold		020
9	MW-40R-201710	W	G			10/24/17	1300		3				X						X									021
10	IW-77-201710	W	G			10/24/17	1635		3								X		X							7day hold		022
11	MW-19U-201710	W	G			10/24/17	0935		3				X						X									023
12	MW-19U-201710-MS	W	G			10/24/17	0935		3				X						X									~~024~~

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Victoria Siegel REH	10/24/17	1800	[signature] PASI	10/25	~~0205~~ 0230	2.2	Y	Y	Y
							1.9	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Siegel

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 10/24/17

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

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Page: 3 of 4

Section A Required Client Information: Same as section C

Company:	Environ
Address:	~~7500 College Blvd., Ste. 925~~
	~~Overland Park, KS 66210~~
Email To:	
Phone:	~~913-553-5926~~ Fax:
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	Tamara House-Knight
Copy To:	
Purchase Order No.:	NA
Project Name:	Fort Smith, AR
Project Number:	

Section C Invoice Information:

Attention:	Tamara House-Knight
Company Name:	Environ
Address:	124 W. Capitol Avenue
Pace Quote Reference:	Little Rock, AR 72201
Pace Project Manager:	Colleen Clyne
Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

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

Pace Project No./ Lab I.D.: 60256365

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH + Zn Acetate	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	6010-Iron	Ferric Iron calc. (send field Ferrous)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-196-201710-DS	W	G			10/24/17	0935		3				X						Y								3D694 — 025
2	MW-99-201710	W	G			10/24/17	0948		3				X						Y								~~024~~ 026
3	MW-98-201710	W	G			10/24/17	1236		3				X						X								~~025~~ 027
4	MW-184-201710	W	G			10/24/17	1057		3				X						Y								~~026~~ 028
5	TMW-19-201710	W	G			10/24/17	0940		3				X						X								~~027~~ 029
6	MW-186-201710	W	G			10/24/17	1040		3				X						Y								~~028~~ 030
7	FD-04-201710	W	G			10/24/17	1040		3				X						Y								~~029~~ 031
8	MW-187-201710	W	G			10/24/17	1200		3				X						Y								~~030~~ 032
9	MW-188-201710	W	G			10/24/17	1305		3				X						Y								~~031~~ 033
10	MW-188-201710-MS	W	G			10/24/17	1305		3				X						Y								- ~~032~~ 034
11	MW-188-201710-MSD	W	G			10/24/17	1305		3				X						X								- ~~033~~ 035
12	TMW-10-201710	W	G			10/24/17	1450		7	X	X	X	X	+					X	BP3U 20		A635 20	BP3N 4.0	1BP3Z			~~032 034~~ 036

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Victoria Siegl / RCH	10/24/17	1800	[signature] PASI	10/25/17	0230	2.2	Y	Y	Y
							1.9	Y	Y	Y

SAMPLE CONDITIONS

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Siegl

SIGNATURE of SAMPLER: Victoria Siegl DATE Signed (MM/DD/YY): 10/24/17

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

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Page: 4 of 4

Section A Required Client Information: Same as section C

Company:	Environ
Address:	~~7500 College Blvd., Ste. 925~~ ~~Overland Park, KS 66210~~
Email To:	-
Phone: ~~913-533-5920~~	Fax:
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	Tamara House-Knight
Copy To:	
Purchase Order No.:	NA
Project Name:	Fort Smith, AR
Project Number:	

Section C Invoice Information:

Attention:	Tamara House-Knight
Company Name:	Environ
Address:	124 W. Capitol Avenue
Pace Quote Reference:	Little Rock, AR 72201
Pace Project Manager:	Colleen Clyne
Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	8200 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	8010-Iron	Ferric Iron calc. (send field Ferrous)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TMW-22-201710	W	G			10/24/17	1050		3				X						X								
2	EB-02-201710	W	G			10/24/17	1725		3				X						X								
3	TB-02-201710	W	G			10/24/17	—		2				X						X								
4	TB-03-201710	W	G			10/24/17	—		2				X						X								
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											

60256365

SDG# 033 037 034 038 035 039 036 040

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Victoria Sieglen REH	10/24/17	1800		10/25/17	0230

SAMPLE CONDITIONS

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Sieglen

SIGNATURE of SAMPLER: Victoria Sieglen

DATE Signed (MM/DD/YY): 10/24/17

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

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Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

November 16, 2017

Nick Zurweller
Ramboll Environ
7500 College Blvd.
Ste. 295
Overland Park, KS 66210

RE: Project: FORT SMITH, AR
Pace Project No.: 60256510

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on October 26, 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.

RV1 - Revised report - "B" flags removed from trichloroethene for samples 026, 027, 032, and 036.

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

Sincerely,

Richard Mannz
richard.mannz@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: Tamara House-Knight, Ramboll Environ
M. Wilson

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 17-016-0
Illinois Certification #: 200030
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212018-1
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587
Missouri Certification: 10070

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: FORT SMITH, AR
Pace Project No.: 60256510

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60256510001	MW-62-201710	Water	10/25/17 15:42	10/26/17 09:00
60256510002	MW-96-201710	Water	10/25/17 11:00	10/26/17 09:00
60256510003	MW-97-201710	Water	10/25/17 13:14	10/26/17 09:00
60256510004	MW-183-201710	Water	10/25/17 09:51	10/26/17 09:00
60256510005	ITMW-2-201710	Water	10/25/17 14:15	10/26/17 09:00
60256510006	ITMW-1-201710	Water	10/25/17 15:14	10/26/17 09:00
60256510007	MW-55R-201710	Water	10/25/17 16:36	10/26/17 09:00
60256510008	IW-78-201710	Water	10/25/17 08:50	10/26/17 09:00
60256510009	ITMW-20-201710	Water	10/25/17 10:05	10/26/17 09:00
60256510010	ITMW-21-201710	Water	10/25/17 11:05	10/26/17 09:00
60256510011	ITMW-7-201710	Water	10/25/17 12:30	10/26/17 09:00
60256510012	MW-29-201710	Water	10/25/17 13:30	10/26/17 09:00
60256510013	ITMW-5-201710	Water	10/25/17 15:15	10/26/17 09:00
60256510014	MW-22-201710	Water	10/25/17 16:35	10/26/17 09:00
60256510015	MW-84-201710	Water	10/25/17 12:10	10/26/17 09:00
60256510016	MW-83-201710	Water	10/25/17 10:15	10/26/17 09:00
60256510017	MW-28-201710	Water	10/25/17 15:15	10/26/17 09:00
60256510018	MW-91-201710	Water	10/25/17 14:15	10/26/17 09:00
60256510019	MW-178-201710	Water	10/25/17 08:45	10/26/17 09:00
60256510020	FD-06-201710	Water	10/25/17 08:45	10/26/17 09:00
60256510021	MW-39R-201710	Water	10/25/17 09:30	10/26/17 09:00
60256510022	FD-05-201710	Water	10/25/17 10:07	10/26/17 09:00
60256510023	TMW-23-201710	Water	10/25/17 10:47	10/26/17 09:00
60256510024	MW-191-201710	Water	10/25/17 15:38	10/26/17 09:00
60256510025	MW-189-201710	Water	10/25/17 12:25	10/26/17 09:00
60256510026	MW-190-201710	Water	10/25/17 14:18	10/26/17 09:00
60256510027	MW-192-201710	Water	10/25/17 17:00	10/26/17 09:00
60256510028	TMW-27-201710	Water	10/25/17 15:35	10/26/17 09:00
60256510029	TMW-25-201710	Water	10/25/17 16:45	10/26/17 09:00
60256510030	ITMW-16-201710	Water	10/25/17 14:00	10/26/17 09:00
60256510031	ITMW-10-201710	Water	10/25/17 11:50	10/26/17 09:00
60256510032	MW-27-201710	Water	10/25/17 17:10	10/26/17 09:00
60256510033	MW-24-201710	Water	10/25/17 15:00	10/26/17 09:00
60256510034	ITMW-9-201710	Water	10/25/17 09:55	10/26/17 09:00
60256510035	MW-26-201710	Water	10/25/17 16:00	10/26/17 09:00
60256510036	TB-04-201710	Water	10/25/17 08:00	10/26/17 09:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60256510

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60256510001	MW-62-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510002	MW-96-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510003	MW-97-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510004	MW-183-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510005	ITMW-2-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510006	ITMW-1-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510007	MW-55R-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510008	IW-78-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510009	ITMW-20-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510010	ITMW-21-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510011	ITMW-7-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510012	MW-29-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510013	ITMW-5-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510014	MW-22-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510015	MW-84-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510016	MW-83-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510017	MW-28-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510018	MW-91-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510019	MW-178-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510020	FD-06-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510021	MW-39R-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510022	FD-05-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510023	TMW-23-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510024	MW-191-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510025	MW-189-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510026	MW-190-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510027	MW-192-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510028	TMW-27-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510029	TMW-25-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510030	ITMW-16-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510031	ITMW-10-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510032	MW-27-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510033	MW-24-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510034	ITMW-9-201710	EPA 6010	TDS	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	2	PASI-K

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60256510

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256510035	**MW-26-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256510036	**TB-04-201710**	EPA 5030B/8260	PGH	38	PASI-K

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256510

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Ramboll Environ_AR
Date: November 16, 2017

General Information:
1 sample was analyzed for EPA 6010. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 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.

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

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

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

Additional Comments:

Pace Analytical Services, LLC
9608 Loiret Blvd.
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(913)599-5665

PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256510

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: November 16, 2017

General Information:
36 samples were analyzed for EPA 5030B/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: 500793

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 500837

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 501040

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60256510012

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

- MS (Lab ID: 2051157)
  - Styrene
- MSD (Lab ID: 2051158)
  - Styrene

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256510

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: Ramboll Environ_AR
Date: November 16, 2017

General Information:
1 sample was analyzed for SM 4500-S-2 D. 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.

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.

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

Additional Comments:

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256510

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Ramboll Environ_AR
Date: November 16, 2017

General Information:
1 sample was analyzed for EPA 300.0. 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.

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256510

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Ramboll Environ_AR
Date: November 16, 2017

General Information:
1 sample was analyzed for EPA 353.2. 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.

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: 500492

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60256510034,60256590004

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

- MS (Lab ID: 2048688)
  - Nitrogen, NO2 plus NO3
  - Nitrogen, Nitrite
- MS (Lab ID: 2048690)
  - Nitrogen, Nitrate
  - Nitrogen, Nitrite

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

Additional Comments:

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256510

Method: **SM 5310C**
Description: 5310C TOC
Client: Ramboll Environ_AR
Date: November 16, 2017

General Information:
1 sample was analyzed for SM 5310C. 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.

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

QC Batch: 500954

B: Analyte was detected in the associated method blank.

- BLANK for HBN 500954 [WETA/478 (Lab ID: 2050852)
  - Total Organic Carbon

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.

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.

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-62-201710 **Lab ID: 60256510001** Collected: 10/25/17 15:42 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 17:52	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 17:52	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 17:52	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 17:52	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 17:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 17:52	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 17:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 17:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 17:52	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 17:52	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 17:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 17:52	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 17:52	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 17:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 17:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 17:52	75-35-4	
cis-1,2-Dichloroethene	**0.17J**	ug/L	1.0	0.080	1		10/31/17 17:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 17:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 17:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 17:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 17:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 17:52	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 17:52	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 17:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 17:52	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 17:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 17:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 17:52	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 17:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 17:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 17:52	79-00-5	
Trichloroethene	**0.38J**	ug/L	1.0	0.17	1		10/31/17 17:52	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 17:52	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 17:52	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/31/17 17:52	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/31/17 17:52	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/31/17 17:52	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 17:52		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-96-201710 **Lab ID: 60256510002** Collected: 10/25/17 11:00 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 18:06	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 18:06	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 18:06	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 18:06	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 18:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 18:06	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 18:06	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 18:06	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 18:06	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 18:06	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 18:06	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 18:06	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 18:06	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 18:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 18:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 18:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/31/17 18:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 18:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 18:06	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 18:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 18:06	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 18:06	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 18:06	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 18:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 18:06	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 18:06	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 18:06	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 18:06	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 18:06	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 18:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 18:06	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/31/17 18:06	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 18:06	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 18:06	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/31/17 18:06	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/31/17 18:06	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/31/17 18:06	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 18:06		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-97-201710 **Lab ID: 60256510003** Collected: 10/25/17 13:14 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 18:20	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 18:20	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 18:20	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 18:20	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 18:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 18:20	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 18:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 18:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 18:20	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 18:20	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 18:20	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 18:20	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 18:20	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 18:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 18:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 18:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/31/17 18:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 18:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 18:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 18:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 18:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 18:20	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 18:20	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 18:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 18:20	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 18:20	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 18:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 18:20	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 18:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 18:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 18:20	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/31/17 18:20	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 18:20	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 18:20	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/31/17 18:20	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/31/17 18:20	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/31/17 18:20	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 18:20		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-183-201710 **Lab ID: 60256510004** Collected: 10/25/17 09:51 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 18:34	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 18:34	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 18:34	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 18:34	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 18:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 18:34	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 18:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 18:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 18:34	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 18:34	75-00-3	
Chloroform	**0.16J**	ug/L	1.0	0.14	1		10/31/17 18:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 18:34	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 18:34	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 18:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 18:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 18:34	75-35-4	
cis-1,2-Dichloroethene	**0.24J**	ug/L	1.0	0.080	1		10/31/17 18:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 18:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 18:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 18:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 18:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 18:34	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 18:34	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 18:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 18:34	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 18:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 18:34	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 18:34	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 18:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 18:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 18:34	79-00-5	
Trichloroethene	**2.8**	ug/L	1.0	0.17	1		10/31/17 18:34	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 18:34	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 18:34	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/31/17 18:34	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/31/17 18:34	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/31/17 18:34	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 18:34		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-2-201710 **Lab ID: 60256510005** Collected: 10/25/17 14:15 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 18:48	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 18:48	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 18:48	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 18:48	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 18:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 18:48	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 18:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 18:48	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 18:48	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 18:48	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 18:48	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 18:48	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 18:48	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 18:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 18:48	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 18:48	75-35-4	
cis-1,2-Dichloroethene	**0.29J**	ug/L	1.0	0.080	1		10/31/17 18:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 18:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 18:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 18:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 18:48	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 18:48	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 18:48	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 18:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 18:48	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 18:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 18:48	79-34-5	
Tetrachloroethene	**0.76J**	ug/L	1.0	0.10	1		10/31/17 18:48	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 18:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 18:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 18:48	79-00-5	
Trichloroethene	**0.34J**	ug/L	1.0	0.17	1		10/31/17 18:48	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 18:48	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 18:48	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/31/17 18:48	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/31/17 18:48	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/31/17 18:48	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 18:48		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-1-201710 **Lab ID: 60256510006** Collected: 10/25/17 15:14 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 19:02	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 19:02	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 19:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 19:02	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 19:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 19:02	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 19:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 19:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 19:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 19:02	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 19:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 19:02	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 19:02	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 19:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 19:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 19:02	75-35-4	
cis-1,2-Dichloroethene	**3.8**	ug/L	1.0	0.080	1		10/31/17 19:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 19:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 19:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 19:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 19:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 19:02	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 19:02	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 19:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 19:02	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 19:02	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 19:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 19:02	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 19:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 19:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 19:02	79-00-5	
Trichloroethene	**8.9**	ug/L	1.0	0.17	1		10/31/17 19:02	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 19:02	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 19:02	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/31/17 19:02	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/31/17 19:02	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/31/17 19:02	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 19:02		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-55R-201710 **Lab ID: 60256510007** Collected: 10/25/17 16:36 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 19:16	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 19:16	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 19:16	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 19:16	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 19:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 19:16	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 19:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 19:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 19:16	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 19:16	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 19:16	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 19:16	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 19:16	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 19:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 19:16	107-06-2	
1,1-Dichloroethene	**0.28J**	ug/L	1.0	0.20	1		10/31/17 19:16	75-35-4	
cis-1,2-Dichloroethene	**0.77J**	ug/L	1.0	0.080	1		10/31/17 19:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 19:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 19:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 19:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 19:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 19:16	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 19:16	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 19:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 19:16	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 19:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 19:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 19:16	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 19:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 19:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 19:16	79-00-5	
Trichloroethene	**10.9**	ug/L	1.0	0.17	1		10/31/17 19:16	79-01-6	
Vinyl chloride	**0.15J**	ug/L	1.0	0.13	1		10/31/17 19:16	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 19:16	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/31/17 19:16	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/31/17 19:16	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/31/17 19:16	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 19:16		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: IW-78-201710 **Lab ID: 60256510008** Collected: 10/25/17 08:50 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**9.1J**	ug/L	10.0	1.9	1		10/30/17 12:05	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 12:05	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 12:05	75-27-4	
Bromoform	**1.8**	ug/L	1.0	0.070	1		10/30/17 12:05	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 12:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 12:05	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 12:05	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 12:05	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 12:05	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 12:05	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 12:05	67-66-3	
Chloromethane	**6.2**	ug/L	1.0	0.080	1		10/30/17 12:05	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 12:05	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 12:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 12:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 12:05	75-35-4	
cis-1,2-Dichloroethene	**0.16J**	ug/L	1.0	0.080	1		10/30/17 12:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 12:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 12:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 12:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 12:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 12:05	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 12:05	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 12:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 12:05	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 12:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 12:05	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 12:05	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 12:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 12:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 12:05	79-00-5	
Trichloroethene	**7.0**	ug/L	1.0	0.17	1		10/30/17 12:05	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 12:05	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 12:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 12:05	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		10/30/17 12:05	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/30/17 12:05	2037-26-5	
Preservation pH	**5.0**		0.10	0.10	1		10/30/17 12:05		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-20-201710 **Lab ID: 60256510009** Collected: 10/25/17 10:05 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 19:30	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 19:30	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 19:30	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 19:30	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 19:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 19:30	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 19:30	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 19:30	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 19:30	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 19:30	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 19:30	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 19:30	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 19:30	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 19:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 19:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 19:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/31/17 19:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 19:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 19:30	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 19:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 19:30	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 19:30	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 19:30	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 19:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 19:30	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 19:30	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 19:30	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 19:30	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 19:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 19:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 19:30	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/31/17 19:30	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 19:30	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 19:30	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/31/17 19:30	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/31/17 19:30	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/31/17 19:30	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 19:30		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-21-201710 **Lab ID: 60256510010** Collected: 10/25/17 11:05 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 19:44	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 19:44	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 19:44	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 19:44	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 19:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 19:44	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 19:44	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 19:44	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 19:44	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 19:44	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 19:44	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 19:44	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 19:44	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 19:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 19:44	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 19:44	75-35-4	
cis-1,2-Dichloroethene	**0.25J**	ug/L	1.0	0.080	1		10/31/17 19:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 19:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 19:44	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 19:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 19:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 19:44	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 19:44	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 19:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 19:44	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 19:44	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 19:44	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 19:44	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 19:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 19:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 19:44	79-00-5	
Trichloroethene	**7.9**	ug/L	1.0	0.17	1		10/31/17 19:44	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 19:44	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 19:44	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/31/17 19:44	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/31/17 19:44	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/31/17 19:44	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 19:44		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-7-201710 **Lab ID: 60256510011** Collected: 10/25/17 12:30 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 21:50	67-64-1	
Benzene	**0.11J**	ug/L	1.0	0.060	1		10/31/17 21:50	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 21:50	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 21:50	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 21:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 21:50	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 21:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 21:50	56-23-5	
Chlorobenzene	**2.2**	ug/L	1.0	0.21	1		10/31/17 21:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 21:50	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 21:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 21:50	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 21:50	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 21:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 21:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 21:50	75-35-4	
cis-1,2-Dichloroethene	**7.5**	ug/L	1.0	0.080	1		10/31/17 21:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 21:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 21:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 21:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 21:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 21:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 21:50	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 21:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 21:50	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 21:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 21:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 21:50	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 21:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 21:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 21:50	79-00-5	
Trichloroethene	**23.4**	ug/L	1.0	0.17	1		10/31/17 21:50	79-01-6	
Vinyl chloride	**0.20J**	ug/L	1.0	0.13	1		10/31/17 21:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 21:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/31/17 21:50	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/31/17 21:50	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/31/17 21:50	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 21:50		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-29-201710 **Lab ID: 60256510012** Collected: 10/25/17 13:30 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 22:04	67-64-1	
Benzene	**0.11J**	ug/L	1.0	0.060	1		10/31/17 22:04	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 22:04	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 22:04	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 22:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 22:04	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 22:04	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 22:04	56-23-5	
Chlorobenzene	**4.5**	ug/L	1.0	0.21	1		10/31/17 22:04	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 22:04	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 22:04	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 22:04	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 22:04	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 22:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 22:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 22:04	75-35-4	
cis-1,2-Dichloroethene	**0.16J**	ug/L	1.0	0.080	1		10/31/17 22:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 22:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 22:04	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 22:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 22:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 22:04	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 22:04	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 22:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 22:04	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 22:04	100-42-5	M1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 22:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 22:04	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 22:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 22:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 22:04	79-00-5	
Trichloroethene	**0.19J**	ug/L	1.0	0.17	1		10/31/17 22:04	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 22:04	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 22:04	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/31/17 22:04	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/31/17 22:04	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/31/17 22:04	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 22:04		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-5-201710 **Lab ID: 60256510013** Collected: 10/25/17 15:15 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 19:34	67-64-1	
Benzene	**0.10J**	ug/L	1.0	0.060	1		10/30/17 19:34	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 19:34	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 19:34	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 19:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 19:34	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 19:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 19:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 19:34	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 19:34	75-00-3	
Chloroform	**0.50J**	ug/L	1.0	0.14	1		10/30/17 19:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 19:34	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 19:34	124-48-1	
1,1-Dichloroethane	**2.0**	ug/L	1.0	0.050	1		10/30/17 19:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 19:34	107-06-2	
1,1-Dichloroethene	**6.0**	ug/L	1.0	0.20	1		10/30/17 19:34	75-35-4	
cis-1,2-Dichloroethene	**38.2**	ug/L	1.0	0.080	1		10/30/17 19:34	156-59-2	
trans-1,2-Dichloroethene	**0.42J**	ug/L	1.0	0.20	1		10/30/17 19:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 19:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 19:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 19:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 19:34	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 19:34	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 19:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 19:34	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 19:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 19:34	79-34-5	
Tetrachloroethene	**1.4**	ug/L	1.0	0.10	1		10/30/17 19:34	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 19:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 19:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 19:34	79-00-5	
Trichloroethene	**1470**	ug/L	20.0	3.4	20		11/01/17 00:52	79-01-6	
Vinyl chloride	**1.6**	ug/L	1.0	0.13	1		10/30/17 19:34	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 19:34	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/30/17 19:34	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/30/17 19:34	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		10/30/17 19:34	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 19:34		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-22-201710 **Lab ID: 60256510014** Collected: 10/25/17 16:35 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 17:42	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 17:42	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 17:42	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 17:42	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 17:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 17:42	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 17:42	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 17:42	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 17:42	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 17:42	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 17:42	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 17:42	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 17:42	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 17:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 17:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 17:42	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 17:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 17:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 17:42	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 17:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 17:42	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 17:42	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 17:42	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 17:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 17:42	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 17:42	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 17:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 17:42	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 17:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 17:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 17:42	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 17:42	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 17:42	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 17:42	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/30/17 17:42	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/30/17 17:42	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/30/17 17:42	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 17:42		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-84-201710 **Lab ID: 60256510015** Collected: 10/25/17 12:10 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**16.0**	ug/L	10.0	1.9	1		10/30/17 12:19	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 12:19	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 12:19	75-27-4	
Bromoform	**8.4**	ug/L	1.0	0.070	1		10/30/17 12:19	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 12:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 12:19	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 12:19	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 12:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 12:19	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 12:19	75-00-3	
Chloroform	**0.20J**	ug/L	1.0	0.14	1		10/30/17 12:19	67-66-3	
Chloromethane	**3.2**	ug/L	1.0	0.080	1		10/30/17 12:19	74-87-3	
Dibromochloromethane	**0.38J**	ug/L	1.0	0.21	1		10/30/17 12:19	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 12:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 12:19	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 12:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 12:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 12:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 12:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 12:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 12:19	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 12:19	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 12:19	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 12:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 12:19	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 12:19	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 12:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 12:19	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 12:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 12:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 12:19	79-00-5	
Trichloroethene	**0.98J**	ug/L	1.0	0.17	1		10/30/17 12:19	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 12:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 12:19	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/30/17 12:19	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/30/17 12:19	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 12:19	2037-26-5	
Preservation pH	**5.0**		0.10	0.10	1		10/30/17 12:19		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-83-201710 **Lab ID: 60256510016** Collected: 10/25/17 10:15 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**11.5**	ug/L	10.0	1.9	1		10/30/17 12:33	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 12:33	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 12:33	75-27-4	
Bromoform	**1.2**	ug/L	1.0	0.070	1		10/30/17 12:33	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 12:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 12:33	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 12:33	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 12:33	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 12:33	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 12:33	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 12:33	67-66-3	
Chloromethane	**2.6**	ug/L	1.0	0.080	1		10/30/17 12:33	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 12:33	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 12:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 12:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 12:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 12:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 12:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 12:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 12:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 12:33	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 12:33	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 12:33	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 12:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 12:33	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 12:33	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 12:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 12:33	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 12:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 12:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 12:33	79-00-5	
Trichloroethene	**4.8**	ug/L	1.0	0.17	1		10/30/17 12:33	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 12:33	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 12:33	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/30/17 12:33	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		1		10/30/17 12:33	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 12:33	2037-26-5	
Preservation pH	**5.0**		0.10	0.10	1		10/30/17 12:33		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-28-201710 **Lab ID: 60256510017** Collected: 10/25/17 15:15 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 17:56	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 17:56	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 17:56	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 17:56	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 17:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 17:56	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 17:56	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 17:56	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 17:56	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 17:56	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 17:56	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 17:56	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 17:56	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 17:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 17:56	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 17:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 17:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 17:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 17:56	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 17:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 17:56	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 17:56	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 17:56	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 17:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 17:56	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 17:56	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 17:56	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 17:56	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 17:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 17:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 17:56	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 17:56	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 17:56	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 17:56	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/30/17 17:56	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/30/17 17:56	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 17:56	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 17:56		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-91-201710 **Lab ID: 60256510018** Collected: 10/25/17 14:15 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 19:48	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 19:48	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 19:48	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 19:48	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 19:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 19:48	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 19:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 19:48	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 19:48	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 19:48	75-00-3	
Chloroform	**0.19J**	ug/L	1.0	0.14	1		10/30/17 19:48	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 19:48	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 19:48	124-48-1	
1,1-Dichloroethane	**1.7**	ug/L	1.0	0.050	1		10/30/17 19:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 19:48	107-06-2	
1,1-Dichloroethene	**4.8**	ug/L	1.0	0.20	1		10/30/17 19:48	75-35-4	
cis-1,2-Dichloroethene	**36.4**	ug/L	1.0	0.080	1		10/30/17 19:48	156-59-2	
trans-1,2-Dichloroethene	**0.48J**	ug/L	1.0	0.20	1		10/30/17 19:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 19:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 19:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 19:48	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 19:48	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 19:48	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 19:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 19:48	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 19:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 19:48	79-34-5	
Tetrachloroethene	**3.2**	ug/L	1.0	0.10	1		10/30/17 19:48	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 19:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 19:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 19:48	79-00-5	
Trichloroethene	**534**	ug/L	10.0	1.7	10		11/01/17 01:06	79-01-6	
Vinyl chloride	**0.27J**	ug/L	1.0	0.13	1		10/30/17 19:48	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 19:48	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 19:48	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/30/17 19:48	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/30/17 19:48	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 19:48		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-178-201710 **Lab ID: 60256510019** Collected: 10/25/17 08:45 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 18:10	67-64-1	
Benzene	**0.14J**	ug/L	1.0	0.060	1		10/30/17 18:10	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 18:10	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 18:10	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 18:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 18:10	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 18:10	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 18:10	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 18:10	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 18:10	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 18:10	67-66-3	
Chloromethane	**0.12J**	ug/L	1.0	0.080	1		10/30/17 18:10	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 18:10	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 18:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 18:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 18:10	75-35-4	
cis-1,2-Dichloroethene	**0.97J**	ug/L	1.0	0.080	1		10/30/17 18:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 18:10	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 18:10	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 18:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 18:10	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 18:10	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 18:10	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 18:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 18:10	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 18:10	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 18:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 18:10	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 18:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 18:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 18:10	79-00-5	
Trichloroethene	**3.9**	ug/L	1.0	0.17	1		10/30/17 18:10	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 18:10	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 18:10	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/30/17 18:10	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/30/17 18:10	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/30/17 18:10	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 18:10		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: FD-06-201710 **Lab ID: 60256510020** Collected: 10/25/17 08:45 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.0J**	ug/L	10.0	1.9	1		10/30/17 18:38	67-64-1	
Benzene	**0.15J**	ug/L	1.0	0.060	1		10/30/17 18:38	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 18:38	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 18:38	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 18:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 18:38	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 18:38	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 18:38	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 18:38	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 18:38	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 18:38	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 18:38	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 18:38	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 18:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 18:38	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 18:38	75-35-4	
cis-1,2-Dichloroethene	**0.96J**	ug/L	1.0	0.080	1		10/30/17 18:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 18:38	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 18:38	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 18:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 18:38	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 18:38	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 18:38	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 18:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 18:38	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 18:38	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 18:38	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 18:38	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 18:38	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 18:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 18:38	79-00-5	
Trichloroethene	**3.6**	ug/L	1.0	0.17	1		10/30/17 18:38	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 18:38	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 18:38	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/30/17 18:38	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	80-120		1		10/30/17 18:38	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/30/17 18:38	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 18:38		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-39R-201710 **Lab ID: 60256510021** Collected: 10/25/17 09:30 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 18:24	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 18:24	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 18:24	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 18:24	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 18:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 18:24	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 18:24	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 18:24	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 18:24	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 18:24	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 18:24	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 18:24	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 18:24	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 18:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 18:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 18:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 18:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 18:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 18:24	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 18:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 18:24	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 18:24	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 18:24	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 18:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 18:24	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 18:24	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 18:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 18:24	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 18:24	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 18:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 18:24	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 18:24	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 18:24	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 18:24	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/30/17 18:24	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/30/17 18:24	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/30/17 18:24	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 18:24		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: FD-05-201710 **Lab ID: 60256510022** Collected: 10/25/17 10:07 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 18:52	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 18:52	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 18:52	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 18:52	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 18:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 18:52	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 18:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 18:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 18:52	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 18:52	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 18:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 18:52	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 18:52	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 18:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 18:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 18:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 18:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 18:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 18:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 18:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 18:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 18:52	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 18:52	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 18:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 18:52	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 18:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 18:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 18:52	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 18:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 18:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 18:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 18:52	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 18:52	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 18:52	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/30/17 18:52	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		10/30/17 18:52	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 18:52	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 18:52		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: TMW-23-201710 **Lab ID: 60256510023** Collected: 10/25/17 10:47 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 00:29	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 00:29	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 00:29	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 00:29	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 00:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 00:29	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 00:29	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 00:29	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 00:29	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:29	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 00:29	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 00:29	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 00:29	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 00:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 00:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 00:29	75-35-4	
cis-1,2-Dichloroethene	**0.89J**	ug/L	1.0	0.080	1		10/31/17 00:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 00:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 00:29	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 00:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 00:29	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 00:29	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 00:29	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 00:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 00:29	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 00:29	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:29	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 00:29	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 00:29	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 00:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 00:29	79-00-5	
Trichloroethene	**62.2**	ug/L	1.0	0.17	1		10/31/17 00:29	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 00:29	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 00:29	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/31/17 00:29	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/31/17 00:29	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/31/17 00:29	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 00:29		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-191-201710 **Lab ID: 60256510024** Collected: 10/25/17 15:38 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 22:23	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 22:23	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 22:23	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 22:23	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 22:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 22:23	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 22:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 22:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 22:23	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 22:23	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 22:23	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 22:23	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 22:23	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 22:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 22:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 22:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 22:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 22:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 22:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 22:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 22:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 22:23	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 22:23	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 22:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 22:23	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 22:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 22:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 22:23	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 22:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 22:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 22:23	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 22:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 22:23	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 22:23	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/30/17 22:23	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/30/17 22:23	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 22:23	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 22:23		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-189-201710 **Lab ID: 60256510025** Collected: 10/25/17 12:25 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 22:37	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 22:37	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 22:37	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 22:37	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 22:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 22:37	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 22:37	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 22:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 22:37	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 22:37	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 22:37	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 22:37	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 22:37	124-48-1	
1,1-Dichloroethane	**1.8**	ug/L	1.0	0.050	1		10/30/17 22:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 22:37	107-06-2	
1,1-Dichloroethene	**1.5**	ug/L	1.0	0.20	1		10/30/17 22:37	75-35-4	
cis-1,2-Dichloroethene	**9.5**	ug/L	1.0	0.080	1		10/30/17 22:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 22:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 22:37	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 22:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 22:37	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 22:37	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 22:37	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 22:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 22:37	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 22:37	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 22:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 22:37	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 22:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 22:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 22:37	79-00-5	
Trichloroethene	**195**	ug/L	5.0	0.85	5		11/01/17 01:20	79-01-6	
Vinyl chloride	**0.40J**	ug/L	1.0	0.13	1		10/30/17 22:37	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 22:37	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/30/17 22:37	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/30/17 22:37	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/30/17 22:37	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 22:37		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-190-201710 **Lab ID: 60256510026** Collected: 10/25/17 14:18 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.6J**	ug/L	10.0	1.9	1		10/30/17 22:51	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 22:51	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 22:51	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 22:51	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 22:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 22:51	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 22:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 22:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 22:51	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 22:51	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 22:51	67-66-3	
Chloromethane	**0.13J**	ug/L	1.0	0.080	1		10/30/17 22:51	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 22:51	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 22:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 22:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 22:51	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 22:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 22:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 22:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 22:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 22:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 22:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 22:51	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 22:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 22:51	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 22:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 22:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 22:51	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 22:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 22:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 22:51	79-00-5	
Trichloroethene	**0.94J**	ug/L	1.0	0.17	1		10/30/17 22:51	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 22:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 22:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/30/17 22:51	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/30/17 22:51	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/30/17 22:51	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 22:51		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-192-201710 **Lab ID: 60256510027** Collected: 10/25/17 17:00 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 23:05	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 23:05	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 23:05	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 23:05	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 23:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 23:05	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 23:05	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 23:05	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 23:05	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 23:05	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 23:05	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 23:05	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 23:05	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 23:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 23:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 23:05	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 23:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 23:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 23:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 23:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 23:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 23:05	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 23:05	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 23:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 23:05	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 23:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 23:05	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 23:05	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 23:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 23:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 23:05	79-00-5	
Trichloroethene	**0.25J**	ug/L	1.0	0.17	1		10/30/17 23:05	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 23:05	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 23:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 23:05	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/30/17 23:05	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 23:05	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 23:05		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: TMW-27-201710 **Lab ID: 60256510028** Collected: 10/25/17 15:35 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 23:19	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 23:19	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 23:19	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 23:19	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 23:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 23:19	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 23:19	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 23:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 23:19	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 23:19	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 23:19	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 23:19	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 23:19	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 23:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 23:19	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 23:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 23:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 23:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 23:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 23:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 23:19	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 23:19	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 23:19	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 23:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 23:19	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 23:19	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 23:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 23:19	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 23:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 23:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 23:19	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 23:19	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 23:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 23:19	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/30/17 23:19	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		1		10/30/17 23:19	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/30/17 23:19	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 23:19		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: TMW-25-201710 **Lab ID: 60256510029** Collected: 10/25/17 16:45 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 00:57	67-64-1	
Benzene	**0.10J**	ug/L	1.0	0.060	1		10/31/17 00:57	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 00:57	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 00:57	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 00:57	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 00:57	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 00:57	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 00:57	56-23-5	
Chlorobenzene	**2.3**	ug/L	1.0	0.21	1		10/31/17 00:57	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:57	75-00-3	
Chloroform	**0.28J**	ug/L	1.0	0.14	1		10/31/17 00:57	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 00:57	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 00:57	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 00:57	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 00:57	107-06-2	
1,1-Dichloroethene	**0.33J**	ug/L	1.0	0.20	1		10/31/17 00:57	75-35-4	
cis-1,2-Dichloroethene	**11.2**	ug/L	1.0	0.080	1		10/31/17 00:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 00:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 00:57	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 00:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 00:57	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 00:57	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 00:57	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 00:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 00:57	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 00:57	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:57	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 00:57	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 00:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 00:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 00:57	79-00-5	
Trichloroethene	**245**	ug/L	5.0	0.85	5		11/01/17 01:34	79-01-6	
Vinyl chloride	**0.41J**	ug/L	1.0	0.13	1		10/31/17 00:57	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 00:57	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/31/17 00:57	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/31/17 00:57	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/31/17 00:57	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 00:57		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-16-201710 **Lab ID: 60256510030** Collected: 10/25/17 14:00 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 23:33	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 23:33	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 23:33	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 23:33	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 23:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 23:33	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 23:33	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 23:33	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 23:33	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 23:33	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 23:33	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 23:33	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 23:33	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 23:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 23:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 23:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 23:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 23:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 23:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 23:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 23:33	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 23:33	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 23:33	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 23:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 23:33	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 23:33	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 23:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 23:33	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 23:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 23:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 23:33	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 23:33	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 23:33	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 23:33	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/30/17 23:33	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		1		10/30/17 23:33	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/30/17 23:33	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 23:33		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-10-201710 **Lab ID: 60256510031** Collected: 10/25/17 11:50 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 23:47	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 23:47	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 23:47	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 23:47	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 23:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 23:47	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 23:47	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 23:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 23:47	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 23:47	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 23:47	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 23:47	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 23:47	124-48-1	
1,1-Dichloroethane	**1.0**	ug/L	1.0	0.050	1		10/30/17 23:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 23:47	107-06-2	
1,1-Dichloroethene	**1.2**	ug/L	1.0	0.20	1		10/30/17 23:47	75-35-4	
cis-1,2-Dichloroethene	**13.3**	ug/L	1.0	0.080	1		10/30/17 23:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 23:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 23:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 23:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 23:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 23:47	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 23:47	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 23:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 23:47	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 23:47	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 23:47	79-34-5	
Tetrachloroethene	**0.29J**	ug/L	1.0	0.10	1		10/30/17 23:47	127-18-4	
Toluene	**0.28J**	ug/L	1.0	0.17	1		10/30/17 23:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 23:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 23:47	79-00-5	
Trichloroethene	**72.9**	ug/L	1.0	0.17	1		10/30/17 23:47	79-01-6	
Vinyl chloride	**0.82J**	ug/L	1.0	0.13	1		10/30/17 23:47	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 23:47	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 23:47	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/30/17 23:47	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/30/17 23:47	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 23:47		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-27-201710 **Lab ID: 60256510032** Collected: 10/25/17 17:10 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 00:01	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 00:01	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 00:01	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 00:01	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 00:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 00:01	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 00:01	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 00:01	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 00:01	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:01	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 00:01	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 00:01	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 00:01	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 00:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 00:01	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 00:01	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/31/17 00:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 00:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 00:01	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 00:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 00:01	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 00:01	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 00:01	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 00:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 00:01	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 00:01	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:01	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 00:01	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 00:01	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 00:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 00:01	79-00-5	
Trichloroethene	**0.41J**	ug/L	1.0	0.17	1		10/31/17 00:01	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 00:01	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 00:01	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/31/17 00:01	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/31/17 00:01	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/31/17 00:01	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 00:01		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-24-201710 **Lab ID: 60256510033** Collected: 10/25/17 15:00 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**30.4**	ug/L	10.0	1.9	1		10/30/17 13:29	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 13:29	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 13:29	75-27-4	
Bromoform	**15.0**	ug/L	1.0	0.070	1		10/30/17 13:29	75-25-2	
Bromomethane	**2.2J**	ug/L	5.0	0.16	1		10/30/17 13:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 13:29	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 13:29	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 13:29	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 13:29	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 13:29	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 13:29	67-66-3	
Chloromethane	**3.1**	ug/L	1.0	0.080	1		10/30/17 13:29	74-87-3	
Dibromochloromethane	**0.70J**	ug/L	1.0	0.21	1		10/30/17 13:29	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 13:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 13:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 13:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 13:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 13:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 13:29	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 13:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 13:29	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 13:29	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 13:29	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 13:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 13:29	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 13:29	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 13:29	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 13:29	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 13:29	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 13:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 13:29	79-00-5	
Trichloroethene	**20.9**	ug/L	1.0	0.17	1		10/30/17 13:29	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 13:29	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 13:29	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/30/17 13:29	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/30/17 13:29	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/30/17 13:29	2037-26-5	
Preservation pH	**3.0**		0.10	0.10	1		10/30/17 13:29		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-9-201710 **Lab ID: 60256510034** Collected: 10/25/17 09:55 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**37.2J**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:15	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 00:43	67-64-1	
Benzene	**0.65J**	ug/L	1.0	0.060	1		10/31/17 00:43	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 00:43	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 00:43	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 00:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 00:43	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 00:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 00:43	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 00:43	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:43	75-00-3	
Chloroform	**0.31J**	ug/L	1.0	0.14	1		10/31/17 00:43	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 00:43	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 00:43	124-48-1	
1,1-Dichloroethane	**4.6**	ug/L	1.0	0.050	1		10/31/17 00:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 00:43	107-06-2	
1,1-Dichloroethene	**7.4**	ug/L	1.0	0.20	1		10/31/17 00:43	75-35-4	
cis-1,2-Dichloroethene	**60.8**	ug/L	1.0	0.080	1		10/31/17 00:43	156-59-2	
trans-1,2-Dichloroethene	**0.74J**	ug/L	1.0	0.20	1		10/31/17 00:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 00:43	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 00:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 00:43	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 00:43	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 00:43	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 00:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 00:43	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 00:43	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:43	79-34-5	
Tetrachloroethene	**1.4**	ug/L	1.0	0.10	1		10/31/17 00:43	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 00:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 00:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 00:43	79-00-5	
Trichloroethene	**797**	ug/L	10.0	1.7	10		11/01/17 01:48	79-01-6	
Vinyl chloride	**1.7**	ug/L	1.0	0.13	1		10/31/17 00:43	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 00:43	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/31/17 00:43	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/31/17 00:43	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/31/17 00:43	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 00:43		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:12	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-9-201710 **Lab ID: 60256510034** Collected: 10/25/17 09:55 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**74.8**	mg/L	10.0	5.0	10		11/05/17 04:53	16887-00-6	
Sulfate	**33.5**	mg/L	10.0	5.0	10		11/05/17 04:53	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**3.4**	mg/L	0.10	0.050	1		10/27/17 09:23		
Nitrogen, Nitrite	**0.27**	mg/L	0.10	0.030	1		10/27/17 09:23		M1
Nitrogen, NO2 plus NO3	**3.7**	mg/L	0.10	0.050	1		10/27/17 09:23		M1
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**2.8**	mg/L	1.0	0.13	1		10/31/17 18:59	7440-44-0	B

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-26-201710 **Lab ID: 60256510035** Collected: 10/25/17 16:00 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 00:15	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 00:15	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 00:15	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 00:15	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 00:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 00:15	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 00:15	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 00:15	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 00:15	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:15	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 00:15	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 00:15	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 00:15	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 00:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 00:15	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 00:15	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/31/17 00:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 00:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 00:15	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 00:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 00:15	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 00:15	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 00:15	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 00:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 00:15	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 00:15	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:15	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 00:15	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 00:15	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 00:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 00:15	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/31/17 00:15	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 00:15	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 00:15	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/31/17 00:15	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	80-120		1		10/31/17 00:15	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/31/17 00:15	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 00:15		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: TB-04-201710 **Lab ID: 60256510036** Collected: 10/25/17 08:00 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 22:09	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 22:09	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 22:09	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 22:09	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 22:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 22:09	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 22:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 22:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 22:09	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 22:09	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 22:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 22:09	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 22:09	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 22:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 22:09	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 22:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 22:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 22:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 22:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 22:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 22:09	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 22:09	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 22:09	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 22:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 22:09	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 22:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 22:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 22:09	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 22:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 22:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 22:09	79-00-5	
Trichloroethene	**0.19J**	ug/L	1.0	0.17	1		10/30/17 22:09	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 22:09	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 22:09	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/30/17 22:09	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/30/17 22:09	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/30/17 22:09	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 22:09		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 500794
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Associated Lab Samples: 60256510034

METHOD BLANK: 2050410 Matrix: Water
Associated Lab Samples: 60256510034

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	50.0	12.4	10/30/17 18:42	

LABORATORY CONTROL SAMPLE: 2050411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9760	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2050412 2050413

Parameter	Units	60256450001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	159	10000	10000	10100	9670	100	95	75-125	5	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 500837 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256510013, 60256510014, 60256510017, 60256510018, 60256510019, 60256510020, 60256510021, 60256510022

METHOD BLANK: 2050615 Matrix: Water
Associated Lab Samples: 60256510013, 60256510014, 60256510017, 60256510018, 60256510019, 60256510020, 60256510021, 60256510022

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/30/17 15:50	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/30/17 15:50	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/30/17 15:50	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/30/17 15:50	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 15:50	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/30/17 15:50	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/30/17 15:50	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/30/17 15:50	
2-Hexanone	ug/L	ND	10.0	1.2	10/30/17 15:50	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/30/17 15:50	
Acetone	ug/L	ND	10.0	1.9	10/30/17 15:50	
Benzene	ug/L	ND	1.0	0.060	10/30/17 15:50	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/30/17 15:50	
Bromoform	ug/L	ND	1.0	0.070	10/30/17 15:50	
Bromomethane	ug/L	ND	5.0	0.16	10/30/17 15:50	
Carbon disulfide	ug/L	ND	5.0	0.12	10/30/17 15:50	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/30/17 15:50	
Chlorobenzene	ug/L	ND	1.0	0.21	10/30/17 15:50	
Chloroethane	ug/L	ND	1.0	0.15	10/30/17 15:50	
Chloroform	ug/L	ND	1.0	0.14	10/30/17 15:50	
Chloromethane	ug/L	ND	1.0	0.080	10/30/17 15:50	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/30/17 15:50	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/30/17 15:50	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/30/17 15:50	
Ethylbenzene	ug/L	ND	1.0	0.18	10/30/17 15:50	
Methylene chloride	ug/L	ND	1.0	0.15	10/30/17 15:50	
Styrene	ug/L	ND	1.0	0.12	10/30/17 15:50	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/30/17 15:50	
Toluene	ug/L	ND	1.0	0.17	10/30/17 15:50	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 15:50	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/30/17 15:50	
Trichloroethene	ug/L	ND	1.0	0.17	10/30/17 15:50	
Vinyl chloride	ug/L	ND	1.0	0.13	10/30/17 15:50	
Xylene (Total)	ug/L	ND	3.0	0.42	10/30/17 15:50	
1,2-Dichloroethane-d4 (S)	%	98	80-120		10/30/17 15:50	
4-Bromofluorobenzene (S)	%	96	80-120		10/30/17 15:50	
Toluene-d8 (S)	%	99	80-120		10/30/17 15:50	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

LABORATORY CONTROL SAMPLE: 2050616

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.8	104	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	19.8	99	74-124	
1,1,2-Trichloroethane	ug/L	20	20.6	103	81-118	
1,1-Dichloroethane	ug/L	20	21.4	107	82-122	
1,1-Dichloroethene	ug/L	20	20.6	103	78-123	
1,2-Dichloroethane	ug/L	20	21.3	106	78-117	
1,2-Dichloropropane	ug/L	20	22.1	110	81-118	
2-Butanone (MEK)	ug/L	100	104	104	72-117	
2-Hexanone	ug/L	100	98.9	99	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	104	104	77-124	
Acetone	ug/L	100	99.4	99	66-127	
Benzene	ug/L	20	21.5	107	82-115	
Bromodichloromethane	ug/L	20	21.3	107	83-123	
Bromoform	ug/L	20	20.7	103	79-126	
Bromomethane	ug/L	20	22.8	114	39-146	
Carbon disulfide	ug/L	20	19.5	98	75-121	
Carbon tetrachloride	ug/L	20	21.6	108	82-117	
Chlorobenzene	ug/L	20	20.1	101	89-114	
Chloroethane	ug/L	20	18.7	94	71-133	
Chloroform	ug/L	20	20.9	104	78-117	
Chloromethane	ug/L	20	16.3	81	19-181	
cis-1,2-Dichloroethene	ug/L	20	20.2	101	78-119	
cis-1,3-Dichloropropene	ug/L	20	21.6	108	81-116	
Dibromochloromethane	ug/L	20	20.2	101	81-122	
Ethylbenzene	ug/L	20	19.9	99	83-112	
Methylene chloride	ug/L	20	20.2	101	78-127	
Styrene	ug/L	20	20.8	104	88-117	
Tetrachloroethene	ug/L	20	19.9	100	80-121	
Toluene	ug/L	20	20.7	104	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.0	100	79-120	
trans-1,3-Dichloropropene	ug/L	20	20.3	102	81-119	
Trichloroethene	ug/L	20	19.3	97	78-118	
Vinyl chloride	ug/L	20	22.6	113	66-133	
Xylene (Total)	ug/L	60	62.7	105	83-114	
1,2-Dichloroethane-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			101	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 500838 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256510023, 60256510024, 60256510025, 60256510026, 60256510027, 60256510028, 60256510029, 60256510030, 60256510031, 60256510032, 60256510034, 60256510035, 60256510036

METHOD BLANK: 2050617 Matrix: Water
Associated Lab Samples: 60256510023, 60256510024, 60256510025, 60256510026, 60256510027, 60256510028, 60256510029, 60256510030, 60256510031, 60256510032, 60256510034, 60256510035, 60256510036

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/30/17 21:55	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/30/17 21:55	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/30/17 21:55	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/30/17 21:55	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 21:55	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/30/17 21:55	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/30/17 21:55	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/30/17 21:55	
2-Hexanone	ug/L	ND	10.0	1.2	10/30/17 21:55	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/30/17 21:55	
Acetone	ug/L	ND	10.0	1.9	10/30/17 21:55	
Benzene	ug/L	ND	1.0	0.060	10/30/17 21:55	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/30/17 21:55	
Bromoform	ug/L	ND	1.0	0.070	10/30/17 21:55	
Bromomethane	ug/L	ND	5.0	0.16	10/30/17 21:55	
Carbon disulfide	ug/L	ND	5.0	0.12	10/30/17 21:55	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/30/17 21:55	
Chlorobenzene	ug/L	ND	1.0	0.21	10/30/17 21:55	
Chloroethane	ug/L	ND	1.0	0.15	10/30/17 21:55	
Chloroform	ug/L	ND	1.0	0.14	10/30/17 21:55	
Chloromethane	ug/L	ND	1.0	0.080	10/30/17 21:55	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/30/17 21:55	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/30/17 21:55	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/30/17 21:55	
Ethylbenzene	ug/L	ND	1.0	0.18	10/30/17 21:55	
Methylene chloride	ug/L	ND	1.0	0.15	10/30/17 21:55	
Styrene	ug/L	ND	1.0	0.12	10/30/17 21:55	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/30/17 21:55	
Toluene	ug/L	ND	1.0	0.17	10/30/17 21:55	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 21:55	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/30/17 21:55	
Trichloroethene	ug/L	ND	1.0	0.17	10/30/17 21:55	
Vinyl chloride	ug/L	ND	1.0	0.13	10/30/17 21:55	
Xylene (Total)	ug/L	ND	3.0	0.42	10/30/17 21:55	
1,2-Dichloroethane-d4 (S)	%	98	80-120		10/30/17 21:55	
4-Bromofluorobenzene (S)	%	97	80-120		10/30/17 21:55	
Toluene-d8 (S)	%	99	80-120		10/30/17 21:55	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

LABORATORY CONTROL SAMPLE: 2050618

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.4	102	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	19.2	96	74-124	
1,1,2-Trichloroethane	ug/L	20	20.2	101	81-118	
1,1-Dichloroethane	ug/L	20	21.7	108	82-122	
1,1-Dichloroethene	ug/L	20	21.1	105	78-123	
1,2-Dichloroethane	ug/L	20	21.0	105	78-117	
1,2-Dichloropropane	ug/L	20	21.5	107	81-118	
2-Butanone (MEK)	ug/L	100	105	105	72-117	
2-Hexanone	ug/L	100	101	101	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	106	106	77-124	
Acetone	ug/L	100	99.8	100	66-127	
Benzene	ug/L	20	21.1	106	82-115	
Bromodichloromethane	ug/L	20	20.7	104	83-123	
Bromoform	ug/L	20	20.2	101	79-126	
Bromomethane	ug/L	20	26.9	134	39-146	
Carbon disulfide	ug/L	20	21.2	106	75-121	
Carbon tetrachloride	ug/L	20	22.7	113	82-117	
Chlorobenzene	ug/L	20	20.4	102	89-114	
Chloroethane	ug/L	20	20.8	104	71-133	
Chloroform	ug/L	20	20.8	104	78-117	
Chloromethane	ug/L	20	23.2	116	19-181	
cis-1,2-Dichloroethene	ug/L	20	19.6	98	78-119	
cis-1,3-Dichloropropene	ug/L	20	20.8	104	81-116	
Dibromochloromethane	ug/L	20	20.0	100	81-122	
Ethylbenzene	ug/L	20	20.4	102	83-112	
Methylene chloride	ug/L	20	21.6	108	78-127	
Styrene	ug/L	20	20.8	104	88-117	
Tetrachloroethene	ug/L	20	19.5	97	80-121	
Toluene	ug/L	20	20.6	103	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.7	104	79-120	
trans-1,3-Dichloropropene	ug/L	20	19.5	98	81-119	
Trichloroethene	ug/L	20	19.3	97	78-118	
Vinyl chloride	ug/L	20	23.2	116	66-133	
Xylene (Total)	ug/L	60	62.6	104	83-114	
1,2-Dichloroethane-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2050619 2050620

Parameter	Units	60256510028 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	20	20	20.3	20.8	101	104	49-167	2	11	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	16.4	16.9	82	85	75-118	3	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	18.4	18.6	92	93	76-116	1	13	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2050619 2050620

Parameter	Units	60256510028 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethane	ug/L	ND	20	20	20.2	20.9	101	104	82-127	3	15	
1,1-Dichloroethene	ug/L	ND	20	20	21.1	21.3	105	106	79-136	1	14	
1,2-Dichloroethane	ug/L	ND	20	20	18.7	18.7	93	94	58-133	0	14	
1,2-Dichloropropane	ug/L	ND	20	20	19.6	20.5	98	103	81-117	5	11	
2-Butanone (MEK)	ug/L	ND	100	100	88.3	92.5	88	93	64-114	5	21	
2-Hexanone	ug/L	ND	100	100	85.5	91.3	85	91	71-113	7	15	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	88.4	96.9	88	97	64-127	9	14	
Acetone	ug/L	ND	100	100	83.9	91.4	84	91	61-113	9	33	
Benzene	ug/L	ND	20	20	19.8	20.6	99	103	55-145	4	18	
Bromodichloromethane	ug/L	ND	20	20	19.0	19.6	95	98	81-120	3	11	
Bromoform	ug/L	ND	20	20	17.4	19.2	87	96	72-117	10	16	
Bromomethane	ug/L	ND	20	20	19.7	25.2	98	126	39-145	25	37	
Carbon disulfide	ug/L	ND	20	20	20.1	21.7	101	109	82-129	8	11	
Carbon tetrachloride	ug/L	ND	20	20	21.5	22.6	107	113	85-125	5	11	
Chlorobenzene	ug/L	ND	20	20	18.3	19.7	92	98	87-115	7	10	
Chloroethane	ug/L	ND	20	20	19.2	22.4	96	112	62-157	15	20	
Chloroform	ug/L	ND	20	20	18.9	19.7	95	99	79-117	4	12	
Chloromethane	ug/L	ND	20	20	18.2	22.4	91	112	22-194	21	59	
cis-1,2-Dichloroethene	ug/L	ND	20	20	19.0	19.2	95	96	70-134	2	12	
cis-1,3-Dichloropropene	ug/L	ND	20	20	18.6	19.1	93	96	70-117	3	12	
Dibromochloromethane	ug/L	ND	20	20	17.7	18.4	88	92	56-135	4	14	
Ethylbenzene	ug/L	ND	20	20	18.4	19.6	92	98	45-152	7	11	
Methylene chloride	ug/L	ND	20	20	18.3	20.7	91	103	77-123	12	13	
Styrene	ug/L	ND	20	20	18.2	19.8	91	99	64-134	8	11	
Tetrachloroethene	ug/L	ND	20	20	18.6	20.2	93	101	81-126	8	11	
Toluene	ug/L	ND	20	20	18.8	19.7	94	98	52-144	4	12	
trans-1,2-Dichloroethene	ug/L	ND	20	20	19.5	20.0	98	100	80-126	2	12	
trans-1,3-Dichloropropene	ug/L	ND	20	20	16.9	18.0	85	90	72-114	6	15	
Trichloroethene	ug/L	ND	20	20	18.7	19.8	93	98	70-131	5	16	
Vinyl chloride	ug/L	ND	20	20	23.1	24.8	116	124	64-153	7	23	
Xylene (Total)	ug/L	ND	60	60	56.4	60.5	94	101	54-146	7	12	
1,2-Dichloroethane-d4 (S)	%						100	98	80-120			
4-Bromofluorobenzene (S)	%						99	96	80-120			
Toluene-d8 (S)	%						99	99	80-120			
Preservation pH		1.0			1.0	1.0				0		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 501038 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256510001, 60256510002, 60256510003, 60256510004, 60256510005, 60256510006, 60256510007, 60256510009, 60256510010

METHOD BLANK: 2051151 Matrix: Water
Associated Lab Samples: 60256510001, 60256510002, 60256510003, 60256510004, 60256510005, 60256510006, 60256510007, 60256510009, 60256510010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/31/17 15:32	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/31/17 15:32	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/31/17 15:32	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/31/17 15:32	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/31/17 15:32	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/31/17 15:32	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/31/17 15:32	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/31/17 15:32	
2-Hexanone	ug/L	ND	10.0	1.2	10/31/17 15:32	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/31/17 15:32	
Acetone	ug/L	ND	10.0	1.9	10/31/17 15:32	
Benzene	ug/L	ND	1.0	0.060	10/31/17 15:32	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/31/17 15:32	
Bromoform	ug/L	ND	1.0	0.070	10/31/17 15:32	
Bromomethane	ug/L	ND	5.0	0.16	10/31/17 15:32	
Carbon disulfide	ug/L	ND	5.0	0.12	10/31/17 15:32	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/31/17 15:32	
Chlorobenzene	ug/L	ND	1.0	0.21	10/31/17 15:32	
Chloroethane	ug/L	ND	1.0	0.15	10/31/17 15:32	
Chloroform	ug/L	ND	1.0	0.14	10/31/17 15:32	
Chloromethane	ug/L	ND	1.0	0.080	10/31/17 15:32	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/31/17 15:32	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/31/17 15:32	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/31/17 15:32	
Ethylbenzene	ug/L	ND	1.0	0.18	10/31/17 15:32	
Methylene chloride	ug/L	ND	1.0	0.15	10/31/17 15:32	
Styrene	ug/L	ND	1.0	0.12	10/31/17 15:32	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/31/17 15:32	
Toluene	ug/L	ND	1.0	0.17	10/31/17 15:32	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/31/17 15:32	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/31/17 15:32	
Trichloroethene	ug/L	ND	1.0	0.17	10/31/17 15:32	
Vinyl chloride	ug/L	ND	1.0	0.13	10/31/17 15:32	
Xylene (Total)	ug/L	ND	3.0	0.42	10/31/17 15:32	
1,2-Dichloroethane-d4 (S)	%	98	80-120		10/31/17 15:32	
4-Bromofluorobenzene (S)	%	99	80-120		10/31/17 15:32	
Toluene-d8 (S)	%	98	80-120		10/31/17 15:32	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

LABORATORY CONTROL SAMPLE: 2051152

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.3	102	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	18.5	93	74-124	
1,1,2-Trichloroethane	ug/L	20	18.9	95	81-118	
1,1-Dichloroethane	ug/L	20	21.2	106	82-122	
1,1-Dichloroethene	ug/L	20	21.1	105	78-123	
1,2-Dichloroethane	ug/L	20	20.2	101	78-117	
1,2-Dichloropropane	ug/L	20	21.7	109	81-118	
2-Butanone (MEK)	ug/L	100	93.3	93	72-117	
2-Hexanone	ug/L	100	89.4	89	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	97.1	97	77-124	
Acetone	ug/L	100	100	100	66-127	
Benzene	ug/L	20	20.5	103	82-115	
Bromodichloromethane	ug/L	20	20.1	101	83-123	
Bromoform	ug/L	20	19.2	96	79-126	
Bromomethane	ug/L	20	20.0	100	39-146	
Carbon disulfide	ug/L	20	20.9	105	75-121	
Carbon tetrachloride	ug/L	20	21.4	107	82-117	
Chlorobenzene	ug/L	20	20.0	100	89-114	
Chloroethane	ug/L	20	21.8	109	71-133	
Chloroform	ug/L	20	20.2	101	78-117	
Chloromethane	ug/L	20	23.3	116	19-181	
cis-1,2-Dichloroethene	ug/L	20	19.7	99	78-119	
cis-1,3-Dichloropropene	ug/L	20	20.3	101	81-116	
Dibromochloromethane	ug/L	20	19.0	95	81-122	
Ethylbenzene	ug/L	20	19.8	99	83-112	
Methylene chloride	ug/L	20	20.6	103	78-127	
Styrene	ug/L	20	20.5	102	88-117	
Tetrachloroethene	ug/L	20	19.0	95	80-121	
Toluene	ug/L	20	20.0	100	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.0	100	79-120	
trans-1,3-Dichloropropene	ug/L	20	18.6	93	81-119	
Trichloroethene	ug/L	20	19.8	99	78-118	
Vinyl chloride	ug/L	20	24.5	122	66-133	
Xylene (Total)	ug/L	60	61.2	102	83-114	
1,2-Dichloroethane-d4 (S)	%			98	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2051153 2051154

Parameter	Units	60256370021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	20	20	21.3	20.8	107	104	49-167	3	11	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	16.6	17.5	83	87	75-118	5	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	17.9	18.6	89	93	76-116	4	13	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2051153 2051154

Parameter	Units	60256370021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethane	ug/L	ND	20	20	20.9	20.9	105	104	82-127	0	15	
1,1-Dichloroethene	ug/L	ND	20	20	21.5	21.2	107	105	79-136	2	14	
1,2-Dichloroethane	ug/L	ND	20	20	19.4	19.4	97	97	58-133	0	14	
1,2-Dichloropropane	ug/L	ND	20	20	20.2	20.8	101	104	81-117	3	11	
2-Butanone (MEK)	ug/L	ND	100	100	85.8	92.9	86	93	64-114	8	21	
2-Hexanone	ug/L	ND	100	100	85.0	93.5	85	94	71-113	10	15	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	91.5	99.2	92	99	64-127	8	14	
Acetone	ug/L	ND	100	100	93.1	90.8	93	91	61-113	2	33	
Benzene	ug/L	ND	20	20	20.7	20.6	102	102	55-145	0	18	
Bromodichloromethane	ug/L	ND	20	20	20.0	19.2	100	96	81-120	4	11	
Bromoform	ug/L	ND	20	20	17.1	19.3	85	97	72-117	13	16	
Bromomethane	ug/L	ND	20	20	22.0	23.7	110	119	39-145	7	37	
Carbon disulfide	ug/L	ND	20	20	21.0	21.2	105	106	82-129	1	11	
Carbon tetrachloride	ug/L	ND	20	20	22.4	22.3	112	112	85-125	0	11	
Chlorobenzene	ug/L	ND	20	20	19.2	19.8	96	99	87-115	3	10	
Chloroethane	ug/L	ND	20	20	21.2	21.3	106	106	62-157	1	20	
Chloroform	ug/L	ND	20	20	19.6	19.2	98	96	79-117	2	12	
Chloromethane	ug/L	ND	20	20	22.9	22.1	114	111	22-194	3	59	
cis-1,2-Dichloroethene	ug/L	43.2	20	20	62.0	60.3	94	86	70-134	3	12	
cis-1,3-Dichloropropene	ug/L	ND	20	20	19.1	19.8	95	99	70-117	4	12	
Dibromochloromethane	ug/L	ND	20	20	17.6	18.7	88	93	56-135	6	14	
Ethylbenzene	ug/L	ND	20	20	19.3	19.6	96	98	45-152	2	11	
Methylene chloride	ug/L	ND	20	20	19.7	19.7	99	98	77-123	0	13	
Styrene	ug/L	ND	20	20	19.8	20.1	99	100	64-134	2	11	
Tetrachloroethene	ug/L	2.7	20	20	22.4	22.5	98	99	81-126	1	11	
Toluene	ug/L	ND	20	20	19.6	20.0	98	100	52-144	2	12	
trans-1,2-Dichloroethene	ug/L	ND	20	20	20.1	21.0	97	102	80-126	4	12	
trans-1,3-Dichloropropene	ug/L	ND	20	20	17.5	18.1	87	91	72-114	4	15	
Trichloroethene	ug/L	18.4	20	20	37.3	37.4	94	95	70-131	0	16	
Vinyl chloride	ug/L	8.6	20	20	33.1	32.1	123	117	64-153	3	23	
Xylene (Total)	ug/L	ND	60	60	60.0	61.7	100	103	54-146	3	12	
1,2-Dichloroethane-d4 (S)	%						100	95	80-120			
4-Bromofluorobenzene (S)	%						98	99	80-120			
Toluene-d8 (S)	%						99	99	80-120			
Preservation pH		1.0			1.0	1.0				0		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 501040 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256510011, 60256510012, 60256510013, 60256510018, 60256510025, 60256510029, 60256510034

METHOD BLANK: 2051155 Matrix: Water
Associated Lab Samples: 60256510011, 60256510012, 60256510013, 60256510018, 60256510025, 60256510029, 60256510034

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/31/17 21:36	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/31/17 21:36	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/31/17 21:36	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/31/17 21:36	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/31/17 21:36	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/31/17 21:36	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/31/17 21:36	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/31/17 21:36	
2-Hexanone	ug/L	ND	10.0	1.2	10/31/17 21:36	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/31/17 21:36	
Acetone	ug/L	ND	10.0	1.9	10/31/17 21:36	
Benzene	ug/L	ND	1.0	0.060	10/31/17 21:36	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/31/17 21:36	
Bromoform	ug/L	ND	1.0	0.070	10/31/17 21:36	
Bromomethane	ug/L	ND	5.0	0.16	10/31/17 21:36	
Carbon disulfide	ug/L	ND	5.0	0.12	10/31/17 21:36	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/31/17 21:36	
Chlorobenzene	ug/L	ND	1.0	0.21	10/31/17 21:36	
Chloroethane	ug/L	ND	1.0	0.15	10/31/17 21:36	
Chloroform	ug/L	ND	1.0	0.14	10/31/17 21:36	
Chloromethane	ug/L	ND	1.0	0.080	10/31/17 21:36	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/31/17 21:36	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/31/17 21:36	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/31/17 21:36	
Ethylbenzene	ug/L	ND	1.0	0.18	10/31/17 21:36	
Methylene chloride	ug/L	ND	1.0	0.15	10/31/17 21:36	
Styrene	ug/L	ND	1.0	0.12	10/31/17 21:36	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/31/17 21:36	
Toluene	ug/L	ND	1.0	0.17	10/31/17 21:36	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/31/17 21:36	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/31/17 21:36	
Trichloroethene	ug/L	ND	1.0	0.17	10/31/17 21:36	
Vinyl chloride	ug/L	ND	1.0	0.13	10/31/17 21:36	
Xylene (Total)	ug/L	ND	3.0	0.42	10/31/17 21:36	
1,2-Dichloroethane-d4 (S)	%	99	80-120		10/31/17 21:36	
4-Bromofluorobenzene (S)	%	98	80-120		10/31/17 21:36	
Toluene-d8 (S)	%	99	80-120		10/31/17 21:36	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

LABORATORY CONTROL SAMPLE: 2051156

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.0	105	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	17.3	86	74-124	
1,1,2-Trichloroethane	ug/L	20	18.9	94	81-118	
1,1-Dichloroethane	ug/L	20	21.4	107	82-122	
1,1-Dichloroethene	ug/L	20	21.6	108	78-123	
1,2-Dichloroethane	ug/L	20	20.1	100	78-117	
1,2-Dichloropropane	ug/L	20	21.5	108	81-118	
2-Butanone (MEK)	ug/L	100	94.9	95	72-117	
2-Hexanone	ug/L	100	90.1	90	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	92.1	92	77-124	
Acetone	ug/L	100	98.3	98	66-127	
Benzene	ug/L	20	21.2	106	82-115	
Bromodichloromethane	ug/L	20	20.7	104	83-123	
Bromoform	ug/L	20	18.4	92	79-126	
Bromomethane	ug/L	20	25.9	130	39-146	
Carbon disulfide	ug/L	20	22.8	114	75-121	
Carbon tetrachloride	ug/L	20	22.3	112	82-117	
Chlorobenzene	ug/L	20	20.0	100	89-114	
Chloroethane	ug/L	20	21.3	107	71-133	
Chloroform	ug/L	20	20.5	102	78-117	
Chloromethane	ug/L	20	22.6	113	19-181	
cis-1,2-Dichloroethene	ug/L	20	20.3	101	78-119	
cis-1,3-Dichloropropene	ug/L	20	20.7	103	81-116	
Dibromochloromethane	ug/L	20	18.4	92	81-122	
Ethylbenzene	ug/L	20	20.2	101	83-112	
Methylene chloride	ug/L	20	20.7	103	78-127	
Styrene	ug/L	20	20.7	104	88-117	
Tetrachloroethene	ug/L	20	20.0	100	80-121	
Toluene	ug/L	20	20.4	102	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.2	101	79-120	
trans-1,3-Dichloropropene	ug/L	20	18.9	94	81-119	
Trichloroethene	ug/L	20	20.0	100	78-118	
Vinyl chloride	ug/L	20	25.0	125	66-133	
Xylene (Total)	ug/L	60	62.4	104	83-114	
1,2-Dichloroethane-d4 (S)	%			94	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2051157 2051158

Parameter	Units	60256510012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	20	20	21.6	20.7	108	104	49-167	4	11	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	17.9	17.1	90	85	75-118	5	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	18.6	18.0	93	90	76-116	3	13	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2051157 2051158

Parameter	Units	60256510012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethane	ug/L	ND	20	20	22.1	20.5	110	102	82-127	8	15	
1,1-Dichloroethene	ug/L	ND	20	20	22.7	21.3	114	107	79-136	6	14	
1,2-Dichloroethane	ug/L	ND	20	20	19.8	19.0	99	95	58-133	4	14	
1,2-Dichloropropane	ug/L	ND	20	20	21.2	20.6	106	103	81-117	3	11	
2-Butanone (MEK)	ug/L	ND	100	100	89.7	88.9	90	89	64-114	1	21	
2-Hexanone	ug/L	ND	100	100	85.4	82.9	85	83	71-113	3	15	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	93.0	91.7	93	92	64-127	1	14	
Acetone	ug/L	ND	100	100	93.9	88.2	94	88	61-113	6	33	
Benzene	ug/L	0.11J	20	20	21.6	20.6	108	103	55-145	5	18	
Bromodichloromethane	ug/L	ND	20	20	20.1	19.8	100	99	81-120	1	11	
Bromoform	ug/L	ND	20	20	18.4	18.1	92	91	72-117	2	16	
Bromomethane	ug/L	ND	20	20	23.8	24.2	119	121	39-145	2	37	
Carbon disulfide	ug/L	ND	20	20	22.3	21.0	111	105	82-129	6	11	
Carbon tetrachloride	ug/L	ND	20	20	23.1	22.1	116	110	85-125	5	11	
Chlorobenzene	ug/L	4.5	20	20	24.2	23.6	98	96	87-115	2	10	
Chloroethane	ug/L	ND	20	20	22.1	20.2	110	101	62-157	9	20	
Chloroform	ug/L	ND	20	20	20.2	19.2	101	96	79-117	5	12	
Chloromethane	ug/L	ND	20	20	23.4	22.0	117	110	22-194	6	59	
cis-1,2-Dichloroethene	ug/L	0.16J	20	20	20.2	18.9	100	94	70-134	7	12	
cis-1,3-Dichloropropene	ug/L	ND	20	20	19.5	19.7	98	98	70-117	1	12	
Dibromochloromethane	ug/L	ND	20	20	18.2	17.7	91	88	56-135	3	14	
Ethylbenzene	ug/L	ND	20	20	19.8	19.8	99	99	45-152	0	11	
Methylene chloride	ug/L	ND	20	20	20.7	20.3	103	101	77-123	2	13	
Styrene	ug/L	ND	20	20	0.53J	0.56J	3	3	64-134		11	M1
Tetrachloroethene	ug/L	ND	20	20	19.9	19.4	99	97	81-126	3	11	
Toluene	ug/L	ND	20	20	19.6	19.7	98	98	52-144	1	12	
trans-1,2-Dichloroethene	ug/L	ND	20	20	20.7	20.0	104	100	80-126	3	12	
trans-1,3-Dichloropropene	ug/L	ND	20	20	17.8	17.8	89	89	72-114	0	15	
Trichloroethene	ug/L	0.19J	20	20	19.8	19.0	98	94	70-131	4	16	
Vinyl chloride	ug/L	ND	20	20	26.0	23.9	130	119	64-153	9	23	
Xylene (Total)	ug/L	ND	60	60	61.2	59.6	102	99	54-146	3	12	
1,2-Dichloroethane-d4 (S)	%						99	101	80-120			
4-Bromofluorobenzene (S)	%						99	98	80-120			
Toluene-d8 (S)	%						96	99	80-120			
Preservation pH		1.0			1.0	1.0				0		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 500793 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 7 day
Associated Lab Samples: 60256510008, 60256510015, 60256510016, 60256510033

METHOD BLANK: 2050408 Matrix: Water
Associated Lab Samples: 60256510008, 60256510015, 60256510016, 60256510033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/30/17 10:12	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/30/17 10:12	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/30/17 10:12	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/30/17 10:12	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 10:12	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/30/17 10:12	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/30/17 10:12	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/30/17 10:12	
2-Hexanone	ug/L	ND	10.0	1.2	10/30/17 10:12	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/30/17 10:12	
Acetone	ug/L	ND	10.0	1.9	10/30/17 10:12	
Benzene	ug/L	ND	1.0	0.060	10/30/17 10:12	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/30/17 10:12	
Bromoform	ug/L	ND	1.0	0.070	10/30/17 10:12	
Bromomethane	ug/L	ND	5.0	0.16	10/30/17 10:12	
Carbon disulfide	ug/L	ND	5.0	0.12	10/30/17 10:12	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/30/17 10:12	
Chlorobenzene	ug/L	ND	1.0	0.21	10/30/17 10:12	
Chloroethane	ug/L	ND	1.0	0.15	10/30/17 10:12	
Chloroform	ug/L	ND	1.0	0.14	10/30/17 10:12	
Chloromethane	ug/L	ND	1.0	0.080	10/30/17 10:12	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/30/17 10:12	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/30/17 10:12	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/30/17 10:12	
Ethylbenzene	ug/L	ND	1.0	0.18	10/30/17 10:12	
Methylene chloride	ug/L	ND	1.0	0.15	10/30/17 10:12	
Styrene	ug/L	ND	1.0	0.12	10/30/17 10:12	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/30/17 10:12	
Toluene	ug/L	ND	1.0	0.17	10/30/17 10:12	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 10:12	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/30/17 10:12	
Trichloroethene	ug/L	ND	1.0	0.17	10/30/17 10:12	
Vinyl chloride	ug/L	ND	1.0	0.13	10/30/17 10:12	
Xylene (Total)	ug/L	ND	3.0	0.42	10/30/17 10:12	
1,2-Dichloroethane-d4 (S)	%	96	80-120		10/30/17 10:12	
4-Bromofluorobenzene (S)	%	96	80-120		10/30/17 10:12	
Toluene-d8 (S)	%	102	80-120		10/30/17 10:12	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

LABORATORY CONTROL SAMPLE: 2050409

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.1	105	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	18.0	90	74-124	
1,1,2-Trichloroethane	ug/L	20	18.6	93	81-118	
1,1-Dichloroethane	ug/L	20	21.4	107	82-122	
1,1-Dichloroethene	ug/L	20	21.1	105	78-123	
1,2-Dichloroethane	ug/L	20	20.5	103	78-117	
1,2-Dichloropropane	ug/L	20	21.8	109	81-118	
2-Butanone (MEK)	ug/L	100	96.5	97	72-117	
2-Hexanone	ug/L	100	90.7	91	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.0	96	77-124	
Acetone	ug/L	100	103	103	66-127	
Benzene	ug/L	20	21.4	107	82-115	
Bromodichloromethane	ug/L	20	21.3	106	83-123	
Bromoform	ug/L	20	19.5	97	79-126	
Bromomethane	ug/L	20	25.0	125	39-146	
Carbon disulfide	ug/L	20	20.7	103	75-121	
Carbon tetrachloride	ug/L	20	22.1	111	82-117	
Chlorobenzene	ug/L	20	20.1	100	89-114	
Chloroethane	ug/L	20	20.2	101	71-133	
Chloroform	ug/L	20	20.7	103	78-117	
Chloromethane	ug/L	20	20.7	103	19-181	
cis-1,2-Dichloroethene	ug/L	20	20.2	101	78-119	
cis-1,3-Dichloropropene	ug/L	20	21.7	108	81-116	
Dibromochloromethane	ug/L	20	19.4	97	81-122	
Ethylbenzene	ug/L	20	20.0	100	83-112	
Methylene chloride	ug/L	20	20.4	102	78-127	
Styrene	ug/L	20	21.3	107	88-117	
Tetrachloroethene	ug/L	20	20.3	101	80-121	
Toluene	ug/L	20	19.9	99	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.8	104	79-120	
trans-1,3-Dichloropropene	ug/L	20	18.5	93	81-119	
Trichloroethene	ug/L	20	19.8	99	78-118	
Vinyl chloride	ug/L	20	23.1	116	66-133	
Xylene (Total)	ug/L	60	63.5	106	83-114	
1,2-Dichloroethane-d4 (S)	%			95	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			98	80-120	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 500574
QC Batch Method: SM 4500-S-2 D
Analysis Method: SM 4500-S-2 D
Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 60256510034

METHOD BLANK: 2049045 Matrix: Water
Associated Lab Samples: 60256510034

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	ND	0.050	0.0048	10/28/17 14:04	

LABORATORY CONTROL SAMPLE: 2049046

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	.5	0.54	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2049047 2049048

Parameter	Units	60256365016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	ND	.5	.5	0.44	0.44	87	88	75-125	0	20	

SAMPLE DUPLICATE: 2049049

Parameter	Units	60256365017 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 2049050

Parameter	Units	60256491006 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 501768 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60256510034

METHOD BLANK: 2054031 Matrix: Water
Associated Lab Samples: 60256510034

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.50	11/04/17 23:26	
Sulfate	mg/L	ND	1.0	0.50	11/04/17 23:26	

LABORATORY CONTROL SAMPLE: 2054032

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	102	90-110	
Sulfate	mg/L	5	5.3	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2054033 2054034

Parameter	Units	60256478001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	169	100	100	263	264	93	95	80-120	0	15	
Sulfate	mg/L	ND	100	100	110	110	97	97	80-120	0	15	

MATRIX SPIKE SAMPLE: 2054035

Parameter	Units	60256478002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	175	100	264	89	80-120	
Sulfate	mg/L	38.1	100	133	94	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 500492
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 60256510034

METHOD BLANK: 2048686 Matrix: Water
Associated Lab Samples: 60256510034

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.050	10/27/17 09:21	
Nitrogen, Nitrite	mg/L	ND	0.10	0.030	10/27/17 09:21	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.050	10/27/17 09:21	

LABORATORY CONTROL SAMPLE: 2048687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.2	117	70-130	
Nitrogen, Nitrite	mg/L	1	0.93	93	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	2.1	105	90-110	

MATRIX SPIKE SAMPLE: 2048688

Parameter	Units	60256510034 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	3.4	1	4.5	106	70-130	
Nitrogen, Nitrite	mg/L	0.27	1	0.66	39	90-110	M1
Nitrogen, NO2 plus NO3	mg/L	3.7	2	5.2	72	90-110	M1

MATRIX SPIKE SAMPLE: 2048690

Parameter	Units	60256590004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.0	1	2.6	157	70-130	M1
Nitrogen, Nitrite	mg/L	ND	1	0.39	37	90-110	M1
Nitrogen, NO2 plus NO3	mg/L	1.0	2	3.0	97	90-110	

SAMPLE DUPLICATE: 2048689

Parameter	Units	60256495003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	1.2	1.2	3	20	
Nitrogen, Nitrite	mg/L	ND	ND		20	
Nitrogen, NO2 plus NO3	mg/L	1.3	1.2	3	20	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 500954 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon
Associated Lab Samples: 60256510034

METHOD BLANK: 2050852 Matrix: Water
Associated Lab Samples: 60256510034

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	0.37J	1.0	0.13	10/31/17 15:11	

LABORATORY CONTROL SAMPLE: 2050853

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.8	116	80-120	

MATRIX SPIKE SAMPLE: 2050854

Parameter	Units	60256361009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	1.1	5	5.5	88	80-120	

SAMPLE DUPLICATE: 2050855

Parameter	Units	60256361010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	1.7	1.7	1	25	

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QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60256510

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.

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-K	Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: 500793

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 500837

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60256510

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60256510034	ITMW-9-201710	EPA 3010	500794	EPA 6010	500920
60256510001	MW-62-201710	EPA 5030B/8260	501038		
60256510002	MW-96-201710	EPA 5030B/8260	501038		
60256510003	MW-97-201710	EPA 5030B/8260	501038		
60256510004	MW-183-201710	EPA 5030B/8260	501038		
60256510005	ITMW-2-201710	EPA 5030B/8260	501038		
60256510006	ITMW-1-201710	EPA 5030B/8260	501038		
60256510007	MW-55R-201710	EPA 5030B/8260	501038		
60256510009	ITMW-20-201710	EPA 5030B/8260	501038		
60256510010	ITMW-21-201710	EPA 5030B/8260	501038		
60256510011	ITMW-7-201710	EPA 5030B/8260	501040		
60256510012	MW-29-201710	EPA 5030B/8260	501040		
60256510013	ITMW-5-201710	EPA 5030B/8260	500837		
60256510013	ITMW-5-201710	EPA 5030B/8260	501040		
60256510014	MW-22-201710	EPA 5030B/8260	500837		
60256510017	MW-28-201710	EPA 5030B/8260	500837		
60256510018	MW-91-201710	EPA 5030B/8260	500837		
60256510018	MW-91-201710	EPA 5030B/8260	501040		
60256510019	MW-178-201710	EPA 5030B/8260	500837		
60256510020	FD-06-201710	EPA 5030B/8260	500837		
60256510021	MW-39R-201710	EPA 5030B/8260	500837		
60256510022	FD-05-201710	EPA 5030B/8260	500837		
60256510023	TMW-23-201710	EPA 5030B/8260	500838		
60256510024	MW-191-201710	EPA 5030B/8260	500838		
60256510025	MW-189-201710	EPA 5030B/8260	500838		
60256510025	MW-189-201710	EPA 5030B/8260	501040		
60256510026	MW-190-201710	EPA 5030B/8260	500838		
60256510027	MW-192-201710	EPA 5030B/8260	500838		
60256510028	TMW-27-201710	EPA 5030B/8260	500838		
60256510029	TMW-25-201710	EPA 5030B/8260	500838		
60256510029	TMW-25-201710	EPA 5030B/8260	501040		
60256510030	ITMW-16-201710	EPA 5030B/8260	500838		
60256510031	ITMW-10-201710	EPA 5030B/8260	500838		
60256510032	MW-27-201710	EPA 5030B/8260	500838		
60256510034	ITMW-9-201710	EPA 5030B/8260	500838		
60256510034	ITMW-9-201710	EPA 5030B/8260	501040		
60256510035	MW-26-201710	EPA 5030B/8260	500838		
60256510036	TB-04-201710	EPA 5030B/8260	500838		
60256510008	IW-78-201710	EPA 5030B/8260	500793		
60256510015	MW-84-201710	EPA 5030B/8260	500793		
60256510016	MW-83-201710	EPA 5030B/8260	500793		

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60256510

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60256510033	**MW-24-201710**	EPA 5030B/8260	500793		
60256510034	**ITMW-9-201710**	SM 4500-S-2 D	500574		
60256510034	**ITMW-9-201710**	EPA 300.0	501768		
60256510034	**ITMW-9-201710**	EPA 353.2	500492		
60256510034	**ITMW-9-201710**	SM 5310C	500954		

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Sample Condition Upon Receipt

WO# : 60256510

60256510

Client Name: Environ

Courier: FedEx ☐ UPS ☐ VIA ☒ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☐

Custody Seal on Cooler/Box Present: Yes ☒ No ☐ Seals intact: Yes ☒ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☒ Foam ☐ None ☐ Other ☐

Thermometer Used: CF 0.0 T-266 / CF +0.3 T-239 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 2.6 **Corr. Factor** (CF 0.0 CF +0.3) **Corrected** 2.6

Date and initials of person examining contents: JB 10/26

Temperature should be above freezing to 6°C

Chain of Custody present:	☒Yes ☐No ☐N/A	
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	
Samples arrived within holding time:	☒Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☒Yes ☐No ☐N/A	NO_2/NO_3 Fe^{2+}
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	
Sufficient volume:	☒Yes ☐No ☐N/A	
Correct containers used:	☒Yes ☐No ☐N/A	
Pace containers used:	☒Yes ☐No ☐N/A	
Containers intact:	☒Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☒N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	
Sample labels match COC: Date / time / ID / analyses	☒Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☒No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	☒Yes ☐No ☐N/A	
Cyanide water sample checks: ☒ N/A Lead acetate strip turns dark? (Record only) Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No ☐Yes ☐No	
Trip Blank present:	☒Yes ☐No ☐N/A	
Headspace in VOA vials (>6mm):	☐Yes ☒No ☐N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☒N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☒N/A	

RHM

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of 2

Section A Required Client Information: Same as Section C

Company:	Environ
Address:	~~7500 College Blvd., Ste. 925~~ Overland Park, KS ~~66210~~
Email To:	
Phone: ~~913-553-5926~~	Fax:
Requested Due Date/TAT:	STD

Section B Required Project Information:

Report To:	Tamara House-Knight
Copy To:	
Purchase Order No.:	NA
Project Name:	Fort Smith, AR
Project Number:	

Section C Invoice Information:

Attention:	Tamara House-Knight
Company Name:	Environ
Address:	124 W. Capitol Avenue
Pace Quote Reference:	Little Rock, AR 72201
Pace Project Manager:	Colleen Clyne
Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE (10/25/17)	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other Ascorbic Acid	Requested Analysis Filtered (Y/N) Y/N	Analysis Test: 8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	6010-Iron	Ferric iron calc. (send field Ferrous)		Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60256510
1	MW-102-201710	W	G			10/24/17	1542		3				X					X						(3) DEHH		001
2	~~MW-98~~-2 MW-98-201710	W	G			10/25/17	1100		3				X					X								002
3	MW-97-201710	W	G			10/25/17	1314		3				X					X								003
4	MW-183-201710	W	G			10/25/17	0951		3				X					X								004
5	ITMW-2-201710	W	G			10/25/17	1415		3				X					X								005
6	ITMW-1-201710	W	G			10/25/17	1514		3				X					X								006
7	MW-55R-201710	W	G			10/25/17	1636		3				X					X								007
8	IW-78-201710	W	G			10/25/17	0850		3				X				X	X						(3) OTHER		Trip blank	008
9	ITMW-20-201710	W	G			10/25/17	1005		3				X				1	X						(3) DEHH			009
10	ITMW-21-201710	W	G			10/25/17	1105		3				X					X								010
11	ITMW-7-201710	W	G			10/25/17	1230		3				X					X								011
12	MW-29-201710	W	G			10/25/17	1330		3				X					X								012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Victoria Siegler / DEHH	10/25/17	1800		10/26	0900	2.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Siegler

SIGNATURE of SAMPLER: Victoria Siegler

DATE Signed (MM/DD/YY): 10/25/17

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

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

CHAIN-OF-CUSTODY / Analytical Request Document

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same as section C

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Environ	Report To:	Tamara House-Knight	Attention:	Tamara House-Knight
Address:	~~7500 College Blvd., Ste. 925~~ Overland Park, KS 66210	Copy To:		Company Name:	Environ
				Address:	124 W. Capitol Avenue
Email To:		Purchase Order No.:	NA	Pace Quote Reference:	Little Rock, AR 72201
Phone:	~~913-553-5928~~ Fax:	Project Name:	Fort Smith, AR	Pace Project Manager:	Colleen Clyne
Requested Due Date/TAT:	STD	Project Number:		Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER

☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other Ascorbic Acid	Analysis Test Y/N	8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	9010-Ion	Ferric iron calc. (send field Ferrous)			Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60256510
1	MW-24-201710-MS	W	G			10/25/17	1330		3				X						X							(3) DGAH		pH<2 015
2	MW-24-201710-MSD	W	G			10/25/17	1330		3				X						X									014
3	ITMW-5-201710	W	G		1515	10/25/17	~~1515~~ 1520		3				X						X									013
4	MW-22-201710	W	G			10/25/17	1035		3				X						X									016
5	MW-84-201710	W	G			10/25/17	1210		3								X		X							(3) OTHER		7 day hold 015
6	MW-83-201710	W	G			10/25/17	1015		3								X		X									7 day hold 016
7	MW-25-201710	W	G			10/25/17	1515		3				X						X							(3) DGAH		017
8	MW-9-201710	W	G			10/25/17	1415		3				X						X									018
9	MW-178-201710	W	G			10/25/17	0845		3				X						X									019
10	FD-06-201710	W	G			10/25/17	0845		3				X						X									020
11	MW-39R-201710	W	G			10/25/17	0930		3				X						X									021
12	FD-05-201710	W	G			10/25/17	1007		3				X						X									022

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Victoria Siegler/REH	10/25/17	1600		10/26	0900	2.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Siegler

SIGNATURE of SAMPLER: Victoria Siegler DATE Signed (MM/DD/YY): 10/25/17

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

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

CHAIN-OF-CUSTODY / Analytical Request Document

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Section A Required Client Information: Same as Section C

Company:	Environ
Address:	~~7600 College Blvd., Ste. 925~~ Overland Park, KS 66210
Email To:	-
Phone: ~~913-553-5926~~	Fax:
Requested Due Date/TAT:	STD

Section B Required Project Information:

Report To:	Tamara House-Knight
Copy To:	
Purchase Order No.:	NA
Project Name:	Fort Smith, AR
Project Number:	

Section C Invoice Information:

Attention:	Tamara House-Knight
Company Name:	Environ
Address:	124 W. Capitol Avenue
Pace Quote Reference:	Little Rock, AR 72201
Pace Project Manager:	Colleen Clyne
Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	6010-Iron	Ferric Iron calc. (send field Ferrous)		Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60256510
1	TMW-23-201710	W	G			10/25/17	1047		3				X				Y	X						(3)X64H		023
2	MW-191-201710	W	G			10/25/17	1538		3				X				Y	X								024
3	MW-189-201710	W	G			10/25/17	1225		3				X				Y	X								025
4	MW-190-201710	W	G			10/25/17	1418		3				X				Y	X								026
5	MW-192-201710	W	G			10/25/17	1700		3				X				Y	X								027
6	TMW-27-201710	W	G			10/25/17	1535		3				X				Y	X								028
7	TMW-27-201710-MS	W	G			10/25/17	1535		3				X				Y	X								
8	TMW-27-201710-MSD	W	G			10/25/17	1535		3				X				Y	X								
9	TMW-25-201710	W	G			10/25/17	1645		3				X				Y	X								029
10	TMW-16-201710	W	G			10/25/17	1400		3				X				Y	X								030
11	TMW-10-201710	W	G			10/25/17	1150		3				X				Y	X								031
12	MW-27-201710	W	G			10/25/17	1710		3				X				Y	X								032

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Victoria Siegler/REH	10/25/17	1800		10/26	0900	2.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Siegler

SIGNATURE of SAMPLER: Victoria Siegler DATE Signed (MM/DD/YY): 10/25/17

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

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

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Page: 4 of 4

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Environ	Report To:	Tamara House-Knight	Attention:	Tamara House-Knight
Address:	7500 College Blvd., Ste. 925	Copy To:		Company Name:	Environ
	Overland Park, KS 66210			Address:	124 W. Capitol Avenue
Email To:	-	Purchase Order No.:	NA	Pace Quote Reference:	Little Rock, AR 72201
Phone:	913-553-5926 Fax:	Project Name:	Fort Smith, AR	Pace Project Manager:	Colleen Clyne
Requested Due Date/TAT:		Project Number:		Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH + Zn Acetate	$Na_2S_2O_3$	Methanol	Other Ascorbic Acid	Analysis Test Y/N	8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	6010-Iron	Ferric Iron calc. (send field Ferrous)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-24-20171O	W	G			9/25/17	1500		3								4		X							(2)OTHER (3)DG4H		
2	TMW-9-20171O	W	G		0955	9/25/17	0955 VS		7	X	X	X		X												(2)DG4H		BP3N A635 BP3Z BP3N 033 034
3	MW-26-20171O	W	G			9/25/17	1600		3				X						X									035
4	TB-04-20171O	W	G			9/25/17	0800		2				X						X							(2)DG4H TB		036
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Victoria Stegler/REI	10/25/17	1800		10/26	0911	2.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Stegler

SIGNATURE of SAMPLER: Victoria Stg

DATE Signed (MM/DD/YY): 10/25/17

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

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

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

November 07, 2017

Nick Zurweller
Ramboll Environ
7500 College Blvd.
Ste. 295
Overland Park, KS 66210

RE: Project: FORT SMITH, AR
Pace Project No.: 60256529

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on October 26, 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.

RV-1 Revised report - sample ID changed from UP to VP.

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

Sincerely,

Richard Mannz
richard.mannz@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: Tamara House-Knight, Ramboll Environ
M. Wilson

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60256529

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 17-016-0
Illinois Certification #: 200030
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212018-1
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587
Missouri Certification: 10070

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: FORT SMITH, AR
Pace Project No.: 60256529

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60256529001	**VP-07-201710**	Water	10/25/17 08:30	10/26/17 09:00
60256529002	**VP-08-201710**	Water	10/25/17 08:45	10/26/17 09:00
60256529003	**VP-10-201710**	Water	10/25/17 09:30	10/26/17 09:00
60256529004	**VP-12-201710**	Water	10/25/17 12:20	10/26/17 09:00
60256529005	**VP-14-201710**	Water	10/25/17 12:40	10/26/17 09:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60256529

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60256529001	**VP-07-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256529002	**VP-08-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256529003	**VP-10-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256529004	**VP-12-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256529005	**VP-14-201710**	EPA 5030B/8260	PGH	38	PASI-K

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256529

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: November 07, 2017

General Information:
5 samples were analyzed for EPA 5030B/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.

Additional Comments:

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256529

Sample: VP-07-201710 **Lab ID: 60256529001** Collected: 10/25/17 08:30 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**36.2**	ug/L	10.0	1.9	1		10/31/17 01:39	67-64-1	
Benzene	**1.1**	ug/L	1.0	0.060	1		10/31/17 01:39	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 01:39	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 01:39	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 01:39	74-83-9	
2-Butanone (MEK)	**4.5J**	ug/L	10.0	0.59	1		10/31/17 01:39	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 01:39	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 01:39	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 01:39	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 01:39	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 01:39	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 01:39	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 01:39	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 01:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 01:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 01:39	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/31/17 01:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 01:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 01:39	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 01:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 01:39	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 01:39	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 01:39	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 01:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	**1.0J**	ug/L	10.0	0.42	1		10/31/17 01:39	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 01:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 01:39	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 01:39	127-18-4	
Toluene	**0.25J**	ug/L	1.0	0.17	1		10/31/17 01:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 01:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 01:39	79-00-5	
Trichloroethene	**0.71J**	ug/L	1.0	0.17	1		10/31/17 01:39	79-01-6	B
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 01:39	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 01:39	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/31/17 01:39	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-120		1		10/31/17 01:39	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/31/17 01:39	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 01:39		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256529

Sample: VP-08-201710 **Lab ID: 60256529002** Collected: 10/25/17 08:45 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**75.1**	ug/L	10.0	1.9	1		10/31/17 01:53	67-64-1	
Benzene	**0.73J**	ug/L	1.0	0.060	1		10/31/17 01:53	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 01:53	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 01:53	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 01:53	74-83-9	
2-Butanone (MEK)	**11.8**	ug/L	10.0	0.59	1		10/31/17 01:53	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 01:53	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 01:53	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 01:53	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 01:53	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 01:53	67-66-3	
Chloromethane	**0.66J**	ug/L	1.0	0.080	1		10/31/17 01:53	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 01:53	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 01:53	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 01:53	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 01:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/31/17 01:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 01:53	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 01:53	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 01:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 01:53	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 01:53	100-41-4	
2-Hexanone	**3.0J**	ug/L	10.0	1.2	1		10/31/17 01:53	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 01:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	**0.62J**	ug/L	10.0	0.42	1		10/31/17 01:53	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 01:53	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 01:53	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 01:53	127-18-4	
Toluene	**0.28J**	ug/L	1.0	0.17	1		10/31/17 01:53	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 01:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 01:53	79-00-5	
Trichloroethene	**2.9**	ug/L	1.0	0.17	1		10/31/17 01:53	79-01-6	
Vinyl chloride	**0.18J**	ug/L	1.0	0.13	1		10/31/17 01:53	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 01:53	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/31/17 01:53	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/31/17 01:53	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		10/31/17 01:53	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 01:53		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256529

Sample: VP-10-201710 **Lab ID: 60256529003** Collected: 10/25/17 09:30 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 01:11	67-64-1	
Benzene	**0.21J**	ug/L	1.0	0.060	1		10/31/17 01:11	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 01:11	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 01:11	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 01:11	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 01:11	78-93-3	
Carbon disulfide	**0.56J**	ug/L	5.0	0.12	1		10/31/17 01:11	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 01:11	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 01:11	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 01:11	75-00-3	
Chloroform	**0.61J**	ug/L	1.0	0.14	1		10/31/17 01:11	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 01:11	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 01:11	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 01:11	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 01:11	107-06-2	
1,1-Dichloroethene	**1.6**	ug/L	1.0	0.20	1		10/31/17 01:11	75-35-4	
cis-1,2-Dichloroethene	**12.7**	ug/L	1.0	0.080	1		10/31/17 01:11	156-59-2	
trans-1,2-Dichloroethene	**0.27J**	ug/L	1.0	0.20	1		10/31/17 01:11	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 01:11	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 01:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 01:11	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 01:11	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 01:11	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 01:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 01:11	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 01:11	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 01:11	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 01:11	127-18-4	
Toluene	**0.42J**	ug/L	1.0	0.17	1		10/31/17 01:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 01:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 01:11	79-00-5	
Trichloroethene	**211**	ug/L	5.0	0.85	5		11/01/17 00:24	79-01-6	
Vinyl chloride	**0.42J**	ug/L	1.0	0.13	1		10/31/17 01:11	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 01:11	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/31/17 01:11	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	80-120		1		10/31/17 01:11	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/31/17 01:11	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 01:11		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256529

Sample: VP-12-201710 **Lab ID: 60256529004** Collected: 10/25/17 12:20 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.2J**	ug/L	10.0	1.9	1		10/31/17 02:07	67-64-1	
Benzene	**0.15J**	ug/L	1.0	0.060	1		10/31/17 02:07	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 02:07	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 02:07	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 02:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 02:07	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 02:07	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 02:07	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 02:07	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 02:07	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 02:07	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 02:07	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 02:07	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 02:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 02:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 02:07	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/31/17 02:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 02:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 02:07	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 02:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 02:07	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 02:07	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 02:07	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 02:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 02:07	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 02:07	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 02:07	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 02:07	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 02:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 02:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 02:07	79-00-5	
Trichloroethene	**0.22J**	ug/L	1.0	0.17	1		10/31/17 02:07	79-01-6	B
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 02:07	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 02:07	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/31/17 02:07	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		10/31/17 02:07	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/31/17 02:07	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 02:07		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256529

Sample: VP-14-201710 **Lab ID: 60256529005** Collected: 10/25/17 12:40 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 01:25	67-64-1	
Benzene	**0.18J**	ug/L	1.0	0.060	1		10/31/17 01:25	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 01:25	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 01:25	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 01:25	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 01:25	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 01:25	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 01:25	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 01:25	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 01:25	75-00-3	
Chloroform	**0.44J**	ug/L	1.0	0.14	1		10/31/17 01:25	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 01:25	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 01:25	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 01:25	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 01:25	107-06-2	
1,1-Dichloroethene	**0.93J**	ug/L	1.0	0.20	1		10/31/17 01:25	75-35-4	
cis-1,2-Dichloroethene	**3.3**	ug/L	1.0	0.080	1		10/31/17 01:25	156-59-2	
trans-1,2-Dichloroethene	**0.27J**	ug/L	1.0	0.20	1		10/31/17 01:25	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 01:25	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 01:25	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 01:25	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 01:25	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 01:25	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 01:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 01:25	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 01:25	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 01:25	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 01:25	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 01:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 01:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 01:25	79-00-5	
Trichloroethene	**69.0**	ug/L	1.0	0.17	1		10/31/17 01:25	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 01:25	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 01:25	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/31/17 01:25	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/31/17 01:25	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/31/17 01:25	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 01:25		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256529

QC Batch: 500838 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256529001, 60256529002, 60256529003, 60256529004, 60256529005

METHOD BLANK: 2050617 Matrix: Water
Associated Lab Samples: 60256529001, 60256529002, 60256529003, 60256529004, 60256529005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/30/17 21:55	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/30/17 21:55	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/30/17 21:55	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/30/17 21:55	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 21:55	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/30/17 21:55	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/30/17 21:55	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/30/17 21:55	
2-Hexanone	ug/L	ND	10.0	1.2	10/30/17 21:55	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/30/17 21:55	
Acetone	ug/L	ND	10.0	1.9	10/30/17 21:55	
Benzene	ug/L	ND	1.0	0.060	10/30/17 21:55	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/30/17 21:55	
Bromoform	ug/L	ND	1.0	0.070	10/30/17 21:55	
Bromomethane	ug/L	ND	5.0	0.16	10/30/17 21:55	
Carbon disulfide	ug/L	ND	5.0	0.12	10/30/17 21:55	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/30/17 21:55	
Chlorobenzene	ug/L	ND	1.0	0.21	10/30/17 21:55	
Chloroethane	ug/L	ND	1.0	0.15	10/30/17 21:55	
Chloroform	ug/L	ND	1.0	0.14	10/30/17 21:55	
Chloromethane	ug/L	ND	1.0	0.080	10/30/17 21:55	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/30/17 21:55	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/30/17 21:55	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/30/17 21:55	
Ethylbenzene	ug/L	ND	1.0	0.18	10/30/17 21:55	
Methylene chloride	ug/L	ND	1.0	0.15	10/30/17 21:55	
Styrene	ug/L	ND	1.0	0.12	10/30/17 21:55	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/30/17 21:55	
Toluene	ug/L	ND	1.0	0.17	10/30/17 21:55	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 21:55	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/30/17 21:55	
Trichloroethene	ug/L	ND	1.0	0.17	10/30/17 21:55	
Vinyl chloride	ug/L	ND	1.0	0.13	10/30/17 21:55	
Xylene (Total)	ug/L	ND	3.0	0.42	10/30/17 21:55	
1,2-Dichloroethane-d4 (S)	%	98	80-120		10/30/17 21:55	
4-Bromofluorobenzene (S)	%	97	80-120		10/30/17 21:55	
Toluene-d8 (S)	%	99	80-120		10/30/17 21:55	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256529

LABORATORY CONTROL SAMPLE: 2050618

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.4	102	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	19.2	96	74-124	
1,1,2-Trichloroethane	ug/L	20	20.2	101	81-118	
1,1-Dichloroethane	ug/L	20	21.7	108	82-122	
1,1-Dichloroethene	ug/L	20	21.1	105	78-123	
1,2-Dichloroethane	ug/L	20	21.0	105	78-117	
1,2-Dichloropropane	ug/L	20	21.5	107	81-118	
2-Butanone (MEK)	ug/L	100	105	105	72-117	
2-Hexanone	ug/L	100	101	101	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	106	106	77-124	
Acetone	ug/L	100	99.8	100	66-127	
Benzene	ug/L	20	21.1	106	82-115	
Bromodichloromethane	ug/L	20	20.7	104	83-123	
Bromoform	ug/L	20	20.2	101	79-126	
Bromomethane	ug/L	20	26.9	134	39-146	
Carbon disulfide	ug/L	20	21.2	106	75-121	
Carbon tetrachloride	ug/L	20	22.7	113	82-117	
Chlorobenzene	ug/L	20	20.4	102	89-114	
Chloroethane	ug/L	20	20.8	104	71-133	
Chloroform	ug/L	20	20.8	104	78-117	
Chloromethane	ug/L	20	23.2	116	19-181	
cis-1,2-Dichloroethene	ug/L	20	19.6	98	78-119	
cis-1,3-Dichloropropene	ug/L	20	20.8	104	81-116	
Dibromochloromethane	ug/L	20	20.0	100	81-122	
Ethylbenzene	ug/L	20	20.4	102	83-112	
Methylene chloride	ug/L	20	21.6	108	78-127	
Styrene	ug/L	20	20.8	104	88-117	
Tetrachloroethene	ug/L	20	19.5	97	80-121	
Toluene	ug/L	20	20.6	103	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.7	104	79-120	
trans-1,3-Dichloropropene	ug/L	20	19.5	98	81-119	
Trichloroethene	ug/L	20	19.3	97	78-118	
Vinyl chloride	ug/L	20	23.2	116	66-133	
Xylene (Total)	ug/L	60	62.6	104	83-114	
1,2-Dichloroethane-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2050619 2050620

Parameter	Units	60256510028 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	20	20	20.3	20.8	101	104	49-167	2	11	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	16.4	16.9	82	85	75-118	3	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	18.4	18.6	92	93	76-116	1	13	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256529

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2050619 2050620

Parameter	Units	60256510028 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethane	ug/L	ND	20	20	20.2	20.9	101	104	82-127	3	15	
1,1-Dichloroethene	ug/L	ND	20	20	21.1	21.3	105	106	79-136	1	14	
1,2-Dichloroethane	ug/L	ND	20	20	18.7	18.7	93	94	58-133	0	14	
1,2-Dichloropropane	ug/L	ND	20	20	19.6	20.5	98	103	81-117	5	11	
2-Butanone (MEK)	ug/L	ND	100	100	88.3	92.5	88	93	64-114	5	21	
2-Hexanone	ug/L	ND	100	100	85.5	91.3	85	91	71-113	7	15	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	88.4	96.9	88	97	64-127	9	14	
Acetone	ug/L	ND	100	100	83.9	91.4	84	91	61-113	9	33	
Benzene	ug/L	ND	20	20	19.8	20.6	99	103	55-145	4	18	
Bromodichloromethane	ug/L	ND	20	20	19.0	19.6	95	98	81-120	3	11	
Bromoform	ug/L	ND	20	20	17.4	19.2	87	96	72-117	10	16	
Bromomethane	ug/L	ND	20	20	19.7	25.2	98	126	39-145	25	37	
Carbon disulfide	ug/L	ND	20	20	20.1	21.7	101	109	82-129	8	11	
Carbon tetrachloride	ug/L	ND	20	20	21.5	22.6	107	113	85-125	5	11	
Chlorobenzene	ug/L	ND	20	20	18.3	19.7	92	98	87-115	7	10	
Chloroethane	ug/L	ND	20	20	19.2	22.4	96	112	62-157	15	20	
Chloroform	ug/L	ND	20	20	18.9	19.7	95	99	79-117	4	12	
Chloromethane	ug/L	ND	20	20	18.2	22.4	91	112	22-194	21	59	
cis-1,2-Dichloroethene	ug/L	ND	20	20	19.0	19.2	95	96	70-134	2	12	
cis-1,3-Dichloropropene	ug/L	ND	20	20	18.6	19.1	93	96	70-117	3	12	
Dibromochloromethane	ug/L	ND	20	20	17.7	18.4	88	92	56-135	4	14	
Ethylbenzene	ug/L	ND	20	20	18.4	19.6	92	98	45-152	7	11	
Methylene chloride	ug/L	ND	20	20	18.3	20.7	91	103	77-123	12	13	
Styrene	ug/L	ND	20	20	18.2	19.8	91	99	64-134	8	11	
Tetrachloroethene	ug/L	ND	20	20	18.6	20.2	93	101	81-126	8	11	
Toluene	ug/L	ND	20	20	18.8	19.7	94	98	52-144	4	12	
trans-1,2-Dichloroethene	ug/L	ND	20	20	19.5	20.0	98	100	80-126	2	12	
trans-1,3-Dichloropropene	ug/L	ND	20	20	16.9	18.0	85	90	72-114	6	15	
Trichloroethene	ug/L	ND	20	20	18.7	19.8	93	98	70-131	5	16	
Vinyl chloride	ug/L	ND	20	20	23.1	24.8	116	124	64-153	7	23	
Xylene (Total)	ug/L	ND	60	60	56.4	60.5	94	101	54-146	7	12	
1,2-Dichloroethane-d4 (S)	%						100	98	80-120			
4-Bromofluorobenzene (S)	%						99	96	80-120			
Toluene-d8 (S)	%						99	99	80-120			
Preservation pH		1.0			1.0	1.0				0		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256529

QC Batch: 501040
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256529003

METHOD BLANK: 2051155 Matrix: Water
Associated Lab Samples: 60256529003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichloroethene	ug/L	ND	1.0	0.17	10/31/17 21:36	
1,2-Dichloroethane-d4 (S)	%	99	80-120		10/31/17 21:36	
4-Bromofluorobenzene (S)	%	98	80-120		10/31/17 21:36	
Toluene-d8 (S)	%	99	80-120		10/31/17 21:36	

LABORATORY CONTROL SAMPLE: 2051156

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/L	20	20.0	100	78-118	
1,2-Dichloroethane-d4 (S)	%			94	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2051157 2051158

Parameter	Units	60256510012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Trichloroethene	ug/L	0.19J	20	20	19.8	19.0	98	94	70-131	4	16	
1,2-Dichloroethane-d4 (S)	%						99	101	80-120			
4-Bromofluorobenzene (S)	%						99	98	80-120			
Toluene-d8 (S)	%						96	99	80-120			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60256529

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.

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-K	Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60256529

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60256529001	**VP-07-201710**	EPA 5030B/8260	500838		
60256529002	**VP-08-201710**	EPA 5030B/8260	500838		
60256529003	**VP-10-201710**	EPA 5030B/8260	500838		
60256529003	**VP-10-201710**	EPA 5030B/8260	501040		
60256529004	**VP-12-201710**	EPA 5030B/8260	500838		
60256529005	**VP-14-201710**	EPA 5030B/8260	500838		

Pace Analytical
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Sample Condition Upon Receipt

WO# : 60256529

60256529

Client Name: Environ

Courier: FedEx ☐ UPS ☐ VIA ☒ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☐

Custody Seal on Cooler/Box Present: Yes ☒ No ☐ Seals intact: Yes ☒ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☒ Foam ☐ None ☐ Other ☐

Thermometer Used: (CF 0.0) T-266 / (CF +0.3) T-239 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 2.6 **Corr. Factor** (CF 0.0 / CF +0.3) **Corrected** 2.6

Date and initials of person examining contents: JB 10/26

Temperature should be above freezing to 6°C

Chain of Custody present:	☒Yes ☐No ☐N/A	
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	
Samples arrived within holding time:	☒Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☒No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	
Sufficient volume:	☒Yes ☐No ☐N/A	
Correct containers used:	☒Yes ☐No ☐N/A	
Pace containers used:	☒Yes ☐No ☐N/A	
Containers intact:	☒Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☒N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	
Sample labels match COC: Date / time / ID / analyses	☒Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☒No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	☐Yes ☐No ☒N/A	
Cyanide water sample checks: ☒N/A Lead acetate strip turns dark? (Record only) Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No ☐Yes ☐No	
Trip Blank present:	☐Yes ☒No ☐N/A	
Headspace in VOA vials (>6mm):	☐Yes ☒No ☐N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☒N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☒N/A	RHM

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

CHAIN-OF-CUSTODY / Analytical Request Document

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

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Same as Section C

Page: 1 of 1

Section A Required Client Information:

Company:	Environ
Address:	7500 College Blvd., Ste. 925 Overland Park, KS 66210
Email To:	
Phone: 913-553-5926	Fax:
Requested Due Date/TAT:	STD

Section B Required Project Information:

Report To:	Tamara House-Knight
Copy To:	
Purchase Order No.:	NA
Project Name:	Fort Smith, AR
Project Number:	

Section C Invoice Information:

Attention:	Tamara House-Knight
Company Name:	Environ
Address:	124 W. Capitol Avenue Little Rock, AR 72201
Pace Quote Reference:	
Pace Project Manager:	Colleen Clyne
Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: 8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	6010-iron	Ferric iron calc. (send field Ferrous)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60256529
1	VP-07-201710	W	G			10/25/17	0830		3				X					X							(3) DLGH	001
2	VP-08-201710	W	G			10/25/17	0845		3				X					X								002
3	VP-10-201710	W	G			10/25/17	0930		3				X					X								003
4	VP-12-201710	W	G			10/25/17	1220		3				X					X								004
5	VP-14-201710	W	G			10/25/17	1240		2				X					X							(2) DLGH	005
6																										
7																										
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ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Victoria Siegler IREH	10/25/17	1800		10/26/17	~~0820~~ 0900	2.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Siegler

SIGNATURE of SAMPLER: Victoria Siegler

DATE Signed (MM/DD/YY): 10/25/17

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

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

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

November 10, 2017

Nick Zurweller
Ramboll Environ
7500 College Blvd.
Ste. 295
Overland Park, KS 66210

RE: Project: FORT SMITH, AR
Pace Project No.: 60256590

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on October 27, 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,

Richard Mannz
richard.mannz@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: Tamara House-Knight, Ramboll Environ
M. Wilson

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CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 17-016-0
Illinois Certification #: 200030
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212018-1
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587
Missouri Certification: 10070

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SAMPLE SUMMARY

Project: FORT SMITH, AR
Pace Project No.: 60256590

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60256590001	**MW-89-201710**	Water	10/26/17 08:42	10/27/17 03:05
60256590002	**MW-38-201710**	Water	10/26/17 10:49	10/27/17 03:05
60256590003	**MW-93-201710**	Water	10/26/17 09:10	10/27/17 03:05
60256590004	**MW-95-201710**	Water	10/26/17 10:20	10/27/17 03:05
60256590005	**MW-25-201710**	Water	10/26/17 09:10	10/27/17 03:05
60256590006	**ITMW-18-201710**	Water	10/26/17 09:45	10/27/17 03:05
60256590007	**FD-08-201710**	Water	10/26/17 09:10	10/27/17 03:05
60256590008	**EB-03-201710**	Water	10/26/17 12:00	10/27/17 03:05
60256590009	**EB-04-201710**	Water	10/26/17 12:13	10/27/17 03:05
60256590010	**MW-179-201710**	Water	10/26/17 08:15	10/27/17 03:05
60256590011	**MW-87-201710**	Water	10/26/17 09:32	10/27/17 03:05
60256590012	**MW-19-201710**	Water	10/26/17 09:10	10/27/17 03:05
60256590013	**EB-05-201710**	Water	10/26/17 12:30	10/27/17 03:05
60256590014	**MW-86-201710**	Water	10/26/17 11:20	10/27/17 03:05
60256590015	**FD-07-201710**	Water	10/26/17 10:41	10/27/17 03:05

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60256590

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60256590001	**MW-89-201710**	EPA 6010	TDS	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	1	PASI-K
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256590002	**MW-38-201710**	EPA 6010	TDS	1	PASI-K
		EPA 5030B/8260	EAG, PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	1	PASI-K
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256590003	**MW-93-201710**	EPA 5030B/8260	EAG, PGH	38	PASI-K
60256590004	**MW-95-201710**	EPA 6010	TDS	1	PASI-K
		EPA 5030B/8260	EAG, PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	1	PASI-K
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256590005	**MW-25-201710**	EPA 6010	TDS	1	PASI-K
		EPA 5030B/8260	EAG, PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	1	PASI-K
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256590006	**ITMW-18-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256590007	**FD-08-201710**	EPA 5030B/8260	EAG, PGH	38	PASI-K
60256590008	**EB-03-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256590009	**EB-04-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256590010	**MW-179-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256590011	**MW-87-201710**	EPA 6010	TDS	1	PASI-K
		EPA 5030B/8260	EAG, PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	1	PASI-K
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256590012	**MW-19-201710**	EPA 5030B/8260	PGH	38	PASI-K

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60256590

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60256590013	**EB-05-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256590014	**MW-86-201710**	EPA 6010	TDS	1	PASI-K
		EPA 5030B/8260	EAG, PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	1	PASI-K
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256590015	**FD-07-201710**	EPA 5030B/8260	PGH	38	PASI-K

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256590

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Ramboll Environ_AR
Date: November 10, 2017

General Information:
6 samples were analyzed for EPA 6010. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 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.

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256590

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: November 10, 2017

General Information:
15 samples were analyzed for EPA 5030B/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: 501472

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: 2052654)
  - Bromoform

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

QC Batch: 500793

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 501042

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 501218

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 501472

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256590

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: November 10, 2017

Additional Comments:

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256590

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: Ramboll Environ_AR
Date: November 10, 2017

General Information:
6 samples were analyzed for SM 4500-S-2 D. 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.

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.

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

Additional Comments:

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256590

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Ramboll Environ_AR
Date: November 10, 2017

General Information:
6 samples were analyzed for EPA 300.0. 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.

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256590

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Ramboll Environ_AR
Date: November 10, 2017

General Information:
6 samples were analyzed for EPA 353.2. 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.

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: 500492

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60256510034,60256590004

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

- MS (Lab ID: 2048688)
  - Nitrogen, NO2 plus NO3
  - Nitrogen, Nitrite
- MS (Lab ID: 2048690)
  - Nitrogen, Nitrate
  - Nitrogen, Nitrite

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

Additional Comments:

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256590

Method: **SM 5310C**
Description: 5310C TOC
Client: Ramboll Environ_AR
Date: November 10, 2017

General Information:
6 samples were analyzed for SM 5310C. 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.

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

QC Batch: 500954

B: Analyte was detected in the associated method blank.

- BLANK for HBN 500954 [WETA/478 (Lab ID: 2050852)
  - Total Organic Carbon

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.

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.

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-89-201710 **Lab ID: 60256590001** Collected: 10/26/17 08:42 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**239**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:18	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		11/01/17 07:54	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		11/01/17 07:54	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/01/17 07:54	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/01/17 07:54	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		11/01/17 07:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/01/17 07:54	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		11/01/17 07:54	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/01/17 07:54	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/01/17 07:54	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/01/17 07:54	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		11/01/17 07:54	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/01/17 07:54	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/01/17 07:54	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		11/01/17 07:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/01/17 07:54	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 07:54	75-35-4	
cis-1,2-Dichloroethene	**0.48J**	ug/L	1.0	0.080	1		11/01/17 07:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 07:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/01/17 07:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/01/17 07:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/01/17 07:54	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/01/17 07:54	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/01/17 07:54	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		11/01/17 07:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/01/17 07:54	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/17 07:54	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/17 07:54	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		11/01/17 07:54	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		11/01/17 07:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/17 07:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		11/01/17 07:54	79-00-5	
Trichloroethene	**11.3**	ug/L	1.0	0.17	1		11/01/17 07:54	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/01/17 07:54	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/01/17 07:54	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		11/01/17 07:54	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		11/01/17 07:54	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		11/01/17 07:54	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/01/17 07:54		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:18	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-89-201710 **Lab ID: 60256590001** Collected: 10/26/17 08:42 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**4.2**	mg/L	1.0	0.50	1		11/08/17 13:49	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**104**	mg/L	5.0	2.5	50		10/27/17 09:44		
Nitrogen, Nitrite	ND	mg/L	5.0	1.5	50		10/27/17 09:44		
Nitrogen, NO2 plus NO3	**105**	mg/L	5.0	2.5	50		10/27/17 09:44		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.8**	mg/L	1.0	0.13	1		10/31/17 19:49	7440-44-0	B

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-38-201710 **Lab ID: 60256590002** Collected: 10/26/17 10:49 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**4370**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:20	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		11/02/17 14:34	67-64-1	
Benzene	**0.18J**	ug/L	1.0	0.060	1		11/02/17 14:34	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/02/17 14:34	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/02/17 14:34	75-25-2	L1
Bromomethane	ND	ug/L	5.0	0.16	1		11/02/17 14:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/02/17 14:34	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		11/02/17 14:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/02/17 14:34	56-23-5	
Chlorobenzene	**0.36J**	ug/L	1.0	0.21	1		11/02/17 14:34	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/02/17 14:34	75-00-3	
Chloroform	**0.29J**	ug/L	1.0	0.14	1		11/02/17 14:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/02/17 14:34	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/02/17 14:34	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		11/02/17 14:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/02/17 14:34	107-06-2	
1,1-Dichloroethene	**16.8**	ug/L	1.0	0.20	1		11/02/17 14:34	75-35-4	
cis-1,2-Dichloroethene	**823**	ug/L	50.0	4.0	50		11/01/17 18:27	156-59-2	
trans-1,2-Dichloroethene	**6.1**	ug/L	1.0	0.20	1		11/02/17 14:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/02/17 14:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/02/17 14:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/02/17 14:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/02/17 14:34	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/02/17 14:34	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		11/02/17 14:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/02/17 14:34	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/02/17 14:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/02/17 14:34	79-34-5	
Tetrachloroethene	**0.50J**	ug/L	1.0	0.10	1		11/02/17 14:34	127-18-4	
Toluene	**0.27J**	ug/L	1.0	0.17	1		11/02/17 14:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/02/17 14:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		11/02/17 14:34	79-00-5	
Trichloroethene	**2240**	ug/L	50.0	8.5	50		11/01/17 18:27	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/02/17 14:34	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/02/17 14:34	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-120		1		11/02/17 14:34	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	80-120		1		11/02/17 14:34	17060-07-0	
Toluene-d8 (S)	103	%	80-120		1		11/02/17 14:34	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/02/17 14:34		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:18	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-38-201710 **Lab ID: 60256590002** Collected: 10/26/17 10:49 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**28.2**	mg/L	2.0	1.0	2		11/08/17 14:32	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.050	1		10/27/17 09:36		
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/27/17 09:36		
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.050	1		10/27/17 09:36		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.7**	mg/L	1.0	0.13	1		10/31/17 20:02	7440-44-0	B

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-93-201710 **Lab ID: 60256590003** Collected: 10/26/17 09:10 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		11/02/17 15:03	67-64-1	
Benzene	**0.14J**	ug/L	1.0	0.060	1		11/02/17 15:03	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/02/17 15:03	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/02/17 15:03	75-25-2	L1
Bromomethane	ND	ug/L	5.0	0.16	1		11/02/17 15:03	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/02/17 15:03	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		11/02/17 15:03	75-15-0	
Carbon tetrachloride	**0.36J**	ug/L	1.0	0.18	1		11/02/17 15:03	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/02/17 15:03	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/02/17 15:03	75-00-3	
Chloroform	**4.1**	ug/L	1.0	0.14	1		11/02/17 15:03	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/02/17 15:03	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/02/17 15:03	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		11/02/17 15:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/02/17 15:03	107-06-2	
1,1-Dichloroethene	**26.0**	ug/L	1.0	0.20	1		11/02/17 15:03	75-35-4	
cis-1,2-Dichloroethene	**111**	ug/L	1.0	0.080	1		11/02/17 15:03	156-59-2	
trans-1,2-Dichloroethene	**5.3**	ug/L	1.0	0.20	1		11/02/17 15:03	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/02/17 15:03	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/02/17 15:03	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/02/17 15:03	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/02/17 15:03	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/02/17 15:03	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		11/02/17 15:03	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/02/17 15:03	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/02/17 15:03	100-42-5	
1,1,2,2-Tetrachloroethane	**0.30J**	ug/L	1.0	0.15	1		11/02/17 15:03	79-34-5	
Tetrachloroethene	**7.3**	ug/L	1.0	0.10	1		11/02/17 15:03	127-18-4	
Toluene	**0.20J**	ug/L	1.0	0.17	1		11/02/17 15:03	108-88-3	
1,1,1-Trichloroethane	**0.23J**	ug/L	1.0	0.11	1		11/02/17 15:03	71-55-6	
1,1,2-Trichloroethane	**1.1**	ug/L	1.0	0.20	1		11/02/17 15:03	79-00-5	
Trichloroethene	**16600**	ug/L	200	34.0	200		11/01/17 18:41	79-01-6	
Vinyl chloride	**9.1**	ug/L	1.0	0.13	1		11/02/17 15:03	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/02/17 15:03	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	92	%	80-120		1		11/02/17 15:03	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	80-120		1		11/02/17 15:03	17060-07-0	
Toluene-d8 (S)	103	%	80-120		1		11/02/17 15:03	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/02/17 15:03		

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-95-201710 **Lab ID: 60256590004** Collected: 10/26/17 10:20 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**72.6**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:28	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		11/02/17 15:17	67-64-1	
Benzene	**0.11J**	ug/L	1.0	0.060	1		11/02/17 15:17	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/02/17 15:17	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/02/17 15:17	75-25-2	L1
Bromomethane	**0.55J**	ug/L	5.0	0.16	1		11/02/17 15:17	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/02/17 15:17	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		11/02/17 15:17	75-15-0	
Carbon tetrachloride	**0.43J**	ug/L	1.0	0.18	1		11/02/17 15:17	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/02/17 15:17	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/02/17 15:17	75-00-3	
Chloroform	**5.4**	ug/L	1.0	0.14	1		11/02/17 15:17	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/02/17 15:17	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/02/17 15:17	124-48-1	
1,1-Dichloroethane	**0.45J**	ug/L	1.0	0.050	1		11/02/17 15:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/02/17 15:17	107-06-2	
1,1-Dichloroethene	**47.3**	ug/L	1.0	0.20	1		11/02/17 15:17	75-35-4	
cis-1,2-Dichloroethene	**198**	ug/L	1.0	0.080	1		11/02/17 15:17	156-59-2	
trans-1,2-Dichloroethene	**4.2**	ug/L	1.0	0.20	1		11/02/17 15:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/02/17 15:17	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/02/17 15:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/02/17 15:17	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/02/17 15:17	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/02/17 15:17	591-78-6	
Methylene chloride	**1.2**	ug/L	1.0	0.15	1		11/02/17 15:17	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/02/17 15:17	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/02/17 15:17	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/02/17 15:17	79-34-5	
Tetrachloroethene	**8.9**	ug/L	1.0	0.10	1		11/02/17 15:17	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		11/02/17 15:17	108-88-3	
1,1,1-Trichloroethane	**0.74J**	ug/L	1.0	0.11	1		11/02/17 15:17	71-55-6	
1,1,2-Trichloroethane	**1.9**	ug/L	1.0	0.20	1		11/02/17 15:17	79-00-5	
Trichloroethene	**23900**	ug/L	200	34.0	200		11/01/17 18:55	79-01-6	
Vinyl chloride	**51.2**	ug/L	1.0	0.13	1		11/02/17 15:17	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/02/17 15:17	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		11/02/17 15:17	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	80-120		1		11/02/17 15:17	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		11/02/17 15:17	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/02/17 15:17		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:18	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-95-201710 **Lab ID: 60256590004** Collected: 10/26/17 10:20 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**3.0**	mg/L	1.0	0.50	1		11/08/17 15:01	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**1.0**	mg/L	0.10	0.050	1		10/27/17 09:34		M1
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/27/17 09:34		M1
Nitrogen, NO2 plus NO3	**1.0**	mg/L	0.10	0.050	1		10/27/17 09:34		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.35J**	mg/L	1.0	0.13	1		10/31/17 20:15	7440-44-0	B

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-25-201710 **Lab ID: 60256590005** Collected: 10/26/17 09:10 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**4810**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:30	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**116**	ug/L	10.0	1.9	1		11/02/17 15:59	67-64-1	
Benzene	**0.43J**	ug/L	1.0	0.060	1		11/02/17 15:59	71-43-2	
Bromodichloromethane	**2.5**	ug/L	1.0	0.19	1		11/02/17 15:59	75-27-4	
Bromoform	**0.97J**	ug/L	1.0	0.070	1		11/02/17 15:59	75-25-2	L1
Bromomethane	**0.75J**	ug/L	5.0	0.16	1		11/02/17 15:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/02/17 15:59	78-93-3	
Carbon disulfide	**3.7J**	ug/L	5.0	0.12	1		11/02/17 15:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/02/17 15:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/02/17 15:59	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/02/17 15:59	75-00-3	
Chloroform	**49.6**	ug/L	1.0	0.14	1		11/02/17 15:59	67-66-3	
Chloromethane	**5.2**	ug/L	1.0	0.080	1		11/02/17 15:59	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/02/17 15:59	124-48-1	
1,1-Dichloroethane	**7.2**	ug/L	1.0	0.050	1		11/02/17 15:59	75-34-3	
1,2-Dichloroethane	**0.29J**	ug/L	1.0	0.12	1		11/02/17 15:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	1000	200	1000		11/01/17 19:09	75-35-4	
cis-1,2-Dichloroethene	**22900**	ug/L	1000	80.0	1000		11/01/17 19:09	156-59-2	
trans-1,2-Dichloroethene	**436J**	ug/L	1000	200	1000		11/01/17 19:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/02/17 15:59	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/02/17 15:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/02/17 15:59	10061-02-6	
Ethylbenzene	**0.19J**	ug/L	1.0	0.18	1		11/02/17 15:59	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/02/17 15:59	591-78-6	
Methylene chloride	**19.1**	ug/L	1.0	0.15	1		11/02/17 15:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	**1.1J**	ug/L	10.0	0.42	1		11/02/17 15:59	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/02/17 15:59	100-42-5	
1,1,2,2-Tetrachloroethane	**184**	ug/L	1.0	0.15	1		11/02/17 15:59	79-34-5	
Tetrachloroethene	**63.4**	ug/L	1.0	0.10	1		11/02/17 15:59	127-18-4	
Toluene	**9.5**	ug/L	1.0	0.17	1		11/02/17 15:59	108-88-3	
1,1,1-Trichloroethane	**27.3**	ug/L	1.0	0.11	1		11/02/17 15:59	71-55-6	
1,1,2-Trichloroethane	**4.5**	ug/L	1.0	0.20	1		11/02/17 15:59	79-00-5	
Trichloroethene	**97400**	ug/L	1000	170	1000		11/01/17 19:09	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/02/17 15:59	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/02/17 15:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	92	%	80-120		1		11/02/17 15:59	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	80-120		1		11/02/17 15:59	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		11/02/17 15:59	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/02/17 15:59		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:18	18496-25-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-25-201710 **Lab ID: 60256590005** Collected: 10/26/17 09:10 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**652**	mg/L	50.0	25.0	50		11/08/17 15:44	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.050	1		10/27/17 09:33		
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/27/17 09:33		
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.050	1		10/27/17 09:33		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**2.4**	mg/L	1.0	0.13	1		10/31/17 20:28	7440-44-0	B

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: ITMW-18-201710 **Lab ID: 60256590006** Collected: 10/26/17 09:45 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**25.3**	ug/L	10.0	1.9	1		10/30/17 12:47	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 12:47	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 12:47	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 12:47	75-25-2	
Bromomethane	**20.7**	ug/L	5.0	0.16	1		10/30/17 12:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 12:47	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 12:47	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 12:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 12:47	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 12:47	75-00-3	
Chloroform	**1.0**	ug/L	1.0	0.14	1		10/30/17 12:47	67-66-3	
Chloromethane	**8.4**	ug/L	1.0	0.080	1		10/30/17 12:47	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 12:47	124-48-1	
1,1-Dichloroethane	**0.73J**	ug/L	1.0	0.050	1		10/30/17 12:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 12:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 12:47	75-35-4	
cis-1,2-Dichloroethene	**0.47J**	ug/L	1.0	0.080	1		10/30/17 12:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 12:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 12:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 12:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 12:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 12:47	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 12:47	591-78-6	
Methylene chloride	**1.1**	ug/L	1.0	0.15	1		10/30/17 12:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 12:47	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 12:47	100-42-5	
1,1,2,2-Tetrachloroethane	**0.35J**	ug/L	1.0	0.15	1		10/30/17 12:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 12:47	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 12:47	108-88-3	
1,1,1-Trichloroethane	**0.18J**	ug/L	1.0	0.11	1		10/30/17 12:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 12:47	79-00-5	
Trichloroethene	**15.0**	ug/L	1.0	0.17	1		10/30/17 12:47	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 12:47	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 12:47	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 12:47	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		10/30/17 12:47	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 12:47	2037-26-5	
Preservation pH	**3.0**		0.10	0.10	1		10/30/17 12:47		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: FD-08-201710 **Lab ID: 60256590007** Collected: 10/26/17 09:10 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**122**	ug/L	10.0	1.9	1		11/02/17 16:13	67-64-1	
Benzene	**0.45J**	ug/L	1.0	0.060	1		11/02/17 16:13	71-43-2	
Bromodichloromethane	**2.5**	ug/L	1.0	0.19	1		11/02/17 16:13	75-27-4	
Bromoform	**0.70J**	ug/L	1.0	0.070	1		11/02/17 16:13	75-25-2	L1
Bromomethane	**1.1J**	ug/L	5.0	0.16	1		11/02/17 16:13	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/02/17 16:13	78-93-3	
Carbon disulfide	**3.9J**	ug/L	5.0	0.12	1		11/02/17 16:13	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/02/17 16:13	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/02/17 16:13	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/02/17 16:13	75-00-3	
Chloroform	**49.8**	ug/L	1.0	0.14	1		11/02/17 16:13	67-66-3	
Chloromethane	**4.9**	ug/L	1.0	0.080	1		11/02/17 16:13	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/02/17 16:13	124-48-1	
1,1-Dichloroethane	**7.5**	ug/L	1.0	0.050	1		11/02/17 16:13	75-34-3	
1,2-Dichloroethane	**0.33J**	ug/L	1.0	0.12	1		11/02/17 16:13	107-06-2	
1,1-Dichloroethene	ND	ug/L	1000	200	1000		11/01/17 18:12	75-35-4	
cis-1,2-Dichloroethene	**20900**	ug/L	1000	80.0	1000		11/01/17 18:12	156-59-2	
trans-1,2-Dichloroethene	**494J**	ug/L	1000	200	1000		11/01/17 18:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/02/17 16:13	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/02/17 16:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/02/17 16:13	10061-02-6	
Ethylbenzene	**0.20J**	ug/L	1.0	0.18	1		11/02/17 16:13	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/02/17 16:13	591-78-6	
Methylene chloride	**19.0**	ug/L	1.0	0.15	1		11/02/17 16:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	**1.2J**	ug/L	10.0	0.42	1		11/02/17 16:13	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/02/17 16:13	100-42-5	
1,1,2,2-Tetrachloroethane	**196**	ug/L	1.0	0.15	1		11/02/17 16:13	79-34-5	
Tetrachloroethene	**63.8**	ug/L	1.0	0.10	1		11/02/17 16:13	127-18-4	
Toluene	**9.2**	ug/L	1.0	0.17	1		11/02/17 16:13	108-88-3	
1,1,1-Trichloroethane	**27.5**	ug/L	1.0	0.11	1		11/02/17 16:13	71-55-6	
1,1,2-Trichloroethane	**4.3**	ug/L	1.0	0.20	1		11/02/17 16:13	79-00-5	
Trichloroethene	**95900**	ug/L	1000	170	1000		11/01/17 18:12	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/02/17 16:13	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/02/17 16:13	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	92	%	80-120		1		11/02/17 16:13	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	80-120		1		11/02/17 16:13	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		11/02/17 16:13	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/02/17 16:13		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: EB-03-201710 **Lab ID: 60256590008** Collected: 10/26/17 12:00 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		11/01/17 17:16	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		11/01/17 17:16	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/01/17 17:16	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/01/17 17:16	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		11/01/17 17:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/01/17 17:16	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		11/01/17 17:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/01/17 17:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/01/17 17:16	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/01/17 17:16	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		11/01/17 17:16	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/01/17 17:16	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/01/17 17:16	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		11/01/17 17:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/01/17 17:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 17:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		11/01/17 17:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 17:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/01/17 17:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/01/17 17:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/01/17 17:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/01/17 17:16	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/01/17 17:16	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		11/01/17 17:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/01/17 17:16	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/17 17:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/17 17:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		11/01/17 17:16	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		11/01/17 17:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/17 17:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		11/01/17 17:16	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		11/01/17 17:16	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/01/17 17:16	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/01/17 17:16	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	105	%	80-120		1		11/01/17 17:16	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		11/01/17 17:16	17060-07-0	
Toluene-d8 (S)	95	%	80-120		1		11/01/17 17:16	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/01/17 17:16		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: EB-04-201710 **Lab ID: 60256590009** Collected: 10/26/17 12:13 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		11/01/17 17:30	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		11/01/17 17:30	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/01/17 17:30	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/01/17 17:30	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		11/01/17 17:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/01/17 17:30	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		11/01/17 17:30	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/01/17 17:30	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/01/17 17:30	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/01/17 17:30	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		11/01/17 17:30	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/01/17 17:30	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/01/17 17:30	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		11/01/17 17:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/01/17 17:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 17:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		11/01/17 17:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 17:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/01/17 17:30	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/01/17 17:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/01/17 17:30	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/01/17 17:30	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/01/17 17:30	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		11/01/17 17:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/01/17 17:30	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/17 17:30	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/17 17:30	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		11/01/17 17:30	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		11/01/17 17:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/17 17:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		11/01/17 17:30	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		11/01/17 17:30	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/01/17 17:30	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/01/17 17:30	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		11/01/17 17:30	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	80-120		1		11/01/17 17:30	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		11/01/17 17:30	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/01/17 17:30		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-179-201710 **Lab ID: 60256590010** Collected: 10/26/17 08:15 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.2J**	ug/L	10.0	1.9	1		11/01/17 17:58	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		11/01/17 17:58	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/01/17 17:58	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/01/17 17:58	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		11/01/17 17:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/01/17 17:58	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		11/01/17 17:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/01/17 17:58	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/01/17 17:58	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/01/17 17:58	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		11/01/17 17:58	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/01/17 17:58	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/01/17 17:58	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		11/01/17 17:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/01/17 17:58	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 17:58	75-35-4	
cis-1,2-Dichloroethene	**0.35J**	ug/L	1.0	0.080	1		11/01/17 17:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 17:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/01/17 17:58	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/01/17 17:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/01/17 17:58	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/01/17 17:58	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/01/17 17:58	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		11/01/17 17:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/01/17 17:58	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/17 17:58	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/17 17:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		11/01/17 17:58	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		11/01/17 17:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/17 17:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		11/01/17 17:58	79-00-5	
Trichloroethene	**10.7**	ug/L	1.0	0.17	1		11/01/17 17:58	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/01/17 17:58	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/01/17 17:58	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		11/01/17 17:58	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		11/01/17 17:58	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		11/01/17 17:58	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/01/17 17:58		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-87-201710 **Lab ID: 60256590011** Collected: 10/26/17 09:32 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**122**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:33	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		11/02/17 14:06	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		11/02/17 14:06	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/02/17 14:06	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/02/17 14:06	75-25-2	L1
Bromomethane	ND	ug/L	5.0	0.16	1		11/02/17 14:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/02/17 14:06	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		11/02/17 14:06	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/02/17 14:06	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/02/17 14:06	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/02/17 14:06	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		11/02/17 14:06	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/02/17 14:06	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/02/17 14:06	124-48-1	
1,1-Dichloroethane	**1.6**	ug/L	1.0	0.050	1		11/02/17 14:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/02/17 14:06	107-06-2	
1,1-Dichloroethene	**5.7**	ug/L	1.0	0.20	1		11/02/17 14:06	75-35-4	
cis-1,2-Dichloroethene	**36.4**	ug/L	1.0	0.080	1		11/02/17 14:06	156-59-2	
trans-1,2-Dichloroethene	**0.89J**	ug/L	1.0	0.20	1		11/02/17 14:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/02/17 14:06	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/02/17 14:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/02/17 14:06	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/02/17 14:06	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/02/17 14:06	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		11/02/17 14:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/02/17 14:06	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/02/17 14:06	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/02/17 14:06	79-34-5	
Tetrachloroethene	**6.1**	ug/L	1.0	0.10	1		11/02/17 14:06	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		11/02/17 14:06	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/02/17 14:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		11/02/17 14:06	79-00-5	
Trichloroethene	**486**	ug/L	20.0	3.4	20		11/01/17 19:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/02/17 14:06	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/02/17 14:06	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-120		1		11/02/17 14:06	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	80-120		1		11/02/17 14:06	17060-07-0	
Toluene-d8 (S)	103	%	80-120		1		11/02/17 14:06	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/02/17 14:06		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:18	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-87-201710 **Lab ID: 60256590011** Collected: 10/26/17 09:32 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**12.4**	mg/L	1.0	0.50	1		11/08/17 15:59	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**2.8**	mg/L	0.10	0.050	1		10/27/17 09:34		
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/27/17 09:34		
Nitrogen, NO2 plus NO3	**2.8**	mg/L	0.10	0.050	1		10/27/17 09:34		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.65J**	mg/L	1.0	0.13	1		10/31/17 20:40	7440-44-0	B

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-19-201710 **Lab ID: 60256590012** Collected: 10/26/17 09:10 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**15.0**	ug/L	10.0	1.9	1		10/30/17 13:01	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 13:01	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 13:01	75-27-4	
Bromoform	**0.80J**	ug/L	1.0	0.070	1		10/30/17 13:01	75-25-2	
Bromomethane	**0.45J**	ug/L	5.0	0.16	1		10/30/17 13:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 13:01	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 13:01	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 13:01	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 13:01	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 13:01	75-00-3	
Chloroform	**0.71J**	ug/L	1.0	0.14	1		10/30/17 13:01	67-66-3	
Chloromethane	**0.79J**	ug/L	1.0	0.080	1		10/30/17 13:01	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 13:01	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 13:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 13:01	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 13:01	75-35-4	
cis-1,2-Dichloroethene	**0.52J**	ug/L	1.0	0.080	1		10/30/17 13:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 13:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 13:01	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 13:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 13:01	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 13:01	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 13:01	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 13:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 13:01	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 13:01	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 13:01	79-34-5	
Tetrachloroethene	**0.27J**	ug/L	1.0	0.10	1		10/30/17 13:01	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 13:01	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 13:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 13:01	79-00-5	
Trichloroethene	**165**	ug/L	1.0	0.17	1		10/30/17 13:01	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 13:01	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 13:01	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/30/17 13:01	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		10/30/17 13:01	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/30/17 13:01	2037-26-5	
Preservation pH	**6.0**		0.10	0.10	1		10/30/17 13:01		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: EB-05-201710 **Lab ID: 60256590013** Collected: 10/26/17 12:30 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		11/01/17 17:44	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		11/01/17 17:44	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/01/17 17:44	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/01/17 17:44	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		11/01/17 17:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/01/17 17:44	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		11/01/17 17:44	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/01/17 17:44	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/01/17 17:44	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/01/17 17:44	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		11/01/17 17:44	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/01/17 17:44	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/01/17 17:44	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		11/01/17 17:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/01/17 17:44	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 17:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		11/01/17 17:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 17:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/01/17 17:44	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/01/17 17:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/01/17 17:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/01/17 17:44	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/01/17 17:44	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		11/01/17 17:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/01/17 17:44	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/17 17:44	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/17 17:44	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		11/01/17 17:44	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		11/01/17 17:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/17 17:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		11/01/17 17:44	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		11/01/17 17:44	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/01/17 17:44	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/01/17 17:44	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		11/01/17 17:44	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-120		1		11/01/17 17:44	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		11/01/17 17:44	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/01/17 17:44		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-86-201710 **Lab ID: 60256590014** Collected: 10/26/17 11:20 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**848**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:35	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**32.7**	ug/L	10.0	1.9	1		11/02/17 16:27	67-64-1	
Benzene	**0.35J**	ug/L	1.0	0.060	1		11/02/17 16:27	71-43-2	
Bromodichloromethane	**3.3**	ug/L	1.0	0.19	1		11/02/17 16:27	75-27-4	
Bromoform	**7.1**	ug/L	1.0	0.070	1		11/02/17 16:27	75-25-2	L1
Bromomethane	**0.50J**	ug/L	5.0	0.16	1		11/02/17 16:27	74-83-9	
2-Butanone (MEK)	**3.9J**	ug/L	10.0	0.59	1		11/02/17 16:27	78-93-3	
Carbon disulfide	**5.3**	ug/L	5.0	0.12	1		11/02/17 16:27	75-15-0	
Carbon tetrachloride	**1.2**	ug/L	1.0	0.18	1		11/02/17 16:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/02/17 16:27	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/02/17 16:27	75-00-3	
Chloroform	**27.1**	ug/L	1.0	0.14	1		11/02/17 16:27	67-66-3	
Chloromethane	**2.7**	ug/L	1.0	0.080	1		11/02/17 16:27	74-87-3	
Dibromochloromethane	**0.84J**	ug/L	1.0	0.21	1		11/02/17 16:27	124-48-1	
1,1-Dichloroethane	**4.4**	ug/L	1.0	0.050	1		11/02/17 16:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/02/17 16:27	107-06-2	
1,1-Dichloroethene	**58.0**	ug/L	1.0	0.20	1		11/02/17 16:27	75-35-4	
cis-1,2-Dichloroethene	**2210**	ug/L	1000	80.0	1000		11/01/17 19:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1000	200	1000		11/01/17 19:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/02/17 16:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/02/17 16:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/02/17 16:27	10061-02-6	
Ethylbenzene	**0.19J**	ug/L	1.0	0.18	1		11/02/17 16:27	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/02/17 16:27	591-78-6	
Methylene chloride	**5.4**	ug/L	1.0	0.15	1		11/02/17 16:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/02/17 16:27	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/02/17 16:27	100-42-5	
1,1,2,2-Tetrachloroethane	**116**	ug/L	1.0	0.15	1		11/02/17 16:27	79-34-5	
Tetrachloroethene	**49.7**	ug/L	1.0	0.10	1		11/02/17 16:27	127-18-4	
Toluene	**3.8**	ug/L	1.0	0.17	1		11/02/17 16:27	108-88-3	
1,1,1-Trichloroethane	**135**	ug/L	1.0	0.11	1		11/02/17 16:27	71-55-6	
1,1,2-Trichloroethane	**3.2**	ug/L	1.0	0.20	1		11/02/17 16:27	79-00-5	
Trichloroethene	**61300**	ug/L	1000	170	1000		11/01/17 19:37	79-01-6	
Vinyl chloride	ND	ug/L	1000	130	1000		11/01/17 19:37	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/02/17 16:27	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-120		1		11/02/17 16:27	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	80-120		1		11/02/17 16:27	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		11/02/17 16:27	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/02/17 16:27		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:18	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-86-201710 **Lab ID: 60256590014** Collected: 10/26/17 11:20 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1660**	mg/L	200	100	200		11/08/17 16:13	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.44**	mg/L	0.10	0.050	1		10/27/17 09:37		
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/27/17 09:37		
Nitrogen, NO2 plus NO3	**0.44**	mg/L	0.10	0.050	1		10/27/17 09:37		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**3.7**	mg/L	1.0	0.13	1		10/31/17 20:53	7440-44-0	B

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: FD-07-201710 **Lab ID: 60256590015** Collected: 10/26/17 10:41 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**20.2**	ug/L	10.0	1.9	1		10/30/17 13:15	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 13:15	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 13:15	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 13:15	75-25-2	
Bromomethane	**23.9**	ug/L	5.0	0.16	1		10/30/17 13:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 13:15	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 13:15	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 13:15	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 13:15	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 13:15	75-00-3	
Chloroform	**0.96J**	ug/L	1.0	0.14	1		10/30/17 13:15	67-66-3	
Chloromethane	**7.0**	ug/L	1.0	0.080	1		10/30/17 13:15	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 13:15	124-48-1	
1,1-Dichloroethane	**0.74J**	ug/L	1.0	0.050	1		10/30/17 13:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 13:15	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 13:15	75-35-4	
cis-1,2-Dichloroethene	**0.50J**	ug/L	1.0	0.080	1		10/30/17 13:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 13:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 13:15	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 13:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 13:15	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 13:15	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 13:15	591-78-6	
Methylene chloride	**0.93J**	ug/L	1.0	0.15	1		10/30/17 13:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 13:15	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 13:15	100-42-5	
1,1,2,2-Tetrachloroethane	**0.31J**	ug/L	1.0	0.15	1		10/30/17 13:15	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 13:15	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 13:15	108-88-3	
1,1,1-Trichloroethane	**0.19J**	ug/L	1.0	0.11	1		10/30/17 13:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 13:15	79-00-5	
Trichloroethene	**16.0**	ug/L	1.0	0.17	1		10/30/17 13:15	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 13:15	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 13:15	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/30/17 13:15	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/30/17 13:15	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/30/17 13:15	2037-26-5	
Preservation pH	**2.0**		0.10	0.10	1		10/30/17 13:15		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

QC Batch: 500794 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

METHOD BLANK: 2050410 Matrix: Water
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	50.0	12.4	10/30/17 18:42	

LABORATORY CONTROL SAMPLE: 2050411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9760	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2050412 2050413

Parameter	Units	60256450001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	159	10000	10000	10100	9670	100	95	75-125	5	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

QC Batch: 501042
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256590001

METHOD BLANK: 2051160
Matrix: Water
Associated Lab Samples: 60256590001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/01/17 03:13	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/01/17 03:13	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	11/01/17 03:13	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	11/01/17 03:13	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	11/01/17 03:13	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	11/01/17 03:13	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	11/01/17 03:13	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	11/01/17 03:13	
2-Hexanone	ug/L	ND	10.0	1.2	11/01/17 03:13	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	11/01/17 03:13	
Acetone	ug/L	ND	10.0	1.9	11/01/17 03:13	
Benzene	ug/L	ND	1.0	0.060	11/01/17 03:13	
Bromodichloromethane	ug/L	ND	1.0	0.19	11/01/17 03:13	
Bromoform	ug/L	ND	1.0	0.070	11/01/17 03:13	
Bromomethane	ug/L	ND	5.0	0.16	11/01/17 03:13	
Carbon disulfide	ug/L	ND	5.0	0.12	11/01/17 03:13	
Carbon tetrachloride	ug/L	ND	1.0	0.18	11/01/17 03:13	
Chlorobenzene	ug/L	ND	1.0	0.21	11/01/17 03:13	
Chloroethane	ug/L	ND	1.0	0.15	11/01/17 03:13	
Chloroform	ug/L	ND	1.0	0.14	11/01/17 03:13	
Chloromethane	ug/L	0.12J	1.0	0.080	11/01/17 03:13	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	11/01/17 03:13	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	11/01/17 03:13	
Dibromochloromethane	ug/L	ND	1.0	0.21	11/01/17 03:13	
Ethylbenzene	ug/L	ND	1.0	0.18	11/01/17 03:13	
Methylene chloride	ug/L	ND	1.0	0.15	11/01/17 03:13	
Styrene	ug/L	ND	1.0	0.12	11/01/17 03:13	
Tetrachloroethene	ug/L	ND	1.0	0.10	11/01/17 03:13	
Toluene	ug/L	ND	1.0	0.17	11/01/17 03:13	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	11/01/17 03:13	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	11/01/17 03:13	
Trichloroethene	ug/L	ND	1.0	0.17	11/01/17 03:13	
Vinyl chloride	ug/L	ND	1.0	0.13	11/01/17 03:13	
Xylene (Total)	ug/L	ND	3.0	0.42	11/01/17 03:13	
1,2-Dichloroethane-d4 (S)	%	101	80-120		11/01/17 03:13	
4-Bromofluorobenzene (S)	%	99	80-120		11/01/17 03:13	
Toluene-d8 (S)	%	101	80-120		11/01/17 03:13	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

LABORATORY CONTROL SAMPLE: 2051161

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.5	103	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	18.0	90	74-124	
1,1,2-Trichloroethane	ug/L	20	19.0	95	81-118	
1,1-Dichloroethane	ug/L	20	22.1	110	82-122	
1,1-Dichloroethene	ug/L	20	21.4	107	78-123	
1,2-Dichloroethane	ug/L	20	21.1	106	78-117	
1,2-Dichloropropane	ug/L	20	22.3	111	81-118	
2-Butanone (MEK)	ug/L	100	101	101	72-117	
2-Hexanone	ug/L	100	96.9	97	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	104	104	77-124	
Acetone	ug/L	100	102	102	66-127	
Benzene	ug/L	20	21.2	106	82-115	
Bromodichloromethane	ug/L	20	20.7	104	83-123	
Bromoform	ug/L	20	20.0	100	79-126	
Bromomethane	ug/L	20	25.0	125	39-146	
Carbon disulfide	ug/L	20	21.0	105	75-121	
Carbon tetrachloride	ug/L	20	22.1	110	82-117	
Chlorobenzene	ug/L	20	19.7	99	89-114	
Chloroethane	ug/L	20	21.4	107	71-133	
Chloroform	ug/L	20	20.3	101	78-117	
Chloromethane	ug/L	20	23.7	119	19-181	
cis-1,2-Dichloroethene	ug/L	20	20.1	100	78-119	
cis-1,3-Dichloropropene	ug/L	20	20.2	101	81-116	
Dibromochloromethane	ug/L	20	18.9	94	81-122	
Ethylbenzene	ug/L	20	19.5	97	83-112	
Methylene chloride	ug/L	20	21.0	105	78-127	
Styrene	ug/L	20	20.5	102	88-117	
Tetrachloroethene	ug/L	20	18.9	94	80-121	
Toluene	ug/L	20	19.8	99	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.5	103	79-120	
trans-1,3-Dichloropropene	ug/L	20	18.8	94	81-119	
Trichloroethene	ug/L	20	19.0	95	78-118	
Vinyl chloride	ug/L	20	25.0	125	66-133	
Xylene (Total)	ug/L	60	62.2	104	83-114	
1,2-Dichloroethane-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			98	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

QC Batch: 501218 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256590002, 60256590003, 60256590004, 60256590005, 60256590007, 60256590008, 60256590009, 60256590010, 60256590011, 60256590013, 60256590014

METHOD BLANK: 2051808 Matrix: Water
Associated Lab Samples: 60256590002, 60256590003, 60256590004, 60256590005, 60256590007, 60256590008, 60256590009, 60256590010, 60256590011, 60256590013, 60256590014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/01/17 15:24	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/01/17 15:24	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	11/01/17 15:24	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	11/01/17 15:24	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	11/01/17 15:24	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	11/01/17 15:24	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	11/01/17 15:24	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	11/01/17 15:24	
2-Hexanone	ug/L	ND	10.0	1.2	11/01/17 15:24	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	11/01/17 15:24	
Acetone	ug/L	ND	10.0	1.9	11/01/17 15:24	
Benzene	ug/L	ND	1.0	0.060	11/01/17 15:24	
Bromodichloromethane	ug/L	ND	1.0	0.19	11/01/17 15:24	
Bromoform	ug/L	ND	1.0	0.070	11/01/17 15:24	
Bromomethane	ug/L	ND	5.0	0.16	11/01/17 15:24	
Carbon disulfide	ug/L	ND	5.0	0.12	11/01/17 15:24	
Carbon tetrachloride	ug/L	ND	1.0	0.18	11/01/17 15:24	
Chlorobenzene	ug/L	ND	1.0	0.21	11/01/17 15:24	
Chloroethane	ug/L	ND	1.0	0.15	11/01/17 15:24	
Chloroform	ug/L	0.27J	1.0	0.14	11/01/17 15:24	
Chloromethane	ug/L	ND	1.0	0.080	11/01/17 15:24	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	11/01/17 15:24	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	11/01/17 15:24	
Dibromochloromethane	ug/L	ND	1.0	0.21	11/01/17 15:24	
Ethylbenzene	ug/L	ND	1.0	0.18	11/01/17 15:24	
Methylene chloride	ug/L	ND	1.0	0.15	11/01/17 15:24	
Styrene	ug/L	ND	1.0	0.12	11/01/17 15:24	
Tetrachloroethene	ug/L	ND	1.0	0.10	11/01/17 15:24	
Toluene	ug/L	ND	1.0	0.17	11/01/17 15:24	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	11/01/17 15:24	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	11/01/17 15:24	
Trichloroethene	ug/L	ND	1.0	0.17	11/01/17 15:24	
Vinyl chloride	ug/L	ND	1.0	0.13	11/01/17 15:24	
Xylene (Total)	ug/L	ND	3.0	0.42	11/01/17 15:24	
1,2-Dichloroethane-d4 (S)	%	100	80-120		11/01/17 15:24	
4-Bromofluorobenzene (S)	%	100	80-120		11/01/17 15:24	
Toluene-d8 (S)	%	100	80-120		11/01/17 15:24	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

LABORATORY CONTROL SAMPLE: 2051809

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.5	108	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	16.9	84	74-124	
1,1,2-Trichloroethane	ug/L	20	19.1	95	81-118	
1,1-Dichloroethane	ug/L	20	22.5	113	82-122	
1,1-Dichloroethene	ug/L	20	22.0	110	78-123	
1,2-Dichloroethane	ug/L	20	21.2	106	78-117	
1,2-Dichloropropane	ug/L	20	23.0	115	81-118	
2-Butanone (MEK)	ug/L	100	108	108	72-117	
2-Hexanone	ug/L	100	102	102	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	115	115	77-124	
Acetone	ug/L	100	112	112	66-127	
Benzene	ug/L	20	21.0	105	82-115	
Bromodichloromethane	ug/L	20	21.4	107	83-123	
Bromoform	ug/L	20	17.5	88	79-126	
Bromomethane	ug/L	20	21.4	107	39-146	
Carbon disulfide	ug/L	20	22.1	110	75-121	
Carbon tetrachloride	ug/L	20	22.1	110	82-117	
Chlorobenzene	ug/L	20	19.4	97	89-114	
Chloroethane	ug/L	20	20.6	103	71-133	
Chloroform	ug/L	20	21.1	105	78-117	
Chloromethane	ug/L	20	21.6	108	19-181	
cis-1,2-Dichloroethene	ug/L	20	20.4	102	78-119	
cis-1,3-Dichloropropene	ug/L	20	21.6	108	81-116	
Dibromochloromethane	ug/L	20	18.4	92	81-122	
Ethylbenzene	ug/L	20	19.4	97	83-112	
Methylene chloride	ug/L	20	22.4	112	78-127	
Styrene	ug/L	20	19.7	99	88-117	
Tetrachloroethene	ug/L	20	18.1	91	80-121	
Toluene	ug/L	20	19.6	98	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.6	103	79-120	
trans-1,3-Dichloropropene	ug/L	20	18.8	94	81-119	
Trichloroethene	ug/L	20	19.9	99	78-118	
Vinyl chloride	ug/L	20	23.2	116	66-133	
Xylene (Total)	ug/L	60	59.7	99	83-114	
1,2-Dichloroethane-d4 (S)	%			106	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			97	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

QC Batch: 501472 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256590002, 60256590003, 60256590004, 60256590005, 60256590007, 60256590011, 60256590014

METHOD BLANK: 2052653 Matrix: Water
Associated Lab Samples: 60256590002, 60256590003, 60256590004, 60256590005, 60256590007, 60256590011, 60256590014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/02/17 11:07	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/02/17 11:07	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	11/02/17 11:07	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	11/02/17 11:07	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	11/02/17 11:07	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	11/02/17 11:07	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	11/02/17 11:07	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	11/02/17 11:07	
2-Hexanone	ug/L	ND	10.0	1.2	11/02/17 11:07	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	11/02/17 11:07	
Acetone	ug/L	ND	10.0	1.9	11/02/17 11:07	
Benzene	ug/L	ND	1.0	0.060	11/02/17 11:07	
Bromodichloromethane	ug/L	ND	1.0	0.19	11/02/17 11:07	
Bromoform	ug/L	ND	1.0	0.070	11/02/17 11:07	
Bromomethane	ug/L	ND	5.0	0.16	11/02/17 11:07	
Carbon disulfide	ug/L	ND	5.0	0.12	11/02/17 11:07	
Carbon tetrachloride	ug/L	ND	1.0	0.18	11/02/17 11:07	
Chlorobenzene	ug/L	ND	1.0	0.21	11/02/17 11:07	
Chloroethane	ug/L	ND	1.0	0.15	11/02/17 11:07	
Chloroform	ug/L	ND	1.0	0.14	11/02/17 11:07	
Chloromethane	ug/L	ND	1.0	0.080	11/02/17 11:07	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	11/02/17 11:07	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	11/02/17 11:07	
Dibromochloromethane	ug/L	ND	1.0	0.21	11/02/17 11:07	
Ethylbenzene	ug/L	ND	1.0	0.18	11/02/17 11:07	
Methylene chloride	ug/L	ND	1.0	0.15	11/02/17 11:07	
Styrene	ug/L	ND	1.0	0.12	11/02/17 11:07	
Tetrachloroethene	ug/L	ND	1.0	0.10	11/02/17 11:07	
Toluene	ug/L	ND	1.0	0.17	11/02/17 11:07	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	11/02/17 11:07	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	11/02/17 11:07	
Vinyl chloride	ug/L	ND	1.0	0.13	11/02/17 11:07	
Xylene (Total)	ug/L	ND	3.0	0.42	11/02/17 11:07	
1,2-Dichloroethane-d4 (S)	%	105	80-120		11/02/17 11:07	
4-Bromofluorobenzene (S)	%	96	80-120		11/02/17 11:07	
Toluene-d8 (S)	%	105	80-120		11/02/17 11:07	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

LABORATORY CONTROL SAMPLE: 2052654

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	22.6	113	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	16.2	81	74-124	
1,1,2-Trichloroethane	ug/L	20	19.3	96	81-118	
1,1-Dichloroethane	ug/L	20	18.0	90	82-122	
1,1-Dichloroethene	ug/L	20	23.1	116	78-123	
1,2-Dichloroethane	ug/L	20	20.3	101	78-117	
1,2-Dichloropropane	ug/L	20	17.4	87	81-118	
2-Butanone (MEK)	ug/L	100	74.6	75	72-117	
2-Hexanone	ug/L	100	80.7	81	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	76.7	77	77-124	
Acetone	ug/L	100	93.2	93	66-127	
Benzene	ug/L	20	17.3	87	82-115	
Bromodichloromethane	ug/L	20	21.6	108	83-123	
Bromoform	ug/L	20	26.9	135	79-126	L1
Bromomethane	ug/L	20	19.3	96	39-146	
Carbon disulfide	ug/L	20	23.3	117	75-121	
Carbon tetrachloride	ug/L	20	21.9	109	82-117	
Chlorobenzene	ug/L	20	20.3	101	89-114	
Chloroethane	ug/L	20	22.6	113	71-133	
Chloroform	ug/L	20	19.1	96	78-117	
Chloromethane	ug/L	20	17.4	87	19-181	
cis-1,2-Dichloroethene	ug/L	20	18.9	94	78-119	
cis-1,3-Dichloropropene	ug/L	20	18.6	93	81-116	
Dibromochloromethane	ug/L	20	23.2	116	81-122	
Ethylbenzene	ug/L	20	19.1	95	83-112	
Methylene chloride	ug/L	20	19.6	98	78-127	
Styrene	ug/L	20	20.5	103	88-117	
Tetrachloroethene	ug/L	20	24.0	120	80-121	
Toluene	ug/L	20	19.0	95	78-113	
trans-1,2-Dichloroethene	ug/L	20	17.3	87	79-120	
trans-1,3-Dichloropropene	ug/L	20	19.6	98	81-119	
Vinyl chloride	ug/L	20	21.7	108	66-133	
Xylene (Total)	ug/L	60	59.4	99	83-114	
1,2-Dichloroethane-d4 (S)	%			108	80-120	
4-Bromofluorobenzene (S)	%			87	80-120	
Toluene-d8 (S)	%			104	80-120	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

QC Batch: 500793 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 7 day
Associated Lab Samples: 60256590006, 60256590012, 60256590015

METHOD BLANK: 2050408 Matrix: Water
Associated Lab Samples: 60256590006, 60256590012, 60256590015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/30/17 10:12	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/30/17 10:12	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/30/17 10:12	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/30/17 10:12	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 10:12	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/30/17 10:12	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/30/17 10:12	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/30/17 10:12	
2-Hexanone	ug/L	ND	10.0	1.2	10/30/17 10:12	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/30/17 10:12	
Acetone	ug/L	ND	10.0	1.9	10/30/17 10:12	
Benzene	ug/L	ND	1.0	0.060	10/30/17 10:12	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/30/17 10:12	
Bromoform	ug/L	ND	1.0	0.070	10/30/17 10:12	
Bromomethane	ug/L	ND	5.0	0.16	10/30/17 10:12	
Carbon disulfide	ug/L	ND	5.0	0.12	10/30/17 10:12	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/30/17 10:12	
Chlorobenzene	ug/L	ND	1.0	0.21	10/30/17 10:12	
Chloroethane	ug/L	ND	1.0	0.15	10/30/17 10:12	
Chloroform	ug/L	ND	1.0	0.14	10/30/17 10:12	
Chloromethane	ug/L	ND	1.0	0.080	10/30/17 10:12	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/30/17 10:12	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/30/17 10:12	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/30/17 10:12	
Ethylbenzene	ug/L	ND	1.0	0.18	10/30/17 10:12	
Methylene chloride	ug/L	ND	1.0	0.15	10/30/17 10:12	
Styrene	ug/L	ND	1.0	0.12	10/30/17 10:12	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/30/17 10:12	
Toluene	ug/L	ND	1.0	0.17	10/30/17 10:12	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 10:12	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/30/17 10:12	
Trichloroethene	ug/L	ND	1.0	0.17	10/30/17 10:12	
Vinyl chloride	ug/L	ND	1.0	0.13	10/30/17 10:12	
Xylene (Total)	ug/L	ND	3.0	0.42	10/30/17 10:12	
1,2-Dichloroethane-d4 (S)	%	96	80-120		10/30/17 10:12	
4-Bromofluorobenzene (S)	%	96	80-120		10/30/17 10:12	
Toluene-d8 (S)	%	102	80-120		10/30/17 10:12	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

LABORATORY CONTROL SAMPLE: 2050409

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.1	105	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	18.0	90	74-124	
1,1,2-Trichloroethane	ug/L	20	18.6	93	81-118	
1,1-Dichloroethane	ug/L	20	21.4	107	82-122	
1,1-Dichloroethene	ug/L	20	21.1	105	78-123	
1,2-Dichloroethane	ug/L	20	20.5	103	78-117	
1,2-Dichloropropane	ug/L	20	21.8	109	81-118	
2-Butanone (MEK)	ug/L	100	96.5	97	72-117	
2-Hexanone	ug/L	100	90.7	91	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.0	96	77-124	
Acetone	ug/L	100	103	103	66-127	
Benzene	ug/L	20	21.4	107	82-115	
Bromodichloromethane	ug/L	20	21.3	106	83-123	
Bromoform	ug/L	20	19.5	97	79-126	
Bromomethane	ug/L	20	25.0	125	39-146	
Carbon disulfide	ug/L	20	20.7	103	75-121	
Carbon tetrachloride	ug/L	20	22.1	111	82-117	
Chlorobenzene	ug/L	20	20.1	100	89-114	
Chloroethane	ug/L	20	20.2	101	71-133	
Chloroform	ug/L	20	20.7	103	78-117	
Chloromethane	ug/L	20	20.7	103	19-181	
cis-1,2-Dichloroethene	ug/L	20	20.2	101	78-119	
cis-1,3-Dichloropropene	ug/L	20	21.7	108	81-116	
Dibromochloromethane	ug/L	20	19.4	97	81-122	
Ethylbenzene	ug/L	20	20.0	100	83-112	
Methylene chloride	ug/L	20	20.4	102	78-127	
Styrene	ug/L	20	21.3	107	88-117	
Tetrachloroethene	ug/L	20	20.3	101	80-121	
Toluene	ug/L	20	19.9	99	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.8	104	79-120	
trans-1,3-Dichloropropene	ug/L	20	18.5	93	81-119	
Trichloroethene	ug/L	20	19.8	99	78-118	
Vinyl chloride	ug/L	20	23.1	116	66-133	
Xylene (Total)	ug/L	60	63.5	106	83-114	
1,2-Dichloroethane-d4 (S)	%			95	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			98	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

QC Batch: 500717 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

METHOD BLANK: 2049956 Matrix: Water
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	ND	0.050	0.0048	10/28/17 14:17	

LABORATORY CONTROL SAMPLE: 2049957

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	.5	0.53	107	80-120	

MATRIX SPIKE SAMPLE: 2049958

Parameter	Units	60256628002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	ND	.5	0.59	119	75-125	

SAMPLE DUPLICATE: 2049959

Parameter	Units	60256590001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 2049960

Parameter	Units	60256590005 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

QC Batch: 502277 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

METHOD BLANK: 2055754 Matrix: Water
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	0.50	11/08/17 12:51	

LABORATORY CONTROL SAMPLE: 2055755

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2055756 2055757

Parameter	Units	60256590001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	4.2	5	5	9.2	9.3	101	103	80-120	1	15	

MATRIX SPIKE SAMPLE: 2055758

Parameter	Units	60256590002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	28.2	10	38.5	103	80-120	

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REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

QC Batch: 500492 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

METHOD BLANK: 2048686 Matrix: Water
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.050	10/27/17 09:21	
Nitrogen, Nitrite	mg/L	ND	0.10	0.030	10/27/17 09:21	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.050	10/27/17 09:21	

LABORATORY CONTROL SAMPLE: 2048687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.2	117	70-130	
Nitrogen, Nitrite	mg/L	1	0.93	93	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	2.1	105	90-110	

MATRIX SPIKE SAMPLE: 2048688

Parameter	Units	60256510034 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	3.4	1	4.5	106	70-130	
Nitrogen, Nitrite	mg/L	0.27	1	0.66	39	90-110	M1
Nitrogen, NO2 plus NO3	mg/L	3.7	2	5.2	72	90-110	M1

MATRIX SPIKE SAMPLE: 2048690

Parameter	Units	60256590004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.0	1	2.6	157	70-130	M1
Nitrogen, Nitrite	mg/L	ND	1	0.39	37	90-110	M1
Nitrogen, NO2 plus NO3	mg/L	1.0	2	3.0	97	90-110	

SAMPLE DUPLICATE: 2048689

Parameter	Units	60256495003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	1.2	1.2	3	20	
Nitrogen, Nitrite	mg/L	ND	ND		20	
Nitrogen, NO2 plus NO3	mg/L	1.3	1.2	3	20	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

QC Batch: 500954 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

METHOD BLANK: 2050852 Matrix: Water
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	0.37J	1.0	0.13	10/31/17 15:11	

LABORATORY CONTROL SAMPLE: 2050853

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.8	116	80-120	

MATRIX SPIKE SAMPLE: 2050854

Parameter	Units	60256361009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	1.1	5	5.5	88	80-120	

SAMPLE DUPLICATE: 2050855

Parameter	Units	60256361010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	1.7	1.7	1	25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60256590

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.

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-K	Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: 500793

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 501042

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 501218

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 501472

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60256590

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60256590001	MW-89-201710	EPA 3010	500794	EPA 6010	500920
60256590002	MW-38-201710	EPA 3010	500794	EPA 6010	500920
60256590004	MW-95-201710	EPA 3010	500794	EPA 6010	500920
60256590005	MW-25-201710	EPA 3010	500794	EPA 6010	500920
60256590011	MW-87-201710	EPA 3010	500794	EPA 6010	500920
60256590014	MW-86-201710	EPA 3010	500794	EPA 6010	500920
60256590001	MW-89-201710	EPA 5030B/8260	501042		
60256590002	MW-38-201710	EPA 5030B/8260	501218		
60256590002	MW-38-201710	EPA 5030B/8260	501472		
60256590003	MW-93-201710	EPA 5030B/8260	501218		
60256590003	MW-93-201710	EPA 5030B/8260	501472		
60256590004	MW-95-201710	EPA 5030B/8260	501218		
60256590004	MW-95-201710	EPA 5030B/8260	501472		
60256590005	MW-25-201710	EPA 5030B/8260	501218		
60256590005	MW-25-201710	EPA 5030B/8260	501472		
60256590007	FD-08-201710	EPA 5030B/8260	501218		
60256590007	FD-08-201710	EPA 5030B/8260	501472		
60256590008	EB-03-201710	EPA 5030B/8260	501218		
60256590009	EB-04-201710	EPA 5030B/8260	501218		
60256590010	MW-179-201710	EPA 5030B/8260	501218		
60256590011	MW-87-201710	EPA 5030B/8260	501218		
60256590011	MW-87-201710	EPA 5030B/8260	501472		
60256590013	EB-05-201710	EPA 5030B/8260	501218		
60256590014	MW-86-201710	EPA 5030B/8260	501218		
60256590014	MW-86-201710	EPA 5030B/8260	501472		
60256590006	ITMW-18-201710	EPA 5030B/8260	500793		
60256590012	MW-19-201710	EPA 5030B/8260	500793		
60256590015	FD-07-201710	EPA 5030B/8260	500793		
60256590001	MW-89-201710	SM 4500-S-2 D	500717		
60256590002	MW-38-201710	SM 4500-S-2 D	500717		
60256590004	MW-95-201710	SM 4500-S-2 D	500717		
60256590005	MW-25-201710	SM 4500-S-2 D	500717		
60256590011	MW-87-201710	SM 4500-S-2 D	500717		
60256590014	MW-86-201710	SM 4500-S-2 D	500717		
60256590001	MW-89-201710	EPA 300.0	502277		
60256590002	MW-38-201710	EPA 300.0	502277		
60256590004	MW-95-201710	EPA 300.0	502277		
60256590005	MW-25-201710	EPA 300.0	502277		
60256590011	MW-87-201710	EPA 300.0	502277		
60256590014	MW-86-201710	EPA 300.0	502277		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60256590

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60256590001	**MW-89-201710**	EPA 353.2	500492		
60256590002	**MW-38-201710**	EPA 353.2	500492		
60256590004	**MW-95-201710**	EPA 353.2	500492		
60256590005	**MW-25-201710**	EPA 353.2	500492		
60256590011	**MW-87-201710**	EPA 353.2	500492		
60256590014	**MW-86-201710**	EPA 353.2	500492		
60256590001	**MW-89-201710**	SM 5310C	500954		
60256590002	**MW-38-201710**	SM 5310C	500954		
60256590004	**MW-95-201710**	SM 5310C	500954		
60256590005	**MW-25-201710**	SM 5310C	500954		
60256590011	**MW-87-201710**	SM 5310C	500954		
60256590014	**MW-86-201710**	SM 5310C	500954		

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Sample Condition Upon Receipt

WO# : 60256590

60256590

RHM

Client Name: Environ

Courier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☐

Custody Seal on Cooler/Box Present: Yes ☐ No ☐ Seals intact: Yes ☐ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☐ Other ☐

Thermometer Used: CF 0.0 T-266 / CF +0.3 T-239 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 2-4 **Corr. Factor** CF 0.0 CF +0.3 **Corrected** 2-4

Date and initials of person examining contents: PM 10/27/17

Temperature should be above freezing to 6°C

Chain of Custody present:	☐Yes ☐No ☐N/A	
Chain of Custody relinquished:	☐Yes ☐No ☐N/A	RA 10/27/17
Samples arrived within holding time:	☐Yes ☐No ☐N/A	~~Did not receive~~ PM 10/27
Short Hold Time analyses (<72hr):	☐Yes ☐No ☐N/A	~~FD 07-201710~~
Rush Turn Around Time requested:	☐Yes ☐No ☐N/A	
Sufficient volume:	☐Yes ☐No ☐N/A	
Correct containers used:	☐Yes ☐No ☐N/A	Received 8260 volume for
Pace containers used:	☐Yes ☐No ☐N/A	ITMW-18 and missing all other
Containers intact:	☐Yes ☐No ☐N/A	volume.
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☐N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☐N/A	
Sample labels match COC: Date / time / ID / analyses	☐Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☐No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	☐Yes ☐No ☐N/A	
Cyanide water sample checks: ☐ N/A Lead acetate strip turns dark? (Record only) Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No ☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☐N/A	PM 10/27
Headspace in VOA vials (>6mm):	☐Yes ☐No ☐N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☐N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☐N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: COC in error ITMW-18 only needs 8260 VOC RHM

Project Manager Review: _____ Date: _____

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 2

Section A Required Client Information: Same as Section C

Company:	Environ
Address:	~~7500 College Blvd., Ste. 925~~
	~~Overland Park, KS 66210~~
Email To:	
Phone:	~~913-553-5926~~ Fax:
Requested Due Date/TAT:	STD

Section B Required Project Information:

Report To:	Tamara House-Knight
Copy To:	
Purchase Order No.:	NA
Project Name:	Fort Smith, AR
Project Number:	

Section C Invoice Information:

Attention:	Tamara House-Knight
Company Name:	Environ
Address:	124 W. Capitol Avenue
Pace Quote Reference:	Little Rock, AR 72201
Pace Project Manager:	Colleen Clyne
Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE (10/26/17)	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH (12n Acetate)	$Na_2S_2O_3$	Methanol	Other (Ascorbic Acid)	Analysis Test Y/N	8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	6010-Iron	Ferric Iron calc. (send field Ferrous)		Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. (6025690)
1	MW-89-201710	W	G			10/26/17	0842		7	X	X	X	X	Y					X	X	X	X	X	X		3D69H	BP3U	AG3S BP3U BP3Z 001
2	MW-38-201710	W	G		1049	10/26/17	0945		7	X	X	X	X	X					X	X	X	X	X	X				002
3	MW-93-201710	W	G			10/26/17	0910		3				X						X									003
4	MW-95-201710	W	G			10/26/17	1020		7	X	X	X	X	X					X	X	X	X	X	X				004
5	MW-25-201710	W	G			10/26/17	0910		7	X	X	X	X	X					X	X	X	X	X	X				005
6	~~MW-87-201710~~ US	~~W~~	~~G~~			~~10/26/17~~																						P 10/27/17 ~~006~~
7	MW-18-201710	W	G			10/26/17	0945		7	X	X	X		X			X		X	X	X	X	X	X	30HR			~~7 day hold~~ 006
8	FD-08-201710	W	G			10/26/17	0910		3				X				`		X									7 day hold VS 007
9	FD-07-201710	W	G			10/26/17	1041		3								X		X									7 day hold 015
10	EB-03-201710	W	G			10/26/17	1200		3				X						X									008
11	EB-04-201710	W	G			10/26/17	1213		3				X						X									009
12	MW-179-201710	W	G			10/26/17	0815		3				X						Y									010

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Victoria Siegler / RCH	10/26/17	1330	[signature] PASI	10/27	0305	2.4	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Siegler

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10/26/17

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

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

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

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Same as Section C

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 2 of 2

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Environ	Report To:	Tamara House-Knight	Attention:	Tamara House-Knight
Address:	~~7500 College Blvd., Ste. 925~~	Copy To:		Company Name:	Environ
	~~Overland Park, KS 66210~~			Address:	124 W. Capitol Avenue
Email To:		Purchase Order No.:	NA	Pace Quote Reference:	Little Rock, AR 72201
Phone:	~~913-553-5926~~ Fax:	Project Name:	Fort Smith, AR	Pace Project Manager:	Colleen Clyne
Requested Due Date/TAT:	STD	Project Number:		Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

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

Valid Matrix Codes MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	TIME	COMPOSITE END/GRAB DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH + Zn Acetate	$Na_2S_2O_3$	Methanol	Other Ascorbic Acid	8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	6010-Iron	Ferric Iron calc. (send field Ferrous)		Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 6025 6590
1	MW-87-201710	W	G			9/26/17	0932		7	X	X	X	X	X				✓	✓	✓	✓	✓	✓	3D69H	BB3U		AG3S20 BP3N20 BP3Z20 011
2	MW-19-201710	W	G			10/26/17	0910		3								X	X						→ 3-THR			7 day hold 012
3	EB-05-201710	W	G			10/26/17	1230		3				X					X						↓			013
4	MW-80-201710	W	G			9/26/17	1120		7	X	X	X	X	X				X	X	X	X	X	X	↓	↓		↓ ↓ ↓ 014
5	FD																										
6																											
7																											
8																											
9																											
10																											
11																											
12																											

JS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Victoria Siegle / REH	10/26/17	1330	[signature] / PASI	10/27	0305	2-4	Y	Y	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Sieglen

SIGNATURE of SAMPLER: Victoria Siegle

DATE Signed (MM/DD/YY): 10/26/17

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

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

2655 Park Center Dr., Suite A
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F: +1 805 526 7270
www.alsglobal.com

LABORATORY REPORT

November 10, 2017

Tamara House-Knight
Ramboll Environ US Corporation
124 W. Capitol Avenue, Suite 1605
Little Rock, AR 72201

RE: Ft Smith Ark / 34375005

Dear Tamara:

Enclosed are the results of the sample submitted to our laboratory on October 27, 2017. For your reference, this analysis has been assigned our service request number P1705345.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Sue Anderson at 4:31 pm, Nov 10, 2017
For Kelly Horiuchi
Laboratory Director

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

Client: Ramboll Environ US Corporation
Project: Ft Smith Ark / 34375005

Service Request No: P1705345

CASE NARRATIVE

The sample was received intact under chain of custody on October 27, 2017 and was stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the sample at the time of sample receipt.

Volatile Organic Compound Analysis

The sample was analyzed in SIM mode for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The response for the third internal standard in sample P1705345-001 was outside control criteria; however, since this compound is not associated with the target analytes included in this report the results were not affected. No corrective action was appropriate.

The surrogate bromofluorobenzene was outside control criteria in the sample; however, the results were not affected as this compound is not associated with the target analytes included in this report. No corrective action was appropriate.

The container was cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2016036
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1177034
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-004
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-17-8
Utah DOH (NELAP)	http://health.utah.gov/lab/environmental-lab-certification/	CA016272017-8
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: Ramboll Environ US Corporation Service Request: P1705345
Project ID: Ft Smith Ark / 34375005

Date Received: 10/27/2017
Time Received: 09:40

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC SIM
VP-09-201710	P1705345-001	Air	10/25/2017	17:05	AS01247	-2.51	3.45	X

Air - Chain of Custody Record & Analytical Service Request

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10-Day-Standard

ALS Project No. 1705345

Company Name & Address (Reporting Information)
Ramboll Environ
1807 Park 270 Dr. Suite 450
St. Louis, MO 63146

Project Name: Ft Smith Ark
Project Number: 34375005
P.O. # / Billing Information: 34375005

Project Manager: Tamara House-Knight
Phone: 501-907-9437
Fax:
Email Address for Result Reporting: THouseKnight@ramboll.com
Sampler (Print & Sign): Nick Zurweller

ALS Contact:

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	Analysis Method: TO-15 SIM		Comments e.g. Actual Preservative or specific instructions
VP-09-201710	AS01247	10/25/17	1705	AS01247	FCA00916	-30	-6	6L			

Report Tier Levels - please select
Tier I - Results (Default in not specified) X
Tier II (Results + QC Summaries) ____
Tier III (Results + QC & Calibration Summaries) ____
Tier IV (Date Validation Package) 10% Surcharge ____

EDD required YES / No
Type: ____ Units: ____

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	10/26/17	1345			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
				10-27-17	0940

Cooler / Blank Temperature ____ °C

ALS Environmental

Sample Acceptance Check Form

Client: Ramboll Environ US Corporation Work order: P1705345

Project: Ft Smith Ark / 34375005

Sample(s) received on: 10/27/17 Date opened: 10/27/17 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1705345-001.01	6.0 L Silonite Can					

Explain any discrepancies: (include lab sample ID numbers): _____

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **VP-09-201710** ALS Project ID: P1705345
Client Project ID: **Ft Smith Ark / 34375005** ALS Sample ID: P1705345-001

Test Code: EPA TO-15 SIM Date Collected: 10/25/17
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 10/27/17
Analyst: Cory Lewis Date Analyzed: 11/1/17 & 11/10/17
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.025 Liter(s)
Container ID: AS01247

Initial Pressure (psig): -2.51 Final Pressure (psig): 3.45

Container Dilution Factor: 1.49

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	**0.46**	0.037	**0.18**	0.015	
75-35-4	1,1-Dichloroethene	**0.19**	0.037	**0.047**	0.0094	
156-60-5	trans-1,2-Dichloroethene	**0.59**	0.037	**0.15**	0.0094	
75-34-3	1,1-Dichloroethane	**0.31**	0.037	**0.078**	0.0092	
156-59-2	cis-1,2-Dichloroethene	**0.16**	0.037	**0.039**	0.0094	
107-06-2	1,2-Dichloroethane	**0.28**	0.037	**0.070**	0.0092	
71-55-6	1,1,1-Trichloroethane	ND	0.037	ND	0.0068	
79-01-6	Trichloroethene	**400**	1.5	**74**	0.28	**D**
127-18-4	Tetrachloroethene	**0.28**	0.037	**0.041**	0.0055	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
D = The reported result is from a dilution.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **Method Blank** ALS Project ID: P1705345
Client Project ID: **Ft Smith Ark / 34375005** ALS Sample ID: P171101-MB

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Cory Lewis Date Analyzed: 11/1/17
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.025	ND	0.0098	
75-35-4	1,1-Dichloroethene	ND	0.025	ND	0.0063	
156-60-5	trans-1,2-Dichloroethene	ND	0.025	ND	0.0063	
75-34-3	1,1-Dichloroethane	ND	0.025	ND	0.0062	
156-59-2	cis-1,2-Dichloroethene	ND	0.025	ND	0.0063	
107-06-2	1,2-Dichloroethane	ND	0.025	ND	0.0062	
71-55-6	1,1,1-Trichloroethane	ND	0.025	ND	0.0046	
79-01-6	Trichloroethene	ND	0.025	ND	0.0047	
127-18-4	Tetrachloroethene	ND	0.025	ND	0.0037	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **Method Blank** ALS Project ID: P1705345
Client Project ID: **Ft Smith Ark / 34375005** ALS Sample ID: P171110-MB

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Cory Lewis Date Analyzed: 11/10/17
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.025	ND	0.0098	
75-35-4	1,1-Dichloroethene	ND	0.025	ND	0.0063	
156-60-5	trans-1,2-Dichloroethene	ND	0.025	ND	0.0063	
75-34-3	1,1-Dichloroethane	ND	0.025	ND	0.0062	
156-59-2	cis-1,2-Dichloroethene	ND	0.025	ND	0.0063	
107-06-2	1,2-Dichloroethane	ND	0.025	ND	0.0062	
71-55-6	1,1,1-Trichloroethane	ND	0.025	ND	0.0046	
79-01-6	Trichloroethene	ND	0.025	ND	0.0047	
127-18-4	Tetrachloroethene	ND	0.025	ND	0.0037	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **Ramboll Environ US Corporation**
Client Project ID: **Ft Smith Ark / 34375005** ALS Project ID: P1705345

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date(s) Collected: 10/25/17
Analyst: Cory Lewis Date(s) Received: 10/27/17
Sample Type: 6.0 L Summa Canister(s) Date(s) Analyzed: 11/1 - 11/10/17
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 % Recovered	Toluene-d8 % Recovered	Bromofluorobenzene % Recovered	Acceptance Limits	Data Qualifier
Method Blank	P171101-MB	**112**	**102**	**85**	70-130	
Method Blank	P171110-MB	**96**	**99**	**107**	70-130	
Lab Control Sample	P171101-LCS	**113**	**101**	**89**	70-130	
Lab Control Sample	P171110-LCS	**99**	**97**	**110**	70-130	
VP-09-201710	P1705345-001	**95**	**105**	**61**	70-130	**S**

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.
S = Surrogate recovery not within specified limits.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Ramboll Environ US Corporation**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1705345
Client Project ID: **Ft Smith Ark / 34375005** ALS Sample ID: P171101-LCS

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Cory Lewis Date Analyzed: 11/1/17
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-01-4	Vinyl Chloride	4.22	**4.63**	**110**	58-117	
75-35-4	1,1-Dichloroethene	4.27	**4.23**	**99**	74-107	
156-60-5	trans-1,2-Dichloroethene	4.27	**4.20**	**98**	72-107	
75-34-3	1,1-Dichloroethane	4.24	**4.40**	**104**	70-110	
156-59-2	cis-1,2-Dichloroethene	4.24	**4.07**	**96**	73-108	
107-06-2	1,2-Dichloroethane	4.24	**4.34**	**102**	67-111	
71-55-6	1,1,1-Trichloroethane	4.24	**4.03**	**95**	70-108	
79-01-6	Trichloroethene	4.25	**3.67**	**86**	66-101	
127-18-4	Tetrachloroethene	4.24	**3.54**	**83**	66-105	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Ramboll Environ US Corporation**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1705345
Client Project ID: **Ft Smith Ark / 34375005** ALS Sample ID: P171110-LCS

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Cory Lewis Date Analyzed: 11/10/17
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-01-4	Vinyl Chloride	4.22	**3.59**	**85**	58-117	
75-35-4	1,1-Dichloroethene	4.27	**3.72**	**87**	74-107	
156-60-5	trans-1,2-Dichloroethene	4.27	**3.63**	**85**	72-107	
75-34-3	1,1-Dichloroethane	4.24	**3.53**	**83**	70-110	
156-59-2	cis-1,2-Dichloroethene	4.24	**3.54**	**83**	73-108	
107-06-2	1,2-Dichloroethane	4.24	**3.41**	**80**	67-111	
71-55-6	1,1,1-Trichloroethane	4.24	**3.43**	**81**	70-108	
79-01-6	Trichloroethene	4.25	**3.49**	**82**	66-101	
127-18-4	Tetrachloroethene	4.24	**3.49**	**82**	66-105	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Appendix B

Field Notes and Weather Data for October 2017

Fort Smith, AR

Fort Smith Regional

9:53 AM CST on November 20, 2017 (GMT -0600)

Today Forecast

Weather History for KFSM - October, 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 Actual: **85°** | **59°** **0.00** in Average: **80°** | **56°** **0.13** in	**2** Actual: **89°** | **68°** **0.00** in Average: **79°** | **55°** **0.13** in	**3** Actual: **75°** | **72°** **0.71** in Average: **79°** | **55°** **0.13** in	**4** Actual: **78°** | **70°** **0.01** in Average: **79°** | **55°** **0.14** in	**5** Actual: **87°** | **67°** **0.00** in Average: **78°** | **54°** **0.13** in	**6** Actual: **88°** | **66°** **0.00** in Average: **78°** | **54°** **0.14** in	**7** Actual: **85°** | **59°** **0.02** in Average: **78°** | **54°** **0.13** in
8 Actual: **87°** | **57°** **0.00** in Average: **77°** | **53°** **0.13** in	**9** Actual: **92°** | **60°** **T** in Average: **77°** | **53°** **0.13** in	**10** Actual: **74°** | **53°** **0.27** in Average: **77°** | **53°** **0.13** in	**11** Actual: **62°** | **51°** **0.00** in Average: **76°** | **52°** **0.13** in	**12** Actual: **82°** | **50°** **0.00** in Average: **76°** | **52°** **0.14** in	**13** Actual: **89°** | **60°** **0.00** in Average: **76°** | **52°** **0.13** in	**14** Actual: **91°** | **66°** **0.00** in Average: **76°** | **51°** **0.14** in
15 Actual: **79°** | **51°** **0.58** in Average: **75°** | **51°** **0.14** in	**16** Actual: **72°** | **44°** **0.00** in Average: **75°** | **51°** **0.14** in	**17** Actual: **74°** | **45°** **0.00** in Average: **75°** | **50°** **0.15** in	**18** Actual: **80°** | **46°** **0.00** in Average: **74°** | **50°** **0.15** in	**19** Actual: **81°** | **53°** **0.00** in Average: **74°** | **50°** **0.15** in	**20** Actual: **77°** | **54°** **0.00** in Average: **74°** | **49°** **0.15** in	**21** Actual: **84°** | **62°** **T** in Average: **73°** | **49°** **0.14** in
22 Actual: **67°** | **47°** **1.70** in Average: **73°** | **49°** **0.16** in	**23** Actual: **77°** | **44°** **0.00** in Average: **73°** | **49°** **0.14** in	**24** Actual: **66°** | **44°** **0.00** in Average: **72°** | **48°** **0.14** in	**25** Actual: **75°** | **39°** **0.00** in Average: **72°** | **48°** **0.14** in	**26** Actual: **82°** | **45°** **0.00** in Average: **72°** | **48°** **0.15** in	**27** Actual: **66°** | **33°** **0.00** in Average: **71°** | **47°** **0.14** in	**28** Actual: **54°** | **29°** **0.00** in Average: **71°** | **47°** **0.14** in
29 Actual: **68°** | **30°** **0.00** in Average: **71°** | **47°** **0.15** in	**30** Actual: **68°** | **40°** **0.00** in Average: **70°** | **46°** **0.14** in	**31** Actual: **60°** | **37°** **T** in Average: **70°** | **46°** **0.14** in				

Calendar Legend

Sunny / Clear
Mostly Cloudy
Partly Cloudy
Cloudy
Rain
Snow
Hail Flurries
Thunderstorms
Hazy / Fog
Sleet
'?' denotes 'chance of'
Unknown

10/23/17 Whirlpool, Fort Smith Sunny 50°F

0630 H. Ahlers, N. Zunweller, J. Pavlowsky, N. Martin, J. Kretch, & V. Sieglen on-site for REH.

0645 Began un-loading & re-loading vehicles. Conducted H&S meeting, divided up sample coolers.

0730 Split into groups to begin ~~gath~~ taking water levels.

1230 Broke for lunch.

1330 Resumed collecting water levels.

1400 Returned to boiler room to begin calibrating YSI & prepare to sample. See calibration log for more detail.

1530 Done calibrating & packing car. Mobilized to MW-50R.

1545 Began setting up on MW-50R

1555 Began purging.

1705 After one hour of collecting parameters, ORP didn't stabilize.

Sampled MW-50-201710 at 1710.

AHa

10/23/17 Whirlpool, Ft. Smith 75°F

0730 Finished collecting all samples except for bubble stripping. Began bubble stripping. Pumped at 300 mL/min for 10 min.

0740 Finished bubble stripping started packing up car.

0750 Returned to boiler room to pack samples & dump purge water.

1845 REH off-site.

Haley Ahlers

10/24/17 Whirlpool, Ft. Smith 58 Sunny 51°F

0700 HA, NZ, JP, NM, JK & VS onsite for REH.
0710 Began calibrating YSI & turbidimeter
0815 Finished calibrating & preparing to sample.
0822 Began setting up on MW-196
0830 Began purging, see sample log.
0930 Well stabilized after 55 mins of recording parameters.

Sampled MW-196-201710 at 0935

Sampled MW-196-201710-MS/MSD at 0935.

1020 Began setting up on IW-73.
1037 Began purging IW-73. See sampling log for parameters.
1120 well stabilized after recording parameters for 35 min.

Sampled IW-73-201710 @ 1125

1146 Began bubble stripping at 200 ml/min. will run for 20 minutes.

HA

10/24/17 59 Whirlpool, Fort Smith Sunny 61°F

1206 Finished bubble stripping, started setting up on MW-40R
1215 Began purging MW-40R. See log for parameters.
1255 well stabilized after collecting parameters for 35 mins.

Sampled MW-40R-201710 @ 1300.

1355 After grabbing lunch & dumping purge water, started setting up on MW-82.
1415 Began purging MW-82. See log for parameters.
1515 Well stabilized after collecting parameters for 50 min. Tested for persulfate: 620ppm will switch to ascorbic acid vials

Sampled MW-82-201710 @ 1525

~~+5~~ HA Sampled ~~MW-82-201710-DUP~~ @ 1525 FD-03-201710

1540 Started to set up on IW-77
1545 Began purging IW-77, See log for parameters

HA

Rite in the Rain

65°F Sunny

10/24/17 Whirlpool, Ft. Smith

1647 well stabilized after recording parameters for 55 min.
Tested for persulfate: 420 ppm
Will switch to ascorbic acid VOA
Sampled ~~MW-HA~~ IW-77-201710 @ 1655.

1720 Bought Ice and returned to boiler room to pack samples.

1840 REH off site.

Hailey Arthur

40°F Sunny

10/25/17 Whirlpool, Ft. Smith

0700 HA, NZ, JP, VS, JK, & NM on-site for REH.

0710 Began calibrating YSI & turbidimeter. Packed car in preparation for sampling.

0800 Began setting up at IW-78

0805 Began purging IW-78, see log for parameters.

0845 Well stabilized after recording parameters for 35 min.
tested for persulfate: 420 ppm
Will switch to ascorbic acid VOAs
Sampled IW-78-201710 @ 0850.
Fe^{2+}: 0.04 mg/L

0907 Started setting up at ITMW-20.

0912 Began purging ITMW-20, see log for parameters

1002 Well stabilized after recording parameters for 45 min.
Sampled ITMW-20-201710 @ 1005.
Fe^{2+}: 0.0 mg/L

1015 Started ~~stetHA~~ setting up on ITMW-21

1020 Started purging ITMW-21, see log for parameters.

Rain

10/25/17 Whirlpool, Ft. Smith 57°F Sunny

1100 well Stabilized after recording parameters for 35 min.
Sampled ITMW-21-201710 @ 1105. Fe^{2+}: 0.0 mg/L

1115 Dumped purge water.

1130 Started setting up on ITMW-7.

1140 Began purging ITMW-7, See log for parameters.

1225 Well stabilized after recording parameters for 35 mins.
Sampled ITMW-7-201710 @ 1230 Fe^{2+}: 0.07 mg/L

1240 Started setting up at mw-29

1245 Started purging mw-29. See log for parameters.

1325 Well stabilized after 35 min of recording parameters.
Sampled mw-29-201710 @ 1330 Fe^{2+}: 0.0 mg/L
Sampled mw-29-201710-MS/MSD @ 1330

1350 Dumped purge water & broke for lunch.

HA

10/25/17 Whirlpool, Fort Smith 71°F Sunny

1420 Started setting up on ITMW-5

1430 Started purging ITMW-5, See log for parameters.

1510 Well stabilized after recording parameters for 35 minutes.
Sampled ITMW-5-201710 @ 1515 Fe^{2+}: 0.0 mg/L

1530 Started setting up at mw-22

1540 Started purging mw-22, see log for parameters.

1430 Well stabilized after recording parameters for 40 mins.
Sampled mw-22-201710 @ ~~1435~~ HA 1635
Fe^{2+}: 0.0 mg/L

1700 Dumped purge water & returned to boiler room to pack samples.

1810 REH Off-site.

Haley Chiles

2015Q

10/26/17 Whirlpool, Fort Smith — Sunny 9 45°

0715 HA, NZ, NM, JK, JP, & VS on-site for REM.

0720 Started calibrating YSI and preparing to sample.

0800 Started setting up on mw-93.

0810 Began purging mw-93, see log for parameters.

0905 Well stabilized after recording parameters for 50 minutes.

Sampled mw-93-201710 @ 0910

0923 Began setting up on mw-95

0925 Began purging mw-95, see log for parameters.

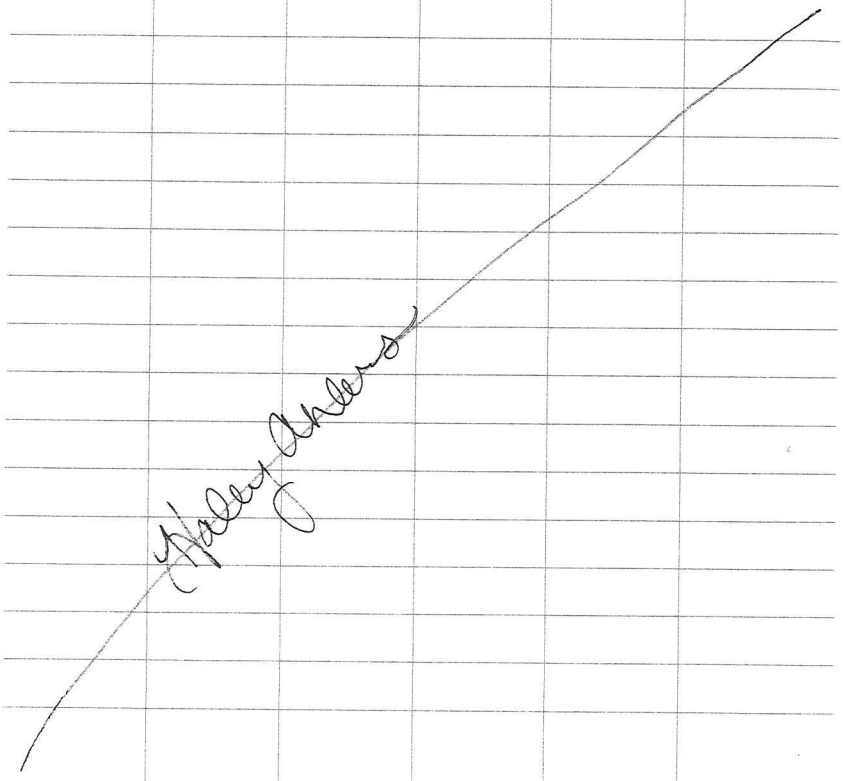
1015 Well stabilized after collecting parameters for 40 minutes.

Sampled mw-95-201710 @ 1020

1054 Began bubble stripping @ 200 ml/min. will run for 20 minutes.

1114 Finished bubble stripping. Packed up car.

10/26/17	Whirlpool, Fort Smith	sunny 70°F
1130	Returned to boiler room to pack samples & prepare to head back to St. Louis.	
1330	Finished packing samples and packing cars with coolers and field equipment.	
1345	Relinquished samples to FedEx.	
1400	Dropped off car at airport. RETT off-site.	



10

Location Fort Smith, AR Date 10/23/17

Project / Client Whirlpool

weather: clear 70s

0630 REH on site Personnel: J. Kredy, N. Martin
N. Zumwalt, J. Pavlowsky
V. Siegler, H. Ahlers

0645 Unload cars from STL w/ equipment and samplejars

0700 H+S meeting - traffic

0715 Begin gaging wells - JK + NZ on South side.

1200 Complete gaging wells (JK + NZ)

1200 NZ + JK offsite for lunch

1230 NZ + JK return to site from lunch

Calibrate YSI 556
Serial: 0B1251AF
Pine Environmental # 12315
mS/cm 1.387 → 1.413
ORP 252.3 → 240.0
pH 7 6.95 → 7.00
pH 4 4.00 → 4.00
pH 10 10.12 → 10.01
DO 98.9 → 98.3

Calibrate turbidity meter
La Motte 2020 WE turbidimeter
SN: 1654-0412
Pine # 19431

11

Location Fort Smith, AR Date 10/23

Project / Client Whirlpool

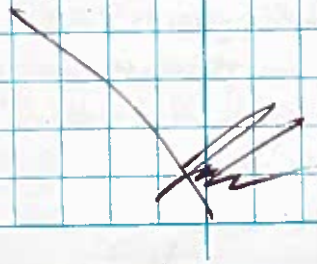
1345 Set up on TMW-29
Begin Purge @ 1425
rate set down to 50 mL/min
due to drawdown
Sample @ 1525
Sample ID: TMW-29-201710

1535 Set up on MW-194
Begin purge @ 1540
Sample @ 1612
- stabilized
Sample ID: MW-194-201710
Lab packed w/ samples

1730 Equipment blank on water level meter
Solinst SN: 238277
Pine #: CD3526
Sample ID: EB-01-201710
Time: 1750

1800 Pack and ice samples

1900 REH offsite



Location Fort Smith, AR Date 10/24/17

Project / Client Whirlpool

weather: clear, 50s

0700 RGH on site
recomd: JK, NE, NM, VS, JP, HA

0705 Calibrate ~~DO~~ YSI and Turbidity meter
YSI serial: 01B1251 AF
Pure # 12315

mS/cm	1379	1413
ORP	240.9	240.0
PH 7	7.03	7.00
PH 4	4.05	4.00
PH 10	10.17	1003
DO	91.8	98.6
Barometric press.	759.39	

Turbidity La Motte 2020we
SN: 1854-0412
Pure # 19431

745 H+S meeting
805 Set up @ MW-176
Begin purge @ 835
Sample @ 935
Sample ID: MW-176-201710
0955 Set up @ MW-46R
Begin purge @ 1004
Sample @ 1043

Location Fort Smith, AR Date 10/24/17

Project / Client Whirlpool

Sample ID: MW-46R-201710
- stabilized
1100 JK offsite for lunch
1130 JK back on site
1145 Set up @ TMW-24
Begin purge @ 1200
Sample @ 1250
- stabilized
Sample ID: TMW-24-201710
1305 Set up @ TMW-21
Begin Purge @ 1326
Sample @ 1426
Sample ID: TMW-21-201710
1445 Set up @ MW-185
Begin Purge @ 1455
Sample @ 1520
- stabilized
Sample ID MW-185-201710
1540 Set up @ MW-178
Begin Purge @ 1555
1633 Purged dry - will allow recharge overnight before sampling
1635 Set up @ MW-179
Begin purge @ 1638

Location Fort Smith AR Date 10/24/17

Project / Client Whirlpool

MW-179 cont.

Purged dry @ 1715

will allow recharge overnight before sampling

1730 Pack up samples for shipment

1830 REH offsite

Location Fort Smith, AR Date 10/25/17

Project / Client Whirlpool

700 REH on site

personnel: JK, NZ, NM, VS JP, HA

705 Calibrate YSI and turbidity meter

YSI serial: 01B1251 AF

Pine H 12315

mS/cm	1341	1413
ORP	244.9	~~240.3~~ 240.6
PH 7	6.99	7.00
PH 4	4.01	4.00
PH 10	10.07	10.01
DO	103.4	98.8

Barometric pres 750.89

Turbidity Lab Matic 2020 we

SN:

Proof:

815 Set up @ MW-178

Begin purge @ 0827

Purge until visibly clear

Sample @ 0845

Field dup taken

FD-06-201710

Sample ID: MW-178-201710

Location Fort Smith AR Date 10/25/17

Project / Client Whirlpool

0855 MW-179 DTW - 12.31
will allow more time to recharge

0900 Set up @ MW-83
Begin purge @ 0917
Sample @ 1015
Persulfate tested - 5 drops used
3.5 x 100 = 350 ppm
Ascorbic Acid used as pres.
for ~~VOC~~ VOAs.
Sample ID: MW-83-201710

1040 Set up @ MW-84
Begin purge @ 1102
Persulfate tested - 2 drops used
2,240 ppm
Ascorbic Acid used as pres. for VOAs
Sample @
Sample ID: MW-84-201710

1300 Set up @ MW-91
Begin Purge @ 1315
Sample @ 1415
Sample ID: MW-91-201710

1430 Set up @ MW-28
Begin purge @ 1440
Sample @ 1515

Location Fort Smith AR Date 10/25/17

Project / Client Whirlpool

MW-28 cont.
Sample ID: MW-28-201710

1535 MW-179 DTW - 12.31
will allow to recharge over night

1600 Pack up samples and COCs

1810 EOH offsite

Location Fort Smith AR Date 10/26/17

Project / Client Whirlpool

0700 REH on site
Personnel: JK, NM, NZ, HA, JP, US
Weather:
Task: complete MW sampling
JK remaining wells: MW-179, MW-87

0705 Calibrate ~~REH~~ JK YSI
YSI serial: 01B125IAF
YSI Pump#: 12315

mS/cm	1422	1413
ORP	236.0	240.0
PH7	6.96	7.00
PH4	4.06	4.00
PH10	10.08	10.01
DO	99.2	97.6

Barometric Press
Turbidity meter: La Motte 2020 we turbidimeter
SN: 1854-0412
Pump#: 19431

0800 Set up @ MW-179
First draw sample
DTW - 12.31
Sample @ 0815
Sample ID: MW-179-201710

Location Fort Smith AR Date 10/26/17

Project / Client Whirlpool

0825 Set up @ MW-87
Begin purge @ 0842
Sample @ 0932
DHC, Vinyl Chloride Reductase
begin - ~~400~~ 100 ml/min
@ 0955
Gas stripping begin @ 1011
@ 180 ml/min
Sample ID: MW-87-201710
Ferrous Iron: 0.00
1100 IDW pick up in rolloff/drums
1130 Pack up equipment and samples
1330 REH offsite

Whirlpool, Fort Smith

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Name Nick Martin

Address

Phone

Project

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CONTENTS

PAGE	REFERENCE	DATE

0630 Rambell Environ onsite. Personnel listed on HASP sign in sheet.
0645 H&S meeting conducted at boiler building on north side of facility.
0650 Unpacked equipment from cars, prepared to gage wells.
0730 Nick Martin and Victoria Siegler depart to gage wells at North parking lot area, and and Bos) property. Wells were equilibrated to atmosphere for at least an hour prior to measurements
1230 Gaging complete, N. Martin & V. Siegler offsite for lunch
1315 Return to site. V. Siegler instructed N. Martin how to sample for Fe^{2+}, H_2, & persulfate
1400 N. Martin begins calibration of equipment
1500 Calibration complete, had to restart calibration for DO to be within range
YSI: 13H100508 SC: 1.208 mS/ ORP = 240.0
pH 7, 4, 10 DO: 98.1% (atmospheric 745.82)

10/23/17

1520 Mob to MW 61R, set up.
1605 Begin purge. Will sample for MNA parameters here
Total purged volume ~ 3.5 gallons
1652 Begin sample collection
1652 Samples collected. MW-61R-20171010
1828 Air stripping sample collected (same sample number. GW will be submitted for SO_4, NO_3 (250mL plastic), metals (250mL), sulfide (250mL), TOC/Ammonia (250mL amber), methane/ethane/ethene (2-40mL), H_2 (22cc), VOCs (3-40mL), 1 Fe^{2+} (empty), 1 DNC/UCR sample (2 cells used, totalling 450mL flowed through): 1st was 250mL, 2nd 200mL
1835 Mob back to boiler room, dump waste water in drum
1900 LE offsite. Note: MW-61R sample for microbes had 2 cells, 1st ~250mL, 2nd ~200mL

10/23/17
Rite in the Rain

0700 RE onsite
07 WS tailgate meeting, see check-in sheet for topics discussed and personnel on site
0720 Calibration of 455 / turbidity meter
YSI S/N: 13H100508 - 556 MPS
Turbidity meter: LaMotte 2020wi - 022207
YSI cal std: pH - 7, 4, 10.02 ORP: 240, Specific Conductance 1413 µs/cm, DO: 98.7
0815 Mob to MW-60R to begin sampling
0845 Complete setup, begin purging.
0925 Parameters stabilized and sample collected, 3-40mL VOAs for VOCs (MW-60R-201710) $
0940 Mob to TMW-16.
1006 Arrive @ TMW-16, begin setup with DTW = 13.23.
1023 Begin purge
1058 Purge end, all params stable. Sample collected (3VOAs for VOCs). TMW-16-201710 $
1115 Mob to TMW-16.
1135 Mob back to boiler room for tubing, as TMW-16 does not have dedicated tubing.
1200 Begin purging (installed tubing)

10/24/17

1248 Parameters stabilized, Sample collected for VOCs, (3 VOAs) #
Sample name: TMW-26-201710
1310 Mob offsite for lunch
1350 Mob to boiler room to obtain tape and silicone tubing
1410 Mob to MW-182
1428 Begin purging @ MW-182, will sample for VOCs (3 VOAs)
1505 Purging complete / Parameters stable #
Sample name: MW-182-201710
1525 Mob to TMW-30
1557 Begin purging @ TMW-30
1645 Turbidity still has not stabilized, but all other parameters have
1658 All parameters stabilized, sample collected: TMW-30-201710 @1658 #
1715 Mob back to boiler building to pack coolers, demob equipment for the day.
1840 RE offsite for day

10/24/17

Rite in the Rain

0715 RE onsite (N. Martin arrives, stopped at Wal-Mart for supplies), all others already onsite.
0720 Brief H&S tailgate - check sign-in for participants / topics
0740 Begin YSI / turbidity calibration
YSI: Model/serial: YSI 556 MPS / 13H100500
Specific conductance: 1413 µS/cm ORP: 240.0 pH: 7, 4, 10.03
DO: 98.8%
0825 Mob to MW-39R
0845 Begin purging, will sample for VOCs (3 VOAs) plus a duplicate (duplicate 5)
0930 Sampling completed after parameters stablized
$ MW-39R-201710 @ 0930
Duplicate collected: FD-05-201710 @ 1007
3 VOAs each collected for VOCs.
1000 Mob to TMW-23
1016 Begin purge
1047 Purge end, parameters stablized
$ TMW-23-201710 @ 1047, VOCs (3 VOAs)
1105 Mob to MW-189
1145 Purging begins at MW-189
1225 Purge end, Sample collected at MW-189
$ MW-189-201710 (3 VOAs for VOCs)

10/25/17

1250 offsite - lunch
1315 Mob to MW-190
1342 Purge begins at MW-190
Note: Water was not coming out of well on first attempt, so the tubing was removed, cleaned out (clay shaking debris loose from tubing near bottom), and reinstalled. Pump was turned on at a high rate (~700mL/min) to purge out any residual material from the inside. Actual purging began at 1350.
1418 Purging complete; Sample collected
$ MW-190-201710 (3 VOAs for VOCs) @ 1418
1430 Mob to MW-191
1452 Purge begins at MW-191.
1538 Purge end - parameters stabilized
$ MW-191-201710 @ 1538
1550 Mob to MW-192
1608 Purge begins at MW-192
1700 Purge complete
$ Sample: MW-192-201710 @ 1700
1715 Mob back to boiler building to store equipment and pack up coolers
0620 Ramboll Environ offsite

10/25/17

0710 Ramboll Environ onsite, see sign-in sheet for personnel onsite
0720 Calibration of YSI and turbidity meter begins
YSI: S/N 13H100508 Turbidity M: Lamotte 2020we
Spec. Conductance: 1413 µS/cm S/N: 022207
ORP: 240
pH: 7/7, 4/4, 10/10.02
DO: 97.6%
0805 Mob to ITMW-18
0850 Installed new tubing in ITMW-18 (temporary w/ weight at bottom), begin purging
0945 Purge ended, persulfate measured at 2400 mg/L (3 drops diluted with 25 mL of DI water, multiplied by 300 per instructions on back of Form for logs. Samples + dup collected in 40 mL amber VOA w/ ascorbic acid per
ITMW-18-201710 @0945
FD-07-201710 @1041 (QA)
1000 Mob to MW-86.
1013 Begin purging at MW-86.
→ continued on next page

10/26/17

1120 Sampling begins. Persulfate test resulted in 0ppm sulfate (2 attempts using 3, 5 drops). Fe^{2+} = 0 mg/L.
Samples: MW-86-201710 collected for VOCs, methane, ethane, ethene, H_2, SO_4, NO_3, metals, sulfide, TOC (Analytical DNC/UCR (1000 mL flowed through cell)
1300 Sampling complete, (Air stripped for 1 hr)
1315 Decon equipment / clean at rental car.
1335 Nick Martin offsite, H. Allen and N. Zumwalter onsite to transfer samples to courier.

10/26/2017

Sunny
75°F

Whirlpool 10-23-17

0630 Arrive at site
0640 distribute paperwork, coolers, sampling equipment,
~~0600~~ conduct H&S mtg.
0700 begin gaging MWs, in source area, Boys & Girls Club, residents along Jacobs + Brazil Ave
1230 leave site for lunch
1310 continue gaging wells
1400 Prep car for sampling
1420 Begin calibrating YSI
Serial #:
Sp. Cond: 1410 µS/cm
ORP: 240.0
pH_7 - 7.03
pH_4 - 4.01
pH_{10} - 10.03
DO - 98.8%
1440 calibrated turbimeter
1500 leave for MW-195
1530 Arrive at MW-195.
Begin setting up & monitoring YSI parameter
1625 parameters stable

10-23-17 Whirlpool Sunny 75°F

1630 Sampled MW-195 @ 1630 for VOCs

1635 Set up at TMW-20.
Begin monitoring YSI parameters
Parameters stabilized @ ~~1715~~ 1720
Sampled TMW-20 @ ~~1715~~ 1720
took FD-01-201710 @ ~~15~~ 1720
for VOCs
total V purged: 2 gal
total depth - 17'
1735 Begin packing up equipment / closing well
1745 deliver samples to cooler for packing + shipping
1755 dump purge water bucket into IDW container
1800 arrive at 61-R MW to assist Nick Martin (REM) with bubble stripping + sample delivery
1840 arrive at boiler room.
daily debrief.
1850 leave site for day

JB

10-24-17 Whirlpool Sunny 45°F

0710 arrive onsite
0715 gather field supplies needed for bubble snipping
0730 begin calibrating YSI
Serial # - 10B101572
Sp Con - 1.416
ORP - 240.8
pH 7 - 7.02
pH 4 - 4.05
pH 10 - 10.03
DO - 98.6%
0810 Calibrated turbidmeter
0820 prepped equipment for sampling/deliver personnel to MCK M.
~~0840~~ 0840 arrive at RW-69
0845 Begin setting up monitoring equipment
TD - 28.11'
DTW - 8.50'
pump set @ ~23'
0900 Begin monitoring/pumping
Parameters stable @ 0935
Take RW-69-20710 @ 0940
MNA + VOCs
total # purged: 2.5 gal

10-24-17 Whirlpool Sunny 54°F

Ferrous iron: 0.0 mg/L
0955 complete bubble snipping sampling
~~DCR~~ DCA-VCR bacteria sampling
pack up equipment, close well
pick up ice at gas station for cooler.
1030 Stop at boiler room at Whirlpool to pick up DHC-Reductase vials for Haley A. & whoever else may need
1100 break for lunch
1130 Arrive at MW-58R
Begin setting up well, ask resident for permission to enter yard w/ vehicle.
TD - 21.88'
DTW - 4.56'
Total # purged - 2 gal
parameters stable @ 1215
Sampled MW-58R @ 1220
- VOCs, MNA, hydrogen, DHC Reductase
Ferrous Iron: 1.08 mg/L
Began hydrogen sampling @ 1230 @ 215 mL/min sample @ ~1245

sunny
64°F

Whirlpool

10-24-17

1255 Began taking DHC-VCR sample. Flow rate @ 100mL/min sampled for 10 min

1305 began packing up MW-56R

1310 mobilize at MW-175. Begin purging shallow well & taking YSI parameters
TD- 14.51'
DTW- 7.05'

1345 After purging ~1 gal (~1 well ∀) the well was dry. Will let recharge & check at end of day to collect VOC sample. Pack up equipment @ MW-175. DUMP purge water.

1430 ~~1355~~ Arrive at MW-57R
Begin setting up equipment
TD- 19.35'
Depth to W- 3.34'
pump @ 17.15'
TOTAL ∀ purged -

1515 Parameters stabilized @ 1515

JP

sunny
64°F

Whirlpool

10-24-17

1520 took MW-57R-20171O @ 1520
VOCs

1525 begin packing up equipment, decon, etc.

1530 begin set up at MW-57oR- & monitoring YSI parameters
TD- 19.79'
DTW- 3.50'
set pump @ 18.79'
(screen 2 ft)

1600 parameters stable @ 1600
prep sample bottles
Sampled MW-57oR-20171O @ 1600
for VOCs - 3 vials

1610 begin demobiling equipment, decon, pack up. Total ∀ purge: ~1.5gal

1630 Arrive at MW-175 (shallow well) to see if recharged
DTW → 11.6'
TD → 14.51'
attempt to sample @ 1640
Sampled MW-175-20171O @ 1640

JP

Cloudy 90°F | Whirlpool | 10-25-17

1645 Begin packing up equipment, assist Haley A. of MW-77 on Best property (packing up equipment)

1715 arrive at boiler room/on-site to unload sampling equipment and sample coolers

1730 Pack ice. Load samples into coolers for courier.

1830 Leave site for day

Cloudy 40°F | Whirlpool | 10-25-17

0700 Arrive on-site.

0710 Conduct H&S mtg

0715 Gather field supplies

0730 Begin calibrating YSI Serial # - 16B101572
Spcon - 1.001 mS/cm
ORP - 252
pH4 - 4.00
pH7 - 7.02
pH10 - 10.03
DO - 99.8 %

0750 Help Joel K & Nick M find ascorbic acid vials, bleach, and persulfate kits

0800 arrive at ITMW-9. Weed tubing not present.

0810 Leave site for scissors, field supplies

0820 arrive in boiler room. grab tubing

0820 arrive at ITMW-9, begin setting tubing.

0850 begin pumping ITMW-9 and monitoring YSI parameters

Sunny 47°F Whirlpool 10/25/17

0930 Continue monitoring ITMW-9.

0950 parameters stabilized. Prepare to sample

0955 sampled ITMW-9-20171O @ 0955

1000 sampled DHC-VCK - 720 mL for 4 min @ 180 mL/min

1010 sample hydrogen/air stripper for 10 min @ 180 mL/min

1025 ferrous iron → 0.0 mg/L

1035 begin ~~un~~packing equipment. ~~arrive at~~ ~~TP~~ total V purged = 2.5 gal close up ITMW-9, pack up.

1050 arrive at ITMW-10 begin setting up equipment.
TD - 36.82'
DTW - 21.25'

1105 begin sampling YSI parameters
parameters stable. Prep sampling bottles.

51°F sunny Whirlpool 10-25-17

sampled ITMW-10-20171O @ 1150

for VOCs only.

1155 Begin packing up equipment, decon, etc.
total V purged: 1.3 gal

1200 Dump purge water

1215 retrieve persulfate kit from Nick M. for source wells
break for lunch
arrive at ITMW-16. (locked)
retrieve well keys from Haley A. to open ITMW-16

1315 Arrive @ ITMW-16. Begin setting up monitoring equipment and taking parameters

1345 parameters stable
run persulfate test. → 0.0 ppm

1400 took one last YSI reading then sampled ITMW-16-20171O @ 1400

1405 closed up well, packed up equip.

1410 arrive at mw-26. Begin setting up equipment

Sunny 75°F — Whirlpool — 10/25/17

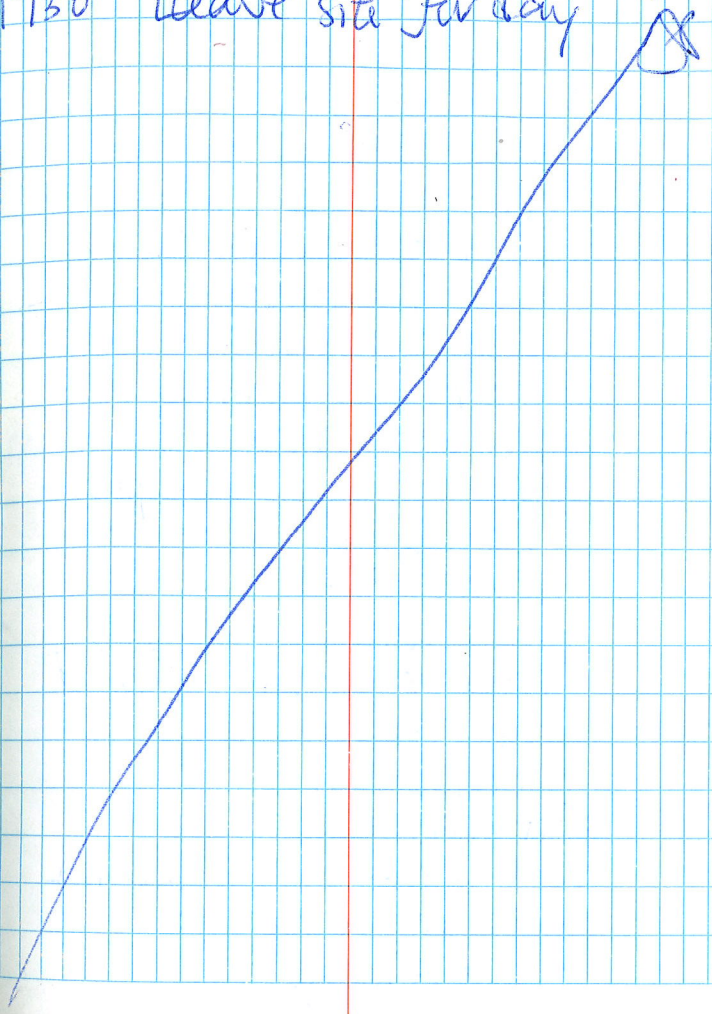
taking YSI parameters
1555 Parameters stable
sampled MW-26-20171010 @ 1600

TD - 35.14'
DTW - 15.75'
Vol purged - 1 gal
1610 pack up equipment
1620 Arrive at MW-27.
1625 Begin setting up equipment
TD - 30.14'
DTW - 12.46'
tubing @ - 23.5' 1/4
total V purged: ~~1~~ gal
1630 start purging well & taking YSI parameters
1705 YSI parameters stable
sampled MW-27-20171010 @ 1710

(for VOCs only)
1715 Begin packing up equipment. Drop off samples for packing & shipping.

Sunny 85°F — Whirlpool — 10/25/17

1730 courier arrives to take samples to lab
Organize coolers, prep
1735 equipment for last day
1738 leave site for day



dark
45°F

Whirlpool 10-26-17

0705 Arrive on site
0710 Begin Calibrating YSI
serial # - 10B101572
Sp Con - 1.414 mS/cm
ORP - 231.1
pH 7 - 7.00
pH 4 - 4.00
pH 10 - 9.99
0752 DO - 98.6
0755 Calibrated turbidimeter
Actual barometric pressure for south - 30.15"
⇒ 750.641 mm Hg
0800 Arrive at ITMW-19.
Begin setting up equipment
TD - 33.23'
DTW - 13.27'
pump tubing @ - 29.50'
total V purged - 1.5 gal
0815 Begin monitoring YSI parameters.
0955 Test persulfate.
used 1 mL GW, 24 mL DI
(multi. result by 25)
→ out of range

Sunny
51°F

Whirlpool 10-26-17

0900 used 3 drops, multiplied by 300
color @ 13 ppm x 300 = 3900 ppm
0905 prep ascorbic acid samples
0910 sampled ITMW-19 @ 0910
ITMW-19-201710 (VOCs only)
0915 pack up equipment.
0920 assist Joel K up sampling MW-87 for MNA parameters.
Labeled sampling jars.
completed DNA-VOA - 1000 mL
completed hydrogen sampling
180 mL/min for 18 min
before sampling.
1100 Arrive at boiler room. Begin unpacking equipment, using chain of custody.

Location Whirlpool Date 10/23/17

Project / Client 6400 Jenny Lind, Ft Smith, AR

Annual Sampling Event

0630	Onsite & H&S meeting Traffic
0645	unload vehicles
~~0700~~	~~[illegible]~~
~~0745~~ 0830	Start open lids to wells on Bost property, North parking lot, MW-22, ITMW-1, 2, 13, 14. w/ nick martin. To stabilized wells to atmospheric pressure.
1230	Gauging complete
1315	Grab NAI raw to sample for Fe^{2+}, H, & persulfate
1430	Start Calibrating YSI
1520	mob to MW-63R
1540	Pump Start
1646	Sample MW-63R purge ~2.0 gal
1655	Head back to site dump purge water.
1705	Back @ boiler room to work on COCs and pack samples
1845	Everyone offsite

US

Location 4400 Jenny Lind, Ft Smith, AR Date 10/24/17

Project / Client Whirlpool

Annual Sampling Event

0700 onsite
HS meeting working alone
0715 Calibrate
0830 Organize vehicle and set up on MW-99
0841 start pump
0948 Sample MW-99 purged 2 gal
0955 Head to MW-184 and setup
1009 Pump Start
1057 MW-184 Sample purge 1 gal
1115 set up @ MW-98
1128 Start pump
1236 Sample MW-98 total purge & 1.5 gal total purge
1246 Lunch + run to Sutherlands
1346 Back onsite set up on MW-102R FD-02-20171010
1439 Pump Start
1534 Sample MW-102R purge ~1.0 gal
1545 move and set up on MW-108R
1608 Pump Start

Location 4400 Jenny Lind Ft Smith AR Date 10/24/17

Project / Client Whirlpool

Annual Sampling Event

Sample MW-108R total purge ~ -gal
1730 Return to main site & dump purge water
1740 Start on CCCS
1830 offsite

Location 6400 Jenny Lind, Ft Smith AR Date 10/25/17

Project / Client Whirlpool

Annual Sampling Event

0700	Arrive onsite
0710	HS meeting "Cold/Heat stress"
0720	Calibrate equipment
0810	Head to MW-183
0839	Pump start
0951	Sample MW-183
	purge ~1.5 gal
1015	Setup on MW-96
1025	Pump start
1100	Sample MW-96
	total purge 1.0 gal
1130	Lunch
1200	Back onsite setup on MW-97
1208	Start pump
1314	Sample MW-97
	total purge ~2.0 gal
1330	Setup on ITMW-2
1340	Pump start
1415	Sample ITMW-2
	purge ~ 1.0 gal
1420	Set up on ITMW-1
1439	Pump start
1514	Sample ITMW-1
	purge ~1.0 gal

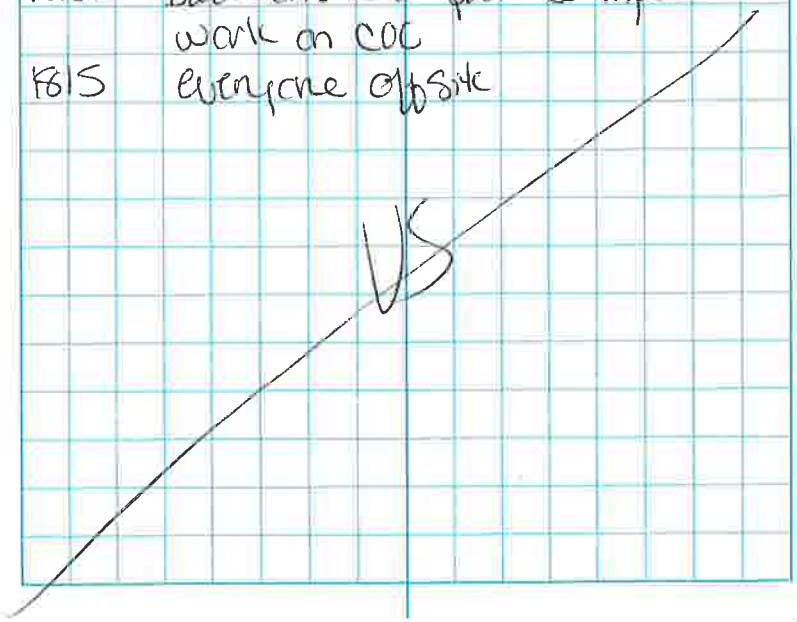
Location 6400 Jenny Lind Ft Smith AR Date 10/25/17

Project / Client Whirlpool

Annual Sampling Event

Found MW-62R in my cooler. It should have gone out yesterday. Call Tamara. Going to re-pull VOCs but not take additional readings

1542	ReSampled MW-62R after purging for 5 mins
1548	Set up on MW-55R
1555	Pump start
1636	Sample MW-55R
	purge ~0.50 gal
1650	Back onsite to pack samples + work on COC
1815	Everyone offsite



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Location 1400 Jenny Lind, Ft Smith, AR Date 10/26/17

Project / Client Whirlpool ~~US~~ Annual Sampling event

0700	onsite HS meeting Slips, trips, falls
0710	calibrate equipment
0755	set up on MW-87
0807	Pump start
0842	Sample MW-87 purge ~ 1.0 gal.
0915	start bubble stripping
0917	inject 20cc of air
0927	Sample 15cc of air (put 0842 on sample to match above)
0935	Load vehicle and head to MW-38
1000	Pump start
1049	Sample MW-38 purge ~1.5gal
1020	start bubble stripping
1022	inject 20cc of air
1032	Sample 15cc of air (put 1049 to match above samples) for this well)
1213	EB-04-20171026
1220	Start COCs, repacking cars, packing samples
~~1400~~ 1330	~~Event~~ US offsite.

US

10/9/17 Whirlpool 65°F Sunny

0730 RE on-site (NZ). Site recon in area for brush hogging.

0920 ERS on-site.
2 roll off boxes delivered & staged @ SW portion of site

0945 Clint's Landscaping on-site.

0950 Begin brush hogging @ SW portion of site to allow access to drilling locations

1100 Ethan King (GPRS) on-site for private utility locate.
Begin locate @ SW locations.

1410 GPRS off-site. N & SW proposed locations cleared.

1425 Clint's Landscaping off-site
Brush hogging complete @ SW.

1545 McCray drilling on-site.
Setup rig to begin drilling @ TMW-20 tomorrow morning

1430 JP (RE) on-site

1710 All off-site

Rite in the Rain.

10/10/17 Whirlpool 55°F clouds

0700 RE (WZ + JP) on-site. McGray on-site (John Kings + 2 helpers). Prep for TMW-20 drilling

0730 conduct H&S meeting. Topic: Inclimate weather, traffic safety

Begin advancing TMW-20 w/ DTW HSA CME 75 DT w/ 4¼" augers.

0'-5' 4' recovery 80%. 0-2.5' clayey silt, dark brown to light brown w/ depth, trace course sand, trace reddish brown, dry, non-plastic,

2.5'-5' silty clay, light brownish gray w/ trace red brown, trace course sand, trace fine subangular gravel, with black nodules, plastic, moist, slightly stiff

5-10' 100% R 5'-6' silty clay, orange with black nodules and gray mottling, moist, slightly stiff, med to course sand, plastic, trace fine gravel

10/10/17 Whirlpool 58°F Cloudy

TMW-20 continued

~~6'-~~ 5'-10' cont. ~~6'-10'~~ 6'-7.0' silty clay, orange ~~and~~ gray, stiff, moist, plastic, with trace subrounded fine gravel

7.0'-8.0' sandy clay, dark brown and orange, med. to course sand w/ fine gravel, with black nodules, slightly stiff, moist ~~plastic~~ cohesive

8.0-10.0' silty clay, orange + gray, with med to course sand, trace black nodules, stiff, moist, plastic

10.0'-15' 80% R 4'/5' 10.0'-11.5' see 8-10' inc. descr

11.5'-12.5' clayey sand, gray, wet, soft, ~~med~~ very fine grain, ~~nonplastic~~ sl. cohesive

transmissive zone * 12.5'-15.0' ~~gravelly clay~~ clayey gravel, orange, wet, fine to course gravel, subrounded to subangular gravel, plastic, poorly sorted sand

15.0-18' 100% R 15.0'-16.0' ~~clayey silt~~ silty clay, light orangish gray, stiff, very plastic, moist,

Rite in the Rain

10/10/17 Whirlpool Cloudy 60°F

TMW-20 (cont.)

15-18.5' cont. 16' - 17' weathered shale, gray to dark gray with depth, stiff moist, crumbles, increasingly laminated w/ depth, trace lt brown

17' - 18.5' shale, dark gray, laminated

0840 End of Bonney

PID Screening

Depth Interval (ft)	Reading (ppm)
0-2.5	0.0
2.5-5.0	0.0
5.0-7.5	0.0
7.5-10.0	0.0
10.0-12.5	0.0
12.5-15.0	0.0
15.0-17.0	0.0
17.0-18.0	0.0

0850 Install TMW-20 - 7' screen, associated riser, filter pack sand: 20-40 to 9.5' bentonite chips to surface near

10-11-17 Whirlpool Cloudy 56°F

0830 took sample @ 0830 TMW-20-SL(12.5-13.0 ft)-101017

. TOC, magnetic susceptability ADEQ onsite

0915 Begin drilling TMW-21

0-5' 100% R

0.0-0.5' - topsoil w/ root hair

0.5' - 3.0' - clayey silt, light grayish brown, trace red brown, trace coarse sand, stiff, ~~plastic~~, dry, cohesive

3.0 - 5.5' - silty clay, orange and gray with black nodules, trace coarse sand, stiff, dry, plastic, with fine gravel, moist

5'-10' 100% R

5.5' - 10.0' clayey silt, brownish orange with black nodules, with sand, fine to coarse sand, moist, cohesive

10'-15' 80% R

10.0' - 11.0' see 5.5' - 10.0'

11.0' - 13.5' clayey sand, gray, wet, soft, fine grain, slightly cohesive,

13.5' - 15.0' - clayey gravel ~~silt~~, reddish

Rite in the Rain

10/10/17 Whirlpool 56°F Cloudy

TMW-21 (cont)

13.5-15' brown, with silt, ~~gravel~~, ~~damp~~ moist
cont. Stiff, cohesive
15' - top of shale
15.0'-20' weathered shale, brownish gray, laminated, dry, stiff, not cohesive, more competent with depth

sample @ 1010
TMW-21-SL(14.0-14.5 ft)-101017

End of boring 1020

PID

depth interval (ft)	Reading (ppm)
0-2.5	0.0
2.5-5	0.0
5-7.5	0.0
7.5-10	0.0
10-12.5	0.0
12.5-15	0.0
15-17.5	0.0
17.5-20	0.0

Install TMW-21 w/ 10' screen

10/10/17 Whirlpool Cloudy 55°F

1045 Begin drilling TMW-24

Rec:5.0' 0-0.5 Topsoil, lgt brn, w/ root hairs, dry, loose
0.5-2.0' Clay silt lgt org brn, dry, loose, trc root hairs, slt cohesion
2.0-3.0' Silty, gray-brn, w/ red brn, w/ black nodules, dry, hard, plastic, trace root hairs
3.0-7.0' Silty Clay, red brn, w/ gray, wet, trace crs sand, trace fine subang gvl, stiff, slt plastic, dry, trace root hairs

Rec:5.0' 7.0-8.0' A/A w/ black nodules
8.0-9.0 A/A trace black nodules, increasing sand

Rec:4.0' 9.0-14' Sandy Clay, red brn, w/ gray, fine, slt plastic, moist slt stiff
14'-~~15.5~~ 16.0 Clayey Gravel, red brn, w/ fine to crs sand, gvl, fine to crs, subrnd to subang, wet (moist 14-15'), cohesive,

Rec:5.0' 16.0-16.5 Clayey Silt, red brn & gray brn laminated, very moist, stiff, slt

Kitt in the Rain

10/10/17 Whirlpool 60°F clouds

TMW-24 contd.

16.5-18' Shale, red brn & gray, w/ weathered shale, dry, hard, laminated

18-19' Shale, dark gray, dry, hard, laminated

1135 End of Boring

Sample TMW-24-S2 (15.0-15.5'=7) - 10/10/17 @ 1130

~~VOC~~ NS Magnetic Susceptability & pOC

PID

Depth (ft)	ppm
0-2.5	0.0
2.5-5.0	
5.0-7.5	
7.5-10.0	
10.0-12.5	
12.5-15.0	
15.0-17.5	
17.5-19.0	

7' ~~10'~~ screen & associated riser, sand to 10', chips to surface

1216 TMW-20 DTW: 4.05' btoc

TD- 17.90' WC: ~14'

10/10/17 Whirlpool 65°F Clouds

1218 TMW-21

DTW: 7.39' btoc

TD: 19.7' btoc

WC ~ 12.3'

1405 Begin advancing TMW-26

Rec: 5.0' 0-0.5' Topsoil, lgt brn, w/ root hairs, dry, loose

0.5-3.5' Clayey Silt, lgt brn, trace root hairs, w/ red brn, dry, loose, slt cohesive

Rec: 4.0' 3.5-5' Silty Clay, red brn & lgt gray brn, trace black nodules, slt plastic, dry

Rec: 5.0' 5.0-~~18.5~~ 18.5' Silty Clay, red brn, w/ gray, trace black nodules, organic

Rec: ~~7.5~~ 3.5' trace root hairs, hard, dry, slt plastic, increasing very fine sand w/ depth, ~~trace black~~

Rec: ~~2.5~~ 7.0' 18.5-22.5 Sandy Clay, red brn, w/ gray, moist, cohesive, very fine, trace black nodules

22.5-25.5' Clayey Gravel, red brn, with fine to crs sand, trace black nodules, gvl, fine to crs, subang w/ cobbles (broken), wet, to Subrnd cohesive (free water)

Rain on the Rain.

10/10/17 Whirlpool 65°F clouds

TMW-26 cont'd 25.5-26.5 Clayey Silt (weathered shale), red Gry, slt moist, slt cohesive, veg stiff, slt laminated

Rec: 3.0' (full) 26.5-28.0' Shale, dark grey hard, laminated, dry

1515 End of Boring

TMW-26:

1545 10' screen (2") + associated riser, filter sand (20/40) to 16' bgs, chips to near surface

PID

Depth (ft bgs) ppm

0-2.5 0.0

All intervals 0 ppm (every ~2.5')

Sample TMW-26-SL (23-23.5FT) -101017 @ 1535

VOCs, Magnetic Susceptibility

1420 McCray off-site.

1440 Begin sample prep + ~~sh~~ relinquishment

1800 Samples relinquished to courier

1805 RE off-site

10/11/17 Whirlpool 50°F Cloudy

0710 RE (NZ + JP) on-site

0715 McCray (same crew) on-site Prep for TMW-27 work. Conduct HSS meeting.

0730 Begin drilling TMW-27

0-5' 0-2.5' - topsoil w/ root hairs

80% R 2.5-3.5' - clayey silt, brown, slightly moist, crumbles, soft, non cohesive, trace sand med to crse grained

3.5'-5' - silty clay, orangish brown, trace root hairs, trace sand - fine grained, with black nodules, trace red nodules, slightly stiff, slightly moist, plastic

5'-10' 5'-5.5' (see 3.5'-5')

100% R 5.5'-10' silty clay, orangeish lt brown with gray mottling (fine-grained sand), with black nodules, crumbles, dry, stiff

10'-15' 10'-14.5' - see 5.5-10' description

100% R 14.5-15', sandy clay, orangeish brown with gray mottling, soft, slightly moist, plastic, fine to very fine grained sand

15'-20' 100% R 15'-20' see 14.5-15' description

Rite in the Rain

10/11/17 Whirlpool 55°F cloudy

0805 cont. drilling TMW-27

20'-25' 20-22.5' sandy clay, pale orange with gray mottling, fine to very fine grain sand, slightly stiff, wet, plastic

3.5/5' 22.5'-23' sandy clay, blue-gray with gray mottling, with gravel medium to coarse, wet, plastic

70% R transmissive * 23'-25' clayey gravelly ~~clay~~ orangish dark brown, ~~med to co~~ poorly sorted, w/ poorly sorted sand, wet, stiff, non cohesive

25'-26' ~~25'-25.5' sandy clay~~

100% R 24.5-25.25' sand, orangeish brown, wet, soft, poorly sorted

2'/2' 25.25'-25.5' silty clay (weathered shale), orange, wet, laminated, soft, slightly plastic,

shale * 25.5-26.0' - shale, dark gray, laminated

0830 End of Boring

0845 Install TMW-27: 10' screen, 2" PVC pipe, + assoc. riser, filter pack (20/40) to 14' bgs, chips to near surface

MB

10-11-17 Whirlpool Cloudy 53°F

~~Begin developing TMW-26 + TMW-27~~

took sample @ 0820
TMW-27-S2(24.5-25.0 ft)-101017

magnetic susceptibility + TOC

0900 PID not reading, cleaning lamp w/ alcohol & retrying

0905 total depth of TMW-27-26.35' btoc
DTW @ 0905 12 ft btoc

0910 Set up Rig @ TMW-25

0915 Drillers remove IDW from construction dumpster to Environ dumpster

0920 NZ + JP offsite to find alcohol wipes to fix ~~YSI~~ PID reader

0930 NZ + JP on-site. Begin cleaning + attempting to fix PID.

1000 Lamp malfunctioning after troubleshooting. NO PID readings for today's samples

1005 Begin decanning purge pump

1024 TMW-26
TD: 28.55 btoc
DTW: 13.54' btoc

MB

Rite in the Rain

10/11/17 Whirlpool 55°F cloud,

1033 Begin purging TMW-26 for development. Initially lgt gray brn dubrd
Rate: ~2 gal/min

1040 Dry

1054 Resume purging

1056 Dry. ~15 gal purged

1100 Begin setting up TMW-26 monitoring equip.

1130 Collect first YSI reading

1200 Parameters stabilized after purging an addt'l 2.5 gallons.
TOOK TMW-26-1017 @ 1205 VOCs

1210 PACK up Sampling Equipment

1215 NZ finds additional well lids for drillers completing 3 wells (installed 5/2017) w/ well pads and TMW-20, 21, & 24.
Drillers completed wells during sampling of TMW-26

1230 Gain access to backyard of resident to install well pads in MWs drilled in may (2 wells)

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10-11-17 Whirlpool Cloudy 57°F

1245 break for lunch

1345 onsite at TMW-25
Begin drilling TMW-25

0-5' 100% R
0-0.5' Topsoil
0.5-1' silty fill, lt brown, dry
1'-2' silty fill, red brown, dry crumbles, loose
2-2.5' silty fill, lt brown/tan, dry, loose, crumbles
2.5-5.0' clayey silt, lt brown with gray mottling and black nodules, dry, crumbles, loose,

5'-10' 100% R
5-7' silt, lt brown, with black nodules, dry, crumbles, loose
7'-10', ~~clayey silt~~ silty clay, orangish brown, with gray mottling, with black nodules, very stiff, dry, crumbles, nonplastic or slightly plastic

10-15' 100% R
10'-15' see descript for 7-10'
15'-17.5' see descript for 7-10'

15-20' 100% R
17.5-20' sandy clay, orange with gray mottling, with black nodules, dry, stiff, plastic, crumbles, increasing sand with depth, fine grained sand

Rite in the Rain

10-11-17 Whirlpool Cloudy 57°F

1420 continue advancing TMW-25
20-25' 20-24.5'. (see 17.5' to 20' descr.)
100% R 24.5'-25' - clayey sand, lt gray, very fine grain, moist, ~~crumbly~~ soft, slightly cohesive
25'-30' 25'-27.5'; (See descript 24.5-25')
70% R 27.5'-29.5'; clayey gravel, brown,
3.5/5 * poorly sorted, with trace cobble,
transmissive * wet, soft, nonplastic
29.5'-30' - silty clay (weathered shale), laminated, stiff, wet, nonplastic, orangish brown, with
top of shale * black shale pieces
30'-30.5' 30'-30.5' shale, dark gray, laminated
100% R 1445 End of Boring
0.5/0.5' 1450 Begin installing TMW-25 10' screen, 2" PVC, w/ associated riser, filter pack (20/40) to 18.5 bgs
[took sample @ 1450 TMW-25-SL(28.0-28.0 ft)-101117]
~~VOCs~~ TOC + magnetic susceptc.
1510 Begin completing TMW-25 well pack. (drillers)
[NZ developed/purged TMW-27 during well installation]

10-11-17 Whirlpool Cloudy 57°F

1630 Begin advancing TMW-22
Hand clear first ~5'
0-0.5 Topsoil, dark brn, root hairs, moist
0.5-2.0' Clayey Silt
2.0-8.0' Silty Clay, red brn, w/ gray mottling, w/ black nodules, ~~stiff to~~ very plastic, slt moist
Rec: 5.0
8.0-10' Silty Clay, ~~mf~~ red brn, trace gray mottling, w/ black nodules, w/ sand, poorly sorted, ~~mf~~ trace gvl, fine, subrnd to subang, stiff, slt plastic, moist
10'-~~14.5~~ 14.7 Clayey Gravel, red brn, w/ gray mottling, w/ sand poorly sorted, gvl, fine to crs subrnd, cohesive, moist, organic odor (ISCR?)
Rec: 3.0
14.7-14.9 Clayey silt red brn, very stiff, slt laminated, dry
14.9-15.0' Shale, hard, very dark gray, laminated
1655 End of boring
[Sample TMW-22-SL(14.0-14.5FT)-101117 @ 1650]
TOC, magnetic susceptibility
Rite in the Rain

10/11/17 — Whirlpool — 65°F Sunny

TMW-22 cont'd

1725 Install 5' screen (2" PVC), & associated riser, filter pack to 8' bgs, chips to near surface

1745 Begin advancing alternate TMW-22 location due to potential ISCR impact @ first location.

TMW-22 (first location)

DTW: Dry

TD: 14.8 etac

0-2.5' Topsoil, silty, lgt brn loose, dry, w/ root hairs — Rec: 5.0

2.5-6.5' Silty clay, red brn, w/ gray mottling, w/ black nodules, very stiff, dry, slt plastic — Rec: 5.0

6.5-~~8.0~~ N2 7.5' Sandy clay, red brn, w/ black nodules, poorly sorted, trace gvl, subang, fine, slt moist, slt cohesive, slt stiff — Rec: 4.0

7.5-~~12~~ N2 11' Silty clay red brn, w/ gray mottling, w/ very fine sand, trace black nodules slt moist, stiff, slt plastic

10/11/17 — Whirlpool — 65°F Sunny

TMW-22 cont'd

11-16' Clayey gravel, red brn, w/ gray mottling, w/ poorly sorted sand, gvl, poorly sorted, subrnd, moist, slt cohesive — Rec: 4.0'

16'-17' Clay Silt, red brn, w/ gray, w/ weathered shale, dry, stiff, slt laminated

17-19' Shale, dark gray, hard, dry, laminated

1820 End of Boring

1830 Sampled TMW-22-SL (15.5'-16.0 ft)-101117 @ ~~1830~~ 1835 (2nd drill location/alt) for TOC + magnetic susceptibility

1835 Drillers finishing up well installation TMW-22 (alt)

1855 TMW-22 installed 7' screen (2" PVC) & associated riser, filter sand to 10' bgs, chips to near surface

1905 All off-site

Rite in the Rain

10/12/17 Whirlpool 55°F Sunny

0800 RE on-site (same crew) McCray already on-site installing TMW-22 pad. Prep for TMW-23 install

0810 Conduct H&S meeting Topics: slips, trips, falls
TMW-22 (original)
DTW: Dry
TMW-22 alt
DTW:

0830 Begin advancing TMW-23

0-5' / 100% R
0-1': topsoil
1'-2': sandy silt, lt brown/beige, dry, loose, noncohesive, soft, fine grained sand
2'-3.5' - clayey silt, dark brown, moist, soft, with root hairs, with black + gray mottling, stiff, crumbles
3.5'-5' ~~clayey silt~~ silty clay orangeish brown with gray mottling, trace black nodules, dry stiff, crumbles, with sand

5'-10' / 100% R
5'-7' - (see descrip for 3.5-5')
7'-9.5' - silty clay, dark orange brown with sand and gray mottling, with

10-12-17 Whirlpool Cloudy 52°F

(TMW-23 cont)

(5-10') black nodules, moist, slightly plastic, crumbles, very stiff
9.5-10' see description for 7'-9.5' plus with poorly sorted gravel

10-15' / 100% R
~~clayey~~ 10'-12.5': clayey sand, gray with orange, fine grained, soft, moist, plastic, crumbles
12.5'-13.5' - ~~gravelly silty~~ clayey dark orangeish brown, subangular, soft, moist, crumbles
13.5'-15' - sandy clay, orange with gray mottling, fine grained very stiff, moist crumbles, plastic

15'-~~20'~~ 19' / 100% R
15'-17' - clayey gravel, orange, poorly sorted, wet, soft, plastic
* transmissive zone *
17'-18.5' - ~~silty clay~~ clayey silt (weathered shale)
~~18.5 top~~ dry, soft, noncohesive, non plastic, laminated
18.5-19' - shale, dark gray, laminated, very stiff

0910 End of Boring

Rite in the Rain

10/12/17 Whirlpool P. Cloudy 55°F

take TMW-23 sample @ 0905
TMW-23-SL(15.0 - 15.5 ft)-101217
for TOC + Magnetic susceptibility
PID - TMW-23

Depth int (ft)	Reading (ppm)
0-2.5	0.9
2.5-5	1.7
5-7.5	1.5
7.5-10	2.2
10-12.5	2.6
12.5-15	1.6
15-17.5	1.6
17.5-19	1.3

Used replacement PID

0920 Drillers install TMW-23 2" PVC, 5' well screen w/ associated riser, filter pack (20/40) to 12' bgs.

0950 Begin ~~installing~~ advancing TMW-29 (added well).

Rec: 5.0'
0 - 2.5' Topsoil, lgt brn, silty dry, root hairs, loose
2.5 - 5.0' Clayey silt, red brn, trace gray mottling, trace black nodules, slt stiff, plastic, slt moist

10/13/17 Whirlpool 60°F Sunny

TMW-29 cont'd
5.0 - 6.0' Silty clay, red brn w/ gray mottling, stiff, plastic slt moist

Rec: 5.0
6.0 - 10' Silty clay, red brn, trace gray mottling, w/ Sand, fine, trace crs, w/ black nodules, trace gvl, fine, subang slt moist, slt stiff, cohesive, plastic increasing sand w/ depth

Rec: 5.0
10' - 11' Clayey Sand, red brn, trace gray, mottling, moist, cohesive fine, w/ medium t crs

Rec: 4.5'
11 - 13' Clayey Gvl, red brn, trace gray, trace black nodules, poorly sorted sand, gvl, fine subrnd, very moist,
13 - 15' A/A crs gravel
15 - 16.5 Silty clay, red brn t gray, moist, stiff, plastic to very, (clayey Sand @ 16.3-16.4', wet) fine
16.5 - 17' Clayey silt (weathered), hard, dry, slt laminated, red brn t gray shale

1025 17 - 19' Shale, dark gray, trace red brn, dry, hard, laminated
End of Boring

Rite in the Rain

10/12/17 — 65°F Sunny

TMW-26 cont'd

Whirlpool

Sample TMW-29-SL (11.5-12.0 FT)-10121 7 @ 1015

TOC, magnetic susceptibility

PID

Depth (ft)	ppm
0-2.5	2.2
2.5-5.0	2.7
5.0-7.5	2.4
7.5-10.0	2.0
10.0-12.5	3.0
12.5-15.0	3.1
15.0-17.5	2.9
17.5-19.0	2.8

1045 Install TMW-29 7' ~~Screen~~ (2" PVC) + associated risers, chips to near surface, filter sand to 10' bgs.

1150 Mobilize to TMW-28

Lunch

1210 TMW-22 (original) DTW: Dry

1215 JP off-side (RE)

1220 Begin advancing TMW-28

Rec: 5.0 — 0-2.5' Topsoil, lgt brn, root hairs, loose, dry, silty

10/12/17 — 70°F Sunny

TMW-28 cont'd

Whirlpool

Rec: 5.0 — 2.5-6.5 Clayey silt, ~~wt~~ vr trace gray & red mottling, dry, stiff, slt plastic, trace root hairs, black nodules, trace crs sand,

Rec: 5.0 — 6.5-16.0' Silty clay, red brn, w/ gray mottling, trace black nodules, very stiff, slt plastic, dry

Rec: 4.0 — 16.0-19.5' Sandy clay, gray, w/ red brn, very fine, slt moist, slt stiff, cohesive, slt plastic, increasing sand w/ depth

Rec: 4.0 — 19.5-21.5' Clayey sand, gray, w/ red brn, very fine, wet, soft, cohesive

Rec: 2.0 (full) — 21.5-24.5 Clayey gravel, red brn, w/ sand, poorly sorted, gvl, poorly sorted, subrnd, wet, cohesive, w/ black nodules

24.5-25 ~~Clayey~~ vr Sand, red brn, w/ clay, w gvl, poorly sorted, subrnd, wet, cohesive, fine, w/ crs to med

Rite in the Rain

10/12/17 Whirlpool 70°F Sunny

TMW-28 cont'd

25-25.5 Clayey silt, red brn, ~~dry,~~ moist, very stiff, slt laminated, w/ weathered shale, slt plastic

25.5-27' Shale, very dark gray, dry, hard, laminated

1310 End of Boring

Sample TMW-28-SL (24.0-24.5 FT)-101217 @ 1300

TOC, magnetic susceptibility

PID

Depth (ft)	ppm
0-2.5	2.4
2.5-5.0	1.2
5.0-7.5	4.5
7.5-10.0	5.5
10.0-12.5	5.5
12.5-15.0	4.2
15.0-17.5	4.4
17.5-20.0	4.2
20.0-22.5	5.2
22.5-25.0	5.0
25.0-26.0	5.3
26.0-27.0	6.6

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10/12/17 Whirlpool 70°F Sunny

TMW-28 cont'd

Install TMW-28

10' screen (2" PVC) & associated riser, filter sand to 15' bgs, chips to near surface

TMW-22 (original)

1400 DTW: Dry (14.8' td btoc)

Begin abandoning original TMW-22 location. Will overdrill to remove all material & seal w/ cement bentonite grout mixture.

TMW-23

DTW: 5.46' btoc, TD: 19.30'

1420 Begin purgin for development

Turbid, lgt brn 4 well vol = ~~2~~ 9 gal

1433 Dry. ~6 gal purged. Rate: ~2 gal/min

1433 DTW: 13.4' btoc

1434 Begin second purge

1436 Dry, ~10 gal purged

brn to lgt brn @ end

Will allow to recharge then sample.

TMW-23

1449 DTW: 11.71' btoc WC: 8.29'

TD: 20.0' btoc 4 vol: 5.6 gal

77

70°F
Sunny

10/12/17 Whirlpool

1430 Begin purging TMW-23

1432 Dry @ ~6 gal purged
Rate ~2 gal/min
lgt brn @ end of purge

1910 Abandonment complete @ TMW-28

1845 DTW @ TMW-29: 17.85' btoc
TD: 19.20' btoc
WC: 1.35'

McCray offsite @ ~1645 Will collect sample without developing due to insufficient volume. w/ peristaltic pump.

Sample TMW-29-201710 @ 1705

VOCs only, lgt brn

TMW-28

1722 DTW: 12.21' btoc bgs (12.71' bgs)
TD: 27.5' btoc (28.0' bgs)

1729 Begin purging for development.

1735 Dry ~1.4 gal purged @ 100 ml/min

1740 Begin purging for parameters

Time	°C	DO	Sp Cond	pH	ORP	DTW
1755	20.9	5.26	257.0	4.99	183.8	20.03
1758	20.8	5.58	257.7	5.00	181.7	19.61
1801	20.8	5.69	256.7	5.02	180.3	19.21

P6

70°F
Sunny

10/12/17 Whirlpool

TMW-28 cont'd

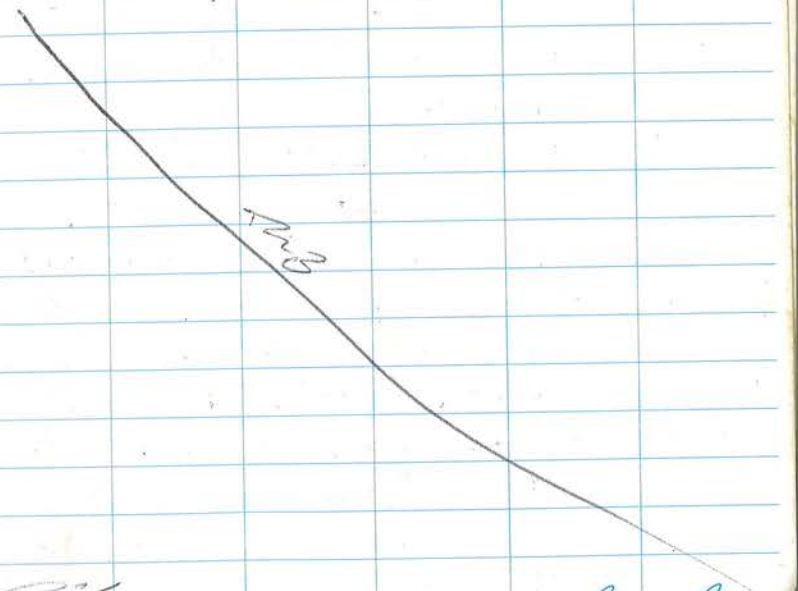
Time	°C	DO	Sp Cond	pH	ORP	DTW
1804	20.7	5.56	256.9	5.09	175.3	18.85
1807	20.7	5.69	256.0	5.16	172.5	18.75
1810	20.6	5.67	255.9	5.19	170.8	18.70
1813	20.5	5.75	254.7	5.18	173.0	18.65
1816	20.6	5.69	254.3	5.20	171.4	18.62

Sample TMW-28-201710 @ 1820

lgt brn, slt turbid, 4.5 gal purged

1825 Prep samples for relinquishment

1840 Samples relinquished.



P5

Rite in the Rain

60°F

10/13/17 Whirlpool

0640 NZ on-site. McCray (same crew) already on-site. Prep for TMW-30 drilling.

0650 Conduct H&S meeting.

0700 Begin advancing TMW-30

0-1' Topsoil, brn, ~~to~~ + lgt brn loose, moist w/ root hairs (0.9-1.0' black organic material)

Rec: 4.0 — 1-5' Clayey Silt, lgt brn, loose, dry, trace root hairs trace crs sand

~~Rec: 5.0~~ Rec: 5.0 — 5-18' Silty Clay, red brn, w/ gray mottling, trace black nodules, very stiff, slt plastic, dry trace black root hairs

Rec: 3.0' — 18'-20' ~~Silty~~ sandy Clay, red brn, w/ gray mottling, very fine, moist, sld stiff, cohesive, plastic

20-23' Clayey Sand, red brn, w/ black nodules, very fine, wet, cohesive, trace gray

23-26' Clayey gravel, red brn w/ sand, poorly sorted, gvl, poorly sorted, subrnd, wet, cohesive trace cobbles

NZ

60°F Sunny

10/13/17 Whirlpool

TMW-30 cont'd — 26-26.5' Clayey Silt, red brn, stiff, slt moist, slt plastic, slt laminated

Rec: 3.5 (full) — 26.5-28.5' Shale, very dark gray, hard, dry, laminated

0815 End of Boring

Sample TMW-30-SL (25.5-26.0 Ft) - 10/13/17 @ 0810

PID

Depth (ft)	ppm
0.25'	1.2
2.5-5.0'	2.5
5.0'-7.5'	1.0
7.5-10.0'	2.7
10.0'-12.5'	3.7
12.5-15.0'	2.6
15.0-17.5	4.0
17.5-20.0	3.9
20.0-22.5'	4.5
22.5-25.0	4.1
25.0-27.5	4.1
27.5-28.0'	3.5

TMW-30: 10' screen, sand + 16.5' bgs, chips

0950 McCray off-site

~~0850~~ Hoffman Survey on-site

Begin well survey + ~~utilities~~ Reference points

NZ 1100 Hoffman off-site

10/13/17 Whirlpool 70°F Sunny

TMW-22 DTW: 4.42' bgs

1126 Purge Start Rate: 100 ml/min

Time	°C	DO	Sp. Cond	pH	ORP mV	DTW (ft)
1130	23.0	4.01	919	6.34	10.4	4.99
1133	23.3	3.99	918	6.34	11.2	5.30
1136	23.1	3.98	922	6.33	-4.0	5.70
1139	23.2	3.89	918	6.32	-9.4	6.00
1142	23.2	3.65	916	6.32	-8.2	6.35
1145	23.3	3.39	918	6.32	22.0	6.45
~~1145~~ 1143	Pump shut off. Resume purging					
1155	23.2	3.45	915	6.29	-6.5	7.11
1158	23.2	3.31	915	6.28	-10.1	7.47
1201	23.2	3.30	917	6.28	-7.4	7.70

Sample TMW-22-201710 @ 1205

VOCs, Clear, ~1 gal purged

DTW: 5.30'

1214 Begin purging TMW-23, Rate:

1220	24.2	5.34	996	6.55	199.9	6.23
1223	24.3	4.78	995	6.53	199.2	6.48
1226	24.4	4.51	996	6.52	197.2	6.70
1229	24.6	4.42	991	6.51	192.9	6.91
1232	24.6	4.29	994	6.53	189.7	7.11
1235	24.6	4.22	994	6.51	191.3	7.30

Sample TMW-23-201710 @ 1240

VOCs, Clear, ~1 gal Purged

3

10/13/17 Whirlpool 75°F Sunny

1305 Begin Purging MW-29 for development
DTW: 14.30' btoc

1307 Purge stop Dry @ ~2 gal purged, lgt brn to brn turbid. Development complete

1321 TMW-30
DTW: 14.45' btoc, TD: 28.75' btoc
wc 14.3, 4 Vol: 9.3 gal

1335 Begin purging TMW-30 for development. Install, very turbid dark brn. Rate: ~2 gal/min

1336 Dry @ ~2.5 gal purged.
1410 DTW 25.45' btoc
1431 24.95' btoc
1458 25.21' btoc
Set tubing to ~27.75' btoc

1500 Begin purging w/ peristaltic pump
Rate 100 ml/min

Time	°C	DO (mg/L)	Sp. Cond (uS/cm)	pH	ORP (mV)	DTW (ft)
1505	21.8	5.44	881	6.92	-259.3	25.81
1508	21.8	2.27	882	6.97	-337.2	26.30

Sample TMW-30-20171013-1510

very, only, turbid brn, purged dry w/ peristaltic, will allow to recharge.

1600 off-site
1630 Samples relinquished

Rite in the Rain

10/16/17 Whirlpool 50°F Sunny

0830 NZ on-site.
Begin removing J-caps from wells to allow for equilibration prior to gauging.
1055 Begin gauging Northern wells

	well	DTW
1055	MW-194	4.82
1057	TMW-24	4.25
1100	TMW-29	8.04
1102	TMW-20	3.44
1105	TMW-21	3.57
1107	TMW-22	4.54
1111	TMW-23	5.08
1115	TMW-11	4.28
1117	TMW-10	5.08
1119	MW-61R	6.78
1121	MW-60R	3.31
1125	MW-196	3.71
1128	MW-195	2.43
1138	MW-62R	5.63
1140	MW-63R	4.24
1142	TMW-14	3.99
1144	TMW-12	3.71
1148	MW-56R	3.49
1149	MW-57R	3.51

10/16/17 Whirlpool 60°F Sunny

Southern wells

	well	DTW
1202	MW-189	26.42
1205	TMW-19	26.00
1207	MW-188	22.35
1209	MW-187	20.49
1212	MW-186	14.43
1215	TMW-30	14.25
1216	TMW-26	16.77
1217	TMW-27	11.82
1219	TMW-28	10.88
1223	TMW-16	13.52
1228	TMW-25	16.77
1230	MW-182	15.95
1234	TMW-6	23.85

1215 McCray on-site (same crew) to abandon TMW-28 (overdrill + grout) & set surface completion @ TMW-30
1300 Begin purging TMW-30 for development.
1302 Dry @ ~2.5 gal purged. 1gpm
1306 DTW: 28.29' btoc
1347 27.45' btoc

10/16/17 Whirlpool

~~1012~~ 1345 McCray off-site.

Abandonments complete

Sample IDW-SL-101617
@ 1320

TCLP VOCs, TCLP Metals.
collected w/ ss hand trowel
@ several depths and locations
in roll-off box.

NZ off-site

1440 Sample relinquished

MS

10/23/17 Whirlpool 50°F Sunny

0640 REH on-site (NZ, HA, JP, VS, JK, & NM). Prep for groundwater sampling & gauging

0700 Conduct H&S meeting. Topic = Construction & traffic. Begin opening well plugs to allow for equilibration prior to gauging. Begin @ SW corner @ TMW-27 & work towards source area. Equilibration well cap removal complete.

Begin gauging @ TMW-27. Gauging complete. See WL log for depths.

Lunch

1350 Calibrate YSI 556. See calibration log. Mobilize to TMW-11.

1453 Begin purging TMW-11 w/ peristaltic pump & dedicated tubing. See Sampling log for parameters.

Sample TMW-11-201710 @ 1600

MNA; slt lt gray silt

10/23/17 Whirlpool 60°F Sunny

1700 Collect hydrogen Sample via bubble stripping @ TMW-11
Prepare samples for relinquishment.

0620 PACE samples relinquish via courier.

0640 Microbial Insights samples relinquished via FedEx.
All off-site

10/24/17 Whirlpool 50°F

0905 RE II on-side (same crew).
Prep for GW sampling.
Conduct H&S meeting
Topic:

0810 Calibrate YSI 556. See calibration log.

0835 Begin purging TMW-19
Sample TMW-19-201710 @ 0940
VOCs only, clear, see log

0955 Begin purging MW-186
Sample MW-186-201710 @ 1040 & FD-04-201710
VOCs only, clear, see log

1110 ~~1127~~ Begin purging MW-187
Sample MW-187-201710 @ 1200
VOCs only, see log, clear

1208 Begin purging MW-188
Sample MW-188-201710 @ 1305 & MS/MSD
VOCs only, clear, see log

Begin purging TMW-10
Sample TMW-10-201710 @ 1450
MNA, clear, see log

Rite in the Rain.

10/24/17 Whirlpool 60°F Sunny

Sample TMW-10 bubble stripping hydrogen @ 1532 after 20 min purging through apparatus.

1549 Begin purging TMW-22, see log

Sample TMW-22-201710 @ 1650

VOCs only, clear

Prep samples for relinquishment

Sample EB-02-201710 @ 1725

1600 Samples relinqurshed to courier.

1620 Off-site

1630 Samples relinquished to Fedex

10/25/17 Whirlpool 40°F

0705 REH on-site (same crew) Prep for vapor point & GW sampling.

Conduct HSS meeting

Topic: Cold stress

Arrive @ VP-7 & VP-8

0825 Begin purging VP-7 w/ peristaltic pump.

Water present in tubing intermittently immediately

Sample VP-07-201710 @ 0830

VOCs only, clear

0838 Begin purgin VP-08.

Water present immediately

Sample VP-08-201710 @ 0845

VOCs only, clear

Rate: ~ 100 ml/min intermittent while sampling

0920 Begin purging VP-10

Water immediately present

Sample VP-10-201710 @ 0930

VOCs only, intermittent while sampling, Rate: ~ 100 ml/min slightly turbid lgt brn

Rite in the Rain.

10/25/17 Whirlpool 50°F Sunny

0944 Begin purging VP-9.
0946 No water observed
0950 ~ 0.5 L air purged. Vacuum held w/ hand pump @ "Hg for 15 min w/ line open to vapor port. Shut-in complete will attempt to collect vapor sample.
1038 Shut-in test complete w/ sampling line) apparatus to summa. Hand pump vacuum held @ 26 "Hg for 2 min during test & still holding
0 ppm helium detected in ~~shroud~~ line during shroud test. >10% helium in shroud
1050 Begin summa @ VP-9. See log for measurements
1214 Begin purging VP-12. Water in line ~ 30 sec
Sample VP-12-201710 @ 1220
VOCs only, clear, intermittent

10/25/17 Whirlpool 60°F Sunny

1236 Begin purging VP-14
Sample VP-14-2017 @ 1240
VOCs only, turbid light brn, intermittent, 2 VOAs
1440 Begin purging TMW-27
Note: calibrated YSI 556 prior to purging. See calibration log. See purge log
Sample TMW-27-201710 @ 1535 + MS/MSD
VOCs only, clear
1552 Begin purging TMW-25 See log
Sample TMW-25-201710 @ 1645
VOCs only
Sample VP-09-201710 @ 1705
TO-15 SIM, -6 "Hg final reading. See log
1720 Prep samples for relinquishment
1800 Samples relinquished to courier
1810 All off site

Rite in the Rain

10/26/17 Whirlpool 45°F Sunny

0710 REH on-site (same crew). Prep for GW sampling. Conduct HASS meeting. Topics: Slips, Trips, Falls

0800 Calibrate YSI 556. See calibration log. Begin purging MW-25. See log.

VOCs only on tube

Sample MW-25-201710 @ 0910 & FD-09-201710

MNA, slt lgt brn tint, VOC odor

0950 Begin bubble stripping @ 300 ml/min for 10 min. Sample @ 1000 for hydrogen. Prepare for GW IDW from GW event & drilling event week of 10/9/17.

Sample IDW-07-GW-201710 @ 1100

TCLP VOCs, TCLP Metals. Collect sample from 6 drums w/ trailer & composite into sample jars.

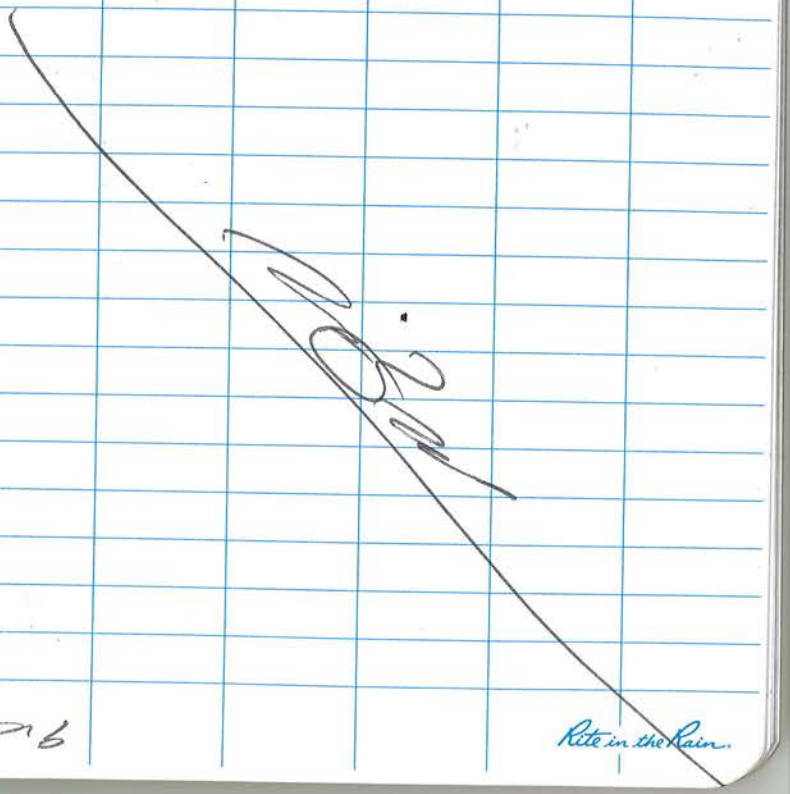
D3

10/26/17 Whirlpool 60°F Sunny

1210 IDW pickup complete (soil & GW). 1 roll-off of soil & 6 GW drums placed inside seperate empty roll-off box.

1220 Begin Sample prep for relinqurshment & demobilization.

1345 Samples relinqurshed off-site @ 1330). Demobilize



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Rite in the Rain.

Appendix C

Risk Calculations and Input Parameters

Contents:

Attachment C.1: Toxicity Values
Whirlpool, Fort Smith, Arkansas

Chem Group	Chemical	CASRN	Cancer Classification		ADAF			URF ($mg/m^3)^{-1}$			RfC (mg/m^3)			
			Group	Ref	Y/N	f_{oral}	f_{inh}	Value	Ref	Notes	Value	UF	Ref	Notes
VOC	Acetone	67-64-1	ID	1	N						3.1E+01	100	129	111
VOC	Benzene	71-43-2	A	1	N			7.8E-03	1	60	3.0E-02	300	1	
VOC	Bromoform	75-25-2	B2	1	N			1.1E-03	1				126	90
VOC	Bromomethane	74-83-9	ID	126	N						5.0E-03	100	1	
VOC	2-Butanone	78-93-3	ID	1	N						5.0E+00	300	1	
VOC	Carbon Disulfide	75-15-0			N						7.0E-01	30	1	
VOC	Chloroform	67-66-3	B2	1	N			2.3E-02	1		5.0E-02	100	117	
VOC	Chloromethane	74-87-3	D	1	N						9.0E-02	1,000	1	
VOC	1,2-Dichloroethane	107-06-2	B2	1	N			2.6E-02	1		7.0E-03	3,000	126	
VOC	1,1-Dichloroethene	75-35-4	C	1	N						2.0E-01	30	1	
VOC	cis-1,2-Dichloroethene	156-59-2	ID	1	N								1	90
VOC	trans-1,2-Dichloroethene	156-60-5	ID	1	N								1	90
VOC	Ethyl Benzene	100-41-4	D	1	N						1.0E+00	300	1	
VOC	2-Hexanone	591-78-6	ID	1	N						3.0E-02	3,000	1	
VOC	4-Methyl-2-pentanone	108-10-1	ID	1	N						3.0E+00	300	1	
VOC	Methylene Chloride	75-09-2	LC	1	Y	1	1	1.0E-05	1	159	6.0E-01	30	1	
VOC	Tetrachloroethene	127-18-4	LC	1	N			2.6E-04	1		4.0E-02	1,000	1	
VOC	Toluene	108-88-3	ID	1	N						5.0E+00	10	1	
VOC	Trichloroethene	79-01-6	HC	1	Y	0.202	0.244	4.1E-03	1	159	2.0E-03	100	1	
VOC	Vinyl Chloride	75-01-4	A	1	N			4.4E-03	1	79	1.0E-01	30	1	

Toxicity values were selected following the hierarchy of sources defined by USEPA (Human Health Toxicity Values in Superfund Risk Assessment, 2003), as discussed in Appendix A, Section 4 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision. Values are current as of December 2017.

References

1 USEPA. Integrated Risk Information System (IRIS). On-line database.

117 USEPA. NCEA. 2003. Risk Assessment Issue Paper for: Derivation of Provisional Subchronic and Chronic RfCs for Chloroform [CASRN 67-66-3]. January 23.

126 Provisional Peer Reviewed Toxicity Values for Superfund (PPRTV) Database.

129 ATSDR. 2013. Minimal Risk Levels. March.

Notes:

60 IRIS provides a range of 2.2E-6 to 7.8E-6 (ug/m3)-1 as the inhalation URF for Benzene.

79 For evaluating partial lifetime exposures that include early-life exposure, the unit risk factor is also used in risk calculations that do not prorate the early-life exposure, per USEPA's May 2000 Toxicological Review.

90 Inadequate data exist to derive a toxicity value, according to the indicated reference.

111 Value as published is an MRL in the indicated reference.

159 Because the chemical has a mutagenic mode of action according to USEPA, the SF and URF are adjusted by the following age-dependent adjustment factors (ADAFs) before use: 10 for ages 0 to 2; 3 for ages 2 to 16; and 1 for ages 16 and older (USEPA 2005).

Attachment C.2: Physical and Chemical Properties
Whirlpool, Fort Smith, Arkansas

Chem Group	Chemical	CASRN	H (unitless)				D_{air} (m^2/d)		D_{water} (m^2/d)		HENRY Ref Temp (°C)
			Value	Adjusted	Ref	Notes	Value	Ref	Value	Ref	Value
VOC	Acetone	67-64-1	1.6E-03	1.1E-03	44		1.1E+00	44	9.8E-05	44	2.5E+01
VOC	Benzene	71-43-2	2.3E-01	1.6E-01	44		7.6E-01	44	8.5E-05	44	2.5E+01
VOC	Bromoform	75-25-2	2.2E-02	1.3E-02	44		1.3E-01	44	8.9E-05	44	2.5E+01
VOC	Bromomethane	74-83-9	2.6E-01	2.0E-01	44		6.3E-01	44	1.0E-04	44	2.5E+01
VOC	2-Butanone	78-93-3	2.3E-03	2.0E-03	50.3	123	7.0E-01	69	8.5E-05	69	2.0E+01
VOC	Carbon Disulfide	75-15-0	1.2E+00	9.3E-01	44		9.0E-01	44	8.6E-05	44	2.5E+01
VOC	Chloroform	67-66-3	1.5E-01	1.1E-01	44		9.0E-01	44	8.6E-05	44	2.5E+01
VOC	Chloromethane	74-87-3	3.6E-01	3.3E-01	50.1	92, 123	1.1E+00	69	5.6E-05	69	2.0E+01
VOC	1,2-Dichloroethane	107-06-2	4.0E-02	2.7E-02	44		9.0E-01	44	8.6E-05	44	2.5E+01
VOC	1,1-Dichloroethene	75-35-4	1.1E+00	8.1E-01	44		7.8E-01	44	9.0E-05	44	2.5E+01
VOC	cis-1,2-Dichloroethene	156-59-2	1.7E-01	1.2E-01	44		6.4E-01	44	9.8E-05	44	2.5E+01
VOC	trans-1,2-Dichloroethene	156-60-5	3.9E-01	2.8E-01	44		6.1E-01	44	1.0E-04	44	2.5E+01
VOC	Ethyl Benzene	100-41-4	3.2E-01	2.0E-01	44		6.5E-01	44	6.7E-05	44	2.5E+01
VOC	2-Hexanone	591-78-6	3.8E-03	3.2E-03	68		7.4E-01	52	7.6E-05	52	2.5E+01
VOC	4-Methyl-2-pentanone	108-10-1	5.6E-03	4.7E-03	50.3	123	6.5E-01	40	6.7E-05	40	2.0E+01
VOC	Methylene Chloride	75-09-2	9.0E-02	6.6E-02	44		8.7E-01	44	1.0E-04	44	2.5E+01
VOC	Tetrachloroethene	127-18-4	7.5E-01	4.9E-01	44		6.2E-01	44	7.1E-05	44	2.5E+01
VOC	Toluene	108-88-3	2.7E-01	1.8E-01	44		7.5E-01	44	7.4E-05	44	2.5E+01
VOC	Trichloroethene	79-01-6	4.2E-01	2.9E-01	44		6.8E-01	44	7.9E-05	44	2.5E+01
VOC	Vinyl Chloride	75-01-4	1.1E+00	9.0E-01	44		9.2E-01	44	1.1E-04	71	2.5E+01

Physical and chemical parameters were selected following the hierarchy of sources used by USEPA (Soil Screening Guidance: Technical Background Document, 1996), as discussed in Appendix A, Section 54 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.

References:

40 Research Triangle Institute, Center for Environmental Analysis. 1995. Supplemental Technical Support Document for Hazardous Waste Identification Rule: Risk Assessment for Human and Ecological Receptors--Volume 1, TABLE A-1. November 1995.

44 USEPA. 1996. Soil Screening Guidance: Technical Background Document and User Guide. Office of Emergency and Remedial Response. EPA/540/R-95/128. May.

50.1 USEPA. 1997. Superfund Chemical Data Matrix (SCDM). Office of Emergency and Remedial Response. September 12.

50.3 USEPA. 20014. Superfund Chemical Data Matrix (SCDM). Office of Superfund Remediation and Technology Innovation. June 20, 2014.

52 USEPA. 1997. CHEM9 Compound Properties Estimation and Data. Version 1.00. Office of Air Quality Planning and Standards. July.

68 PHYSPROP data base. Syracuse Research Corporation.

69 USEPA. 2004. WATER9. Version 2.0.0. Office of Air Quality Planning and Standards. July.

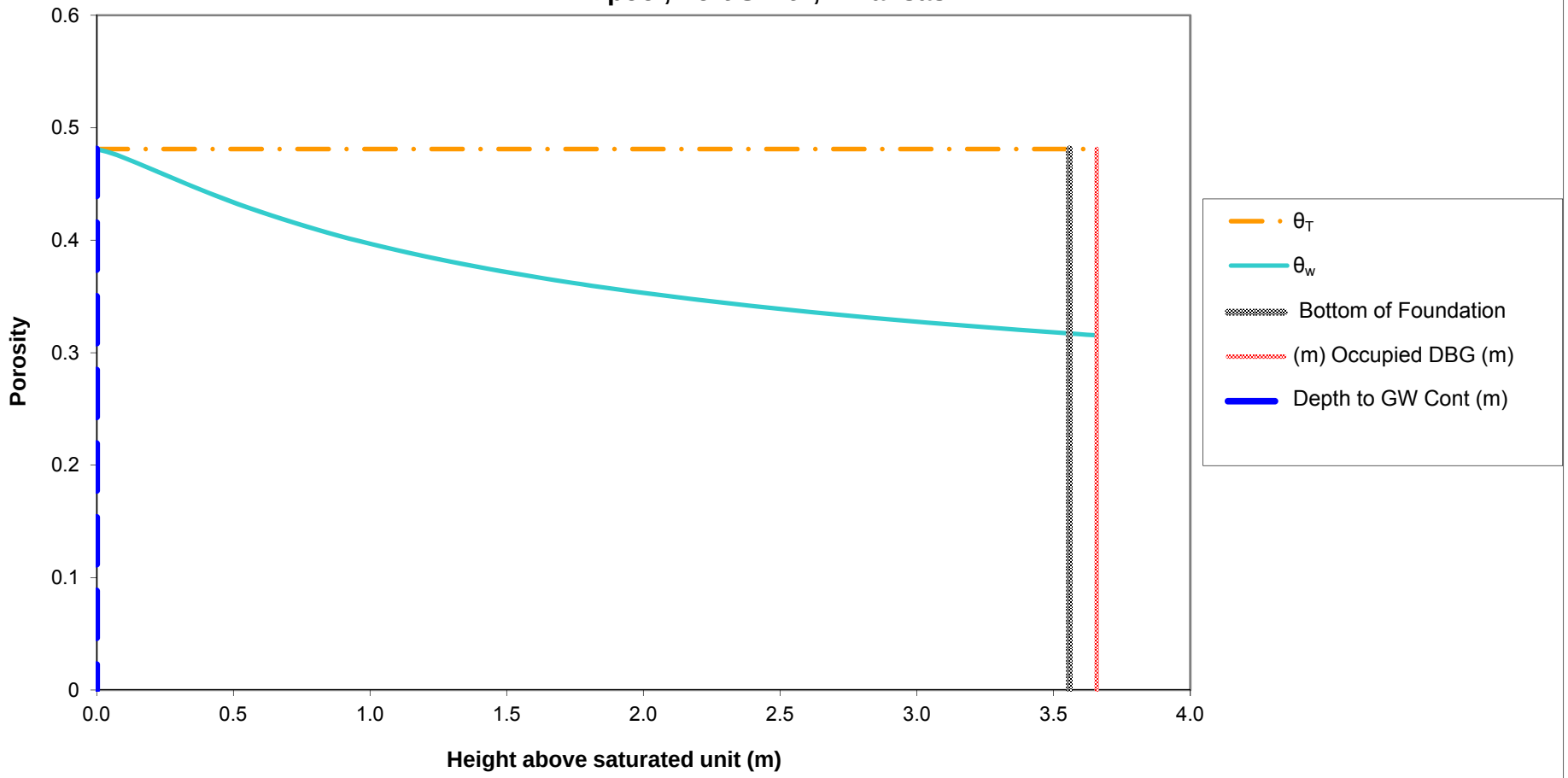
71 USEPA. 2002. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. OSWER 9355.4-24. December.

Notes:

92 Indicated source cites CHEMFATE.

123 Value has been assigned a default reference temperature.

Attachment C.3: Soil Moisture Profile for Residential Building (Slab-on-Grade) for Risk Calculations from Groundwater at Monitoring Wells Whirlpool, Fort Smith, Arkansas



Notes:
The soil-water profile in the vadose zone is estimated using the van Genuchten soil-water retention equation with default water retention parameters appropriate for silt clay, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.

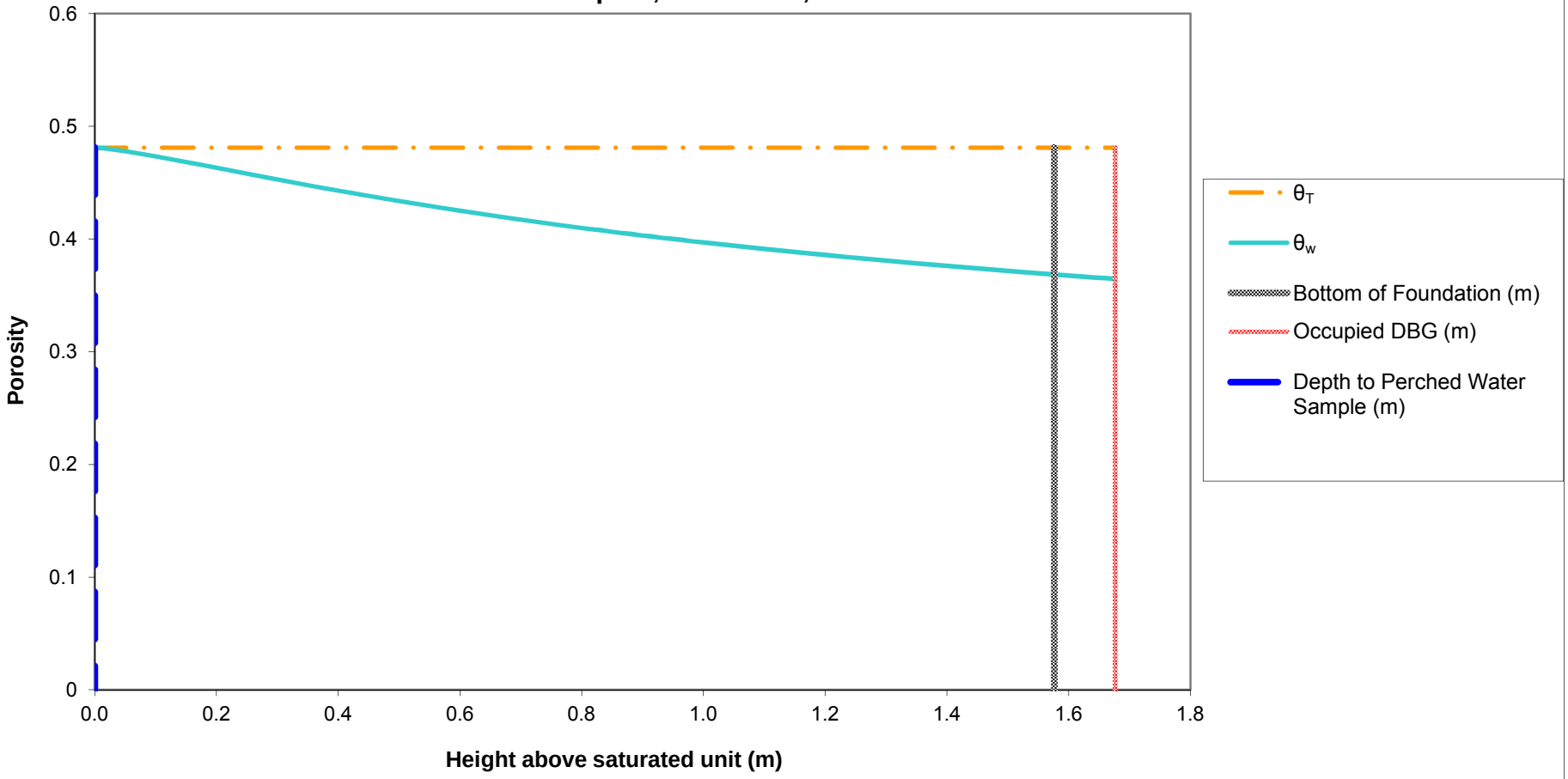
Attachment C.4: Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Groundwater at Monitoring Wells
Whirlpool, Fort Smith, Arkansas

Chem Group	Chemical	CASRN	D_{air} (m^2/day)	D_{water} (m^2/day)	H (unitless)	D_{crack} (m^2/day)	D_{eff}^T (m^2/day)	α_{soil}	α_{slab}	α_{∞}	C_{bldg} (L-water/m^3)
VOC	Acetone	67-64-1	1.07E+00	9.85E-05	1.14E-03	1.72E-01	1.87E-02	6.80E-02	2.73E-03	1.86E-04	2.12E-04
VOC	Benzene	71-43-2	7.60E-01	8.47E-05	1.59E-01	1.22E-01	8.15E-04	3.17E-03	2.73E-03	8.67E-06	1.38E-03
VOC	Bromoform	75-25-2	1.29E-01	8.90E-05	1.34E-02	2.07E-02	1.64E-03	6.37E-03	2.73E-03	1.74E-05	2.33E-04
VOC	Bromomethane	74-83-9	6.29E-01	1.05E-04	2.01E-01	1.01E-01	7.43E-04	2.89E-03	2.73E-03	7.90E-06	1.59E-03
VOC	2-Butanone	78-93-3	6.98E-01	8.47E-05	2.00E-03	1.12E-01	9.94E-03	3.74E-02	2.73E-03	1.02E-04	2.04E-04
VOC	Chloroform	67-66-3	8.99E-01	8.64E-05	1.07E-01	1.44E-01	1.11E-03	4.32E-03	2.73E-03	1.18E-05	1.27E-03
VOC	Chloromethane	74-87-3	1.09E+00	5.62E-05	3.33E-01	1.75E-01	4.61E-04	1.80E-03	2.73E-03	4.90E-06	1.63E-03
VOC	1,1-Dichloroethene	75-35-4	7.78E-01	8.99E-05	8.10E-01	1.25E-01	3.12E-04	1.22E-03	2.73E-03	3.32E-06	2.69E-03
VOC	cis-1,2-Dichloroethene	156-59-2	6.36E-01	9.76E-05	1.19E-01	1.02E-01	9.72E-04	3.78E-03	2.73E-03	1.03E-05	1.22E-03
VOC	trans-1,2-Dichloroethene	156-60-5	6.11E-01	1.03E-04	2.81E-01	9.81E-02	5.96E-04	2.32E-03	2.73E-03	6.35E-06	1.79E-03
VOC	Tetrachloroethene	127-18-4	6.22E-01	7.08E-05	4.90E-01	9.99E-02	3.40E-04	1.33E-03	2.73E-03	3.63E-06	1.78E-03
VOC	Trichloroethene	79-01-6	6.83E-01	7.86E-05	2.88E-01	1.10E-01	5.23E-04	2.04E-03	2.73E-03	5.57E-06	1.60E-03
VOC	Vinyl Chloride	75-01-4	9.16E-01	1.06E-04	9.00E-01	1.47E-01	3.44E-04	1.34E-03	2.73E-03	3.66E-06	3.30E-03
Notes:	**Crack Soil and Building Characteristics**			**Crack Soil**							
	SCS Soil texture class			Sand							
	Bulk density	kg/L	ρ_b	1.66							
	Total porosity	L/L-soil	θ_T	0.375							
	Water-filled porosity	L/L-soil	θ_w	0.054							
	Air-filled porosity	L/L-soil	θ_a	0.321							
	Residual saturation	L/L-soil	θ_r	0.053							
	Hydraulic conductivity	cm/s	**K**	7.4E-03							
	Dynamic viscosity of water	g/cm-s	μ_w	0.01307							
	Density of water	g/cm^3	ρ_w	1.0							
	Gravitational acceleration	cm/s^2	**g**	980.7							
	Intrinsic permeability	cm^2	**k**	9.9E-08							
	Relative saturation	unitless	S_e	0.004							
	van Genuchten N	unitless	**N**	3.177							
	van Genuchten M	unitless	**M**	0.685							
	Relative air permeability	unitless	k_{rg}	0.998							
	Permeability to vapor	cm^2	k_v	9.89E-08							
	Distance from building foundation to source	m	L_{T-gw}	3.56							
	Bldg foundation thickness	m	L_{crack}	0.1							
	Bldg foundation length	m		10.00							
	Bldg foundation width	m		10.00							
	Bldg occupied height	m		2.44							
	Bldg occupied volume	m^3		244.00							
	Occupied depth below ground	m		0.0							
	Bldg area for vapor intrusion	m^2	A_B	100.0							
	Ratio of A_{crack} to A_B		η	4E-04							
	Area of cracks	m^2	A_{crack}	4E-02							
	Air exchange rate	$hour^{-1}$	**ach**	0.45							
	Building ventilation rate	m^3/day	Q_{bldg}	2.64E+03							
	Pressure difference between outdoors-indoors	kg/m-s^2	ΔP	1.0							
	Viscosity of air	kg/m-s	μ_a	1.8E-05							
	Crack length (bldg perimeter)	m	X_{crack}	40							
	Crack depth below ground	m	Z_{crack}	0.10							
	Crack radius	m	r_{crack}	1E-03							
	Soil gas flow rate into bldg	m^3/day	Q_{soil}	7.20							
	Indoor air concentrations resulting from groundwater vapor intrusion into a building are estimated using the relationships described by Johnson and Ettinger (Heuristic model for predicting the intrusion rate of contaminant vapors into buildings, 1991), which USEPA recommends for screening level calculations, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.										
	The effective diffusion term DeffT is calculated based on a silty clay soil, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Program.										

Attachment C.5: Cancer Risk and Hazard Index Calculations for Vapor Intrusion into a Residential Building (Slab-on-Grade) from Groundwater Monitoring Wells in the Neighborhood Whirlpool, Fort Smith, Arkansas

							Cancer				Noncancer	
Chem Group	**Chemical**	**CASRN**	**Carc Class**	**ADAF**	**C_{gw}** (mg/L)	**$C_{building}$** (mg/m^3)	**URF** (m^3/mg)	**f_{inh}**	**Risk**		**RfC** (mg/m^3)	**HQ**
VOC	Acetone	67-64-1	ID	N	1.47E-02	3.11E-06					3.1E+01	9.7E-08
VOC	Benzene	71-43-2	A	N	1.80E-04	2.48E-07	7.8E-03		7.9E-10		3.0E-02	7.9E-06
VOC	Bromoform	75-25-2	B2	N	1.10E-03	2.56E-07	1.1E-03		1.2E-10			
VOC	Bromomethane	74-83-9	ID	N	8.10E-04	1.29E-06					5.0E-03	2.5E-04
VOC	2-Butanone	78-93-3	ID	N	3.20E-03	6.53E-07					5.0E+00	1.3E-07
VOC	Chloroform	67-66-3	B2	N	1.60E-04	2.03E-07	2.3E-02		1.9E-09		5.0E-02	3.9E-06
VOC	Chloromethane	74-87-3	D	N	3.50E-03	5.71E-06					9.0E-02	6.1E-05
VOC	1,1-Dichloroethene	75-35-4	C	N	3.30E-03	8.88E-06					2.0E-01	4.3E-05
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	1.87E-01	2.29E-04						
VOC	trans-1,2-Dichloroethene	156-60-5	ID	N	1.30E-03	2.32E-06						
VOC	Tetrachloroethene	127-18-4	LC	N	1.30E-04	2.31E-07	2.6E-04		2.5E-11		4.0E-02	5.5E-06
VOC	Trichloroethene	79-01-6	HC	Y	8.15E-01	1.31E-03	4.1E-03	0.2439	3.0E-06		2.0E-03	6.3E-01
VOC	Vinyl Chloride	75-01-4	A	N	6.50E-04	2.14E-06	4.4E-03		1.3E-08		1.0E-01	2.1E-05
							Cumulative Risk:		3E-06		**HI:**	6E-01
Note:												
f_{inh} is the fraction of the inhalation URF that USEPA identified as having a mutagenic mode of action.												
Only VOCs detected in the Annual 2017 groundwater samples from wells in the neighborhood are shown.												
Risks were calculated assuming residential exposure to groundwater-derived vapors in indoor air for 24 hours per day and 350 days per year for 30 years.												

Attachment C.6: Soil Moisture Profile for Residential Building (Slab-on-Grade) at Soil Vapor Monitoring Point VP-7 (Parcel 2) Whirlpool, Fort Smith, Arkansas



Notes:
The soil-water profile in the vadose zone is estimated using the van Genuchten soil-water retention equation with default water retention parameters appropriate for silt clay, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.

Attachment C.7: Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Perched Water at VP-7 (Parcel 2) Whirlpool, Fort Smith, Arkansas

Chem Group	Chemical	CASRN	D_{air} (m^2/day)	D_{water} (m^2/day)	H (unitless)	D_{crack} (m^2/day)	D_{eff}^T (m^2/day)	α_{soil}	α_{slab}	α_∞	C_{bldg} (L-water/m^3)
VOC	Acetone	67-64-1	1.07E+00	9.85E-05	1.14E-03	1.61E-01	2.07E-02	1.54E-01	2.73E-03	4.21E-04	4.80E-04
VOC	Benzene	71-43-2	7.60E-01	8.47E-05	1.59E-01	1.14E-01	4.01E-04	3.52E-03	2.73E-03	9.63E-06	1.53E-03
VOC	2-Butanone	78-93-3	6.98E-01	8.47E-05	2.00E-03	1.05E-01	1.04E-02	8.37E-02	2.73E-03	2.29E-04	4.57E-04
VOC	4-Methyl-2-pentanone	108-10-1	6.48E-01	6.74E-05	4.71E-03	9.74E-02	3.96E-03	3.37E-02	2.73E-03	9.21E-05	4.34E-04
VOC	Toluene	108-88-3	7.52E-01	7.43E-05	1.80E-01	1.13E-01	3.38E-04	2.97E-03	2.73E-03	8.11E-06	1.46E-03
VOC	Trichloroethene	79-01-6	6.83E-01	7.86E-05	2.88E-01	1.03E-01	2.50E-04	2.19E-03	2.73E-03	6.00E-06	1.73E-03

Notes:	Crack Soil and Building Characteristics			Crack Soil
	SCS Soil texture class			Sand
	Bulk density	kg/L	ρ_b	1.66
	Total porosity	L/L-soil	θ_T	0.375
	Water-filled porosity	L/L-soil	θ_w	0.061
	Air-filled porosity	L/L-soil	θ_a	0.314
	Residual saturation	L/L-soil	θ_r	0.053
	Hydraulic conductivity	cm/s	K	7.4E-03
	Dynamic viscosity of water	g/cm-s	μ_w	0.01307
	Density of water	g/cm^3	ρ_w	1.0
	Gravitational acceleration	cm/s^2	g	980.7
	Intrinsic permeability	cm^2	k	9.9E-08
	Relative saturation	unitless	S_e	0.023
	van Genuchten N	unitless	N	3.177
	van Genuchten M	unitless	M	0.685
	Relative air permeability	unitless	k_{rg}	0.983
	Permeability to vapor	cm^2	k_v	9.74E-08
	Distance from building foundation to source	m	L_{T-gw}	1.58
	Bldg foundation thickness	m	L_{crack}	0.1
	Bldg foundation length	m		10.00
	Bldg foundation width	m		10.00
	Bldg occupied height	m		2.44
	Bldg occupied volume	m^3		244.00
	Occupied depth below ground	m		0.0
	Bldg area for vapor intrusion	m^2	A_B	100.0
	Ratio of A_{crack} to A_B		η	4E-04
	Area of cracks	m^2	A_{crack}	4E-02
	Air exchange rate	$hour^{-1}$	ach	0.45
	Building ventilation rate	m^3/day	Q_{bldg}	2.64E+03
	Pressure difference between outdoors-indoors	kg/m-s^2	ΔP	1.0
	Viscosity of air	kg/m-s	μ_a	1.8E-05
	Crack length (bldg perimeter)	m	X_{crack}	40
	Crack depth below ground	m	Z_{crack}	0.10
	Crack radius	m	r_{crack}	1E-03
	Soil gas flow rate into bldg	m^3/day	Q_{soil}	7.20

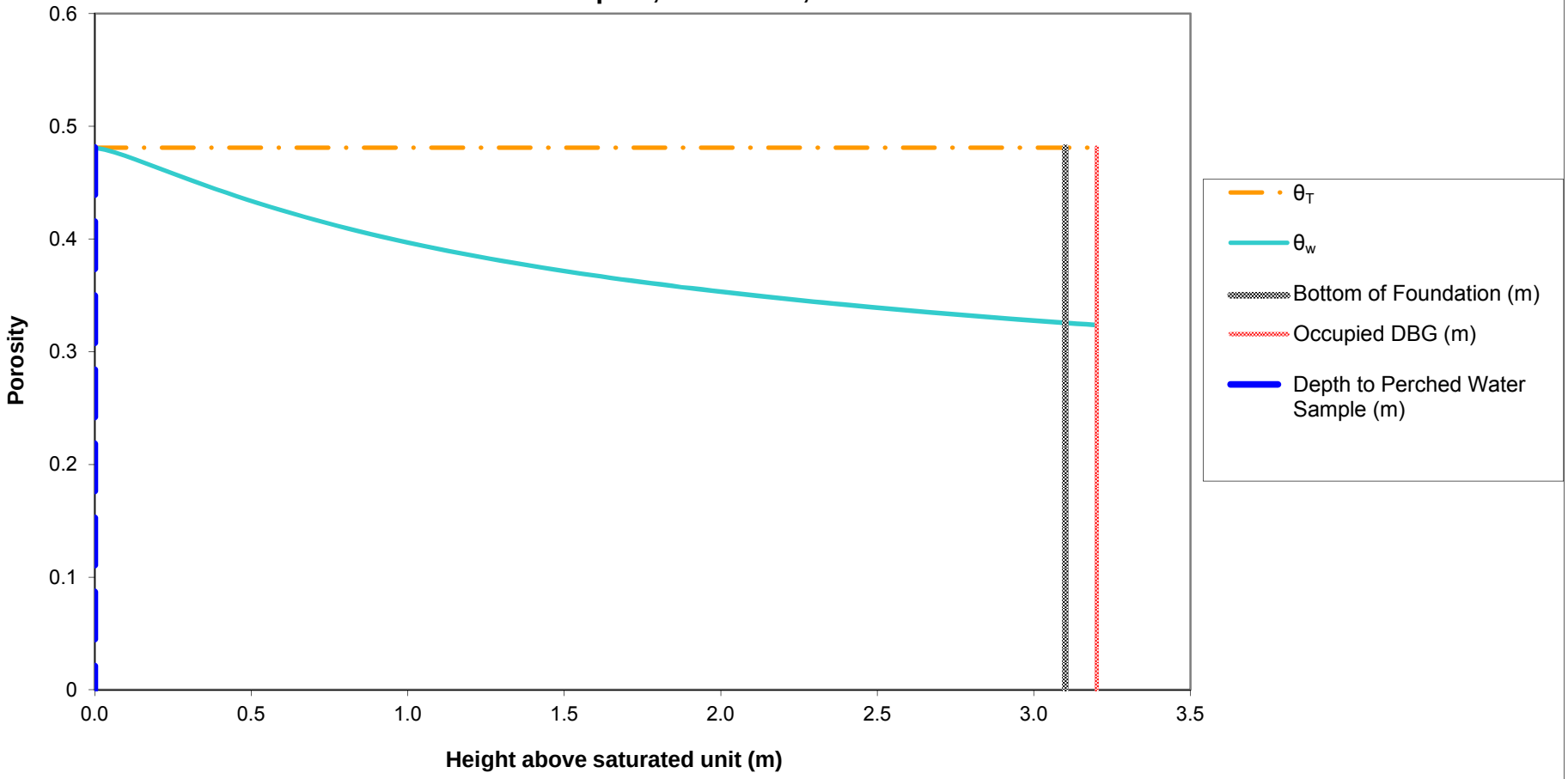
Indoor air concentrations resulting from groundwater vapor intrusion into a building are estimated using the relationships described by Johnson and Ettinger (Heuristic model for predicting the intrusion rate of contaminant vapors into buildings, 1991), which USEPA recommends for screening level calculations, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.

The effective diffusion term DeffT is calculated based on a silty clay soil, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Program.

Attachment C.8: Cancer Risk and Hazard Index Calculations for Vapor Intrusion into a Residential Building (Slab-on-Grade) from Perched Water at VP-7 (Parcel 2) Whirlpool, Fort Smith, Arkansas

							Cancer				Noncancer	
Chem Group	**Chemical**	**CASRN**	**Carc Class**	**ADAF**	**C_{gw}** (mg/L)	**$C_{building}$** (mg/m^3)	**URF** (m^3/mg)	**f_{inh}**	**Risk**		**RfC** (mg/m^3)	**HQ**
VOC	Acetone	67-64-1	ID	N	3.62E-02	1.74E-05					3.1E+01	5.4E-07
VOC	Benzene	71-43-2	A	N	1.10E-03	1.68E-06	7.8E-03		5.4E-09		3.0E-02	5.4E-05
VOC	2-Butanone	78-93-3	ID	N	4.50E-03	2.06E-06					5.0E+00	3.9E-07
VOC	4-Methyl-2-pentanone	108-10-1	ID	N	1.00E-03	4.34E-07					3.0E+00	1.4E-07
VOC	Toluene	108-88-3	ID	N	2.50E-04	3.66E-07					5.0E+00	7.0E-08
VOC	Trichloroethene	79-01-6	HC	Y	7.10E-04	1.23E-06	4.1E-03	0.2439	2.8E-09		2.0E-03	5.9E-04
							Cumulative Risk:		8E-09		**HI:**	6E-04
Note:												
f_{inh} is the fraction of the inhalation URF that USEPA identified as having a mutagenic mode of action.												
Only VOCs detected in the Annual 2017 water sample at VP-7 (Parcel 2) are shown.												
Risks were calculated assuming residential exposure to groundwater-derived vapors in indoor air for 24 hours per day and 350 days per year for 30 years.												

Attachment C.9: Soil Moisture Profile for Residential Building (Slab-on-Grade) at Soil Vapor Monitoring Point VP-8 (Parcel 2) Whirlpool, Fort Smith, Arkansas



Notes:
The soil-water profile in the vadose zone is estimated using the van Genuchten soil-water retention equation with default water retention parameters appropriate for silt clay, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.

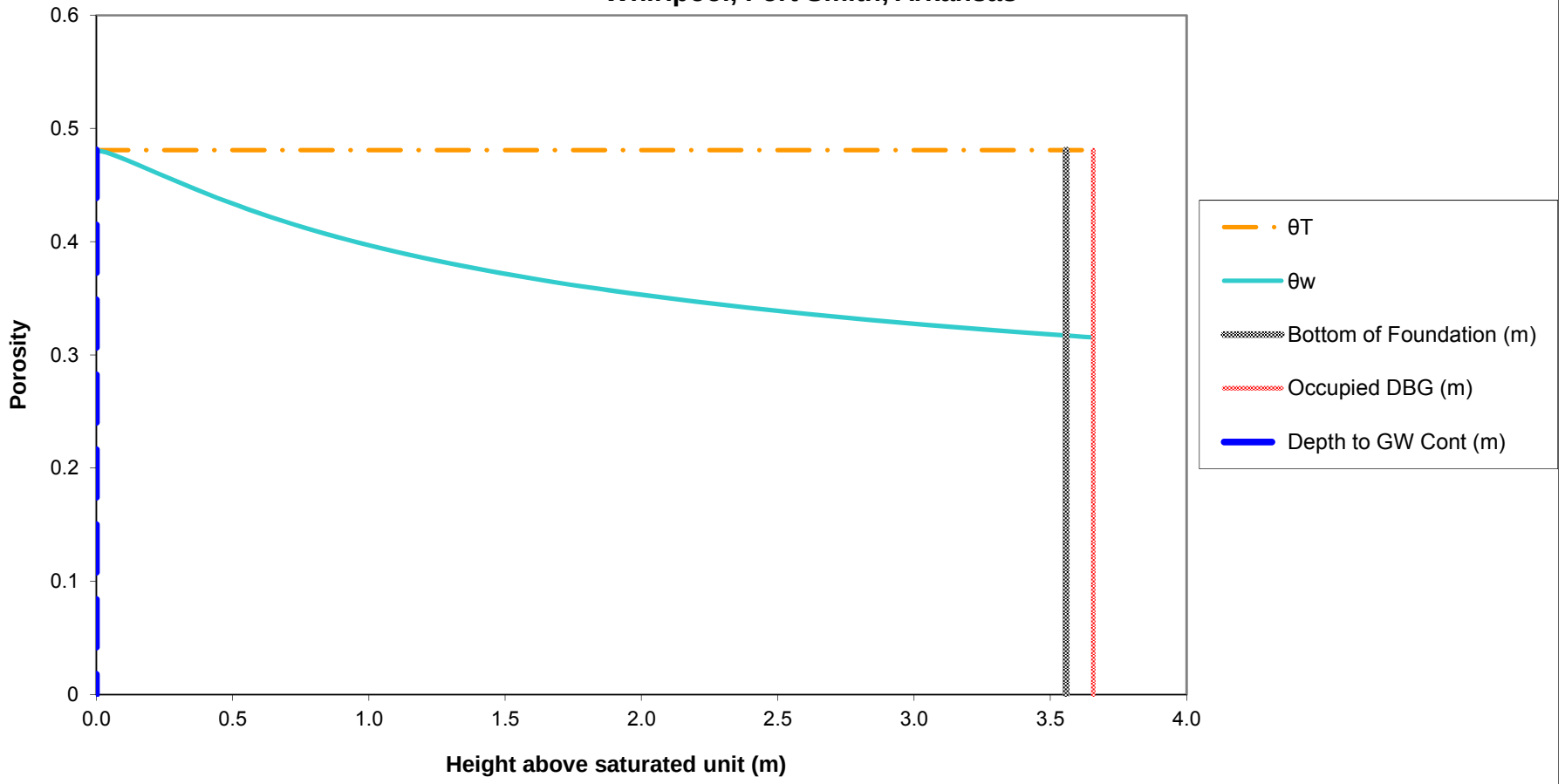
Attachment C.10: Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Perched Water at VP-8 (Parcel 2) Whirlpool, Fort Smith, Arkansas

Chem Group	Chemical	CASRN	D_{air} (m^2/day)	D_{water} (m^2/day)	H (unitless)	D_{crack} (m^2/day)	D_{eff}^T (m^2/day)	α_{soil}	α_{slab}	α_∞	C_{bldg} (L-water/m^3)
VOC	Acetone	67-64-1	1.07E+00	9.85E-05	1.14E-03	1.71E-01	1.87E-02	7.73E-02	2.73E-03	2.11E-04	2.41E-04
VOC	Benzene	71-43-2	7.60E-01	8.47E-05	1.59E-01	1.21E-01	7.17E-04	3.20E-03	2.73E-03	8.74E-06	1.39E-03
VOC	2-Butanone	78-93-3	6.98E-01	8.47E-05	2.00E-03	1.12E-01	9.82E-03	4.21E-02	2.73E-03	1.15E-04	2.30E-04
VOC	Chloromethane	74-87-3	1.09E+00	5.62E-05	3.33E-01	1.74E-01	4.01E-04	1.79E-03	2.73E-03	4.90E-06	1.63E-03
VOC	2-Hexanone	591-78-6	7.45E-01	7.57E-05	3.23E-03	1.19E-01	6.59E-03	2.87E-02	2.73E-03	7.83E-05	2.53E-04
VOC	4-Methyl-2-pentanone	108-10-1	6.48E-01	6.74E-05	4.71E-03	1.04E-01	4.55E-03	2.00E-02	2.73E-03	5.46E-05	2.57E-04
VOC	Toluene	108-88-3	7.52E-01	7.43E-05	1.80E-01	1.20E-01	6.11E-04	2.73E-03	2.73E-03	7.46E-06	1.35E-03
VOC	Trichloroethene	79-01-6	6.83E-01	7.86E-05	2.88E-01	1.09E-01	4.58E-04	2.05E-03	2.73E-03	5.59E-06	1.61E-03
VOC	Vinyl Chloride	75-01-4	9.16E-01	1.06E-04	9.00E-01	1.46E-01	2.99E-04	1.34E-03	2.73E-03	3.66E-06	3.29E-03
Notes:	**Crack Soil and Building Characteristics**			**Crack Soil**							
	SCS Soil texture class			Sand							
	Bulk density	kg/L	ρ_b	1.66							
	Total porosity	L/L-soil	θ_T	0.375							
	Water-filled porosity	L/L-soil	θ_w	0.055							
	Air-filled porosity	L/L-soil	θ_a	0.320							
	Residual saturation	L/L-soil	θ_r	0.053							
	Hydraulic conductivity	cm/s	**K**	7.4E-03							
	Dynamic viscosity of water	g/cm-s	μ_w	0.01307							
	Density of water	g/cm^3	ρ_w	1.0							
	Gravitational acceleration	cm/s^2	**g**	980.7							
	Intrinsic permeability	cm^2	**k**	9.9E-08							
	Relative saturation	unitless	S_e	0.005							
	van Genuchten N	unitless	**N**	3.177							
	van Genuchten M	unitless	**M**	0.685							
	Relative air permeability	unitless	k_{rg}	0.997							
	Permeability to vapor	cm^2	k_v	9.88E-08							
	Distance from building foundation to source	m	L_{T-gw}	3.10							
	Bldg foundation thickness	m	L_{crack}	0.1							
	Bldg foundation length	m		10.00							
	Bldg foundation width	m		10.00							
	Bldg occupied height	m		2.44							
	Bldg occupied volume	m^3		244.00							
	Occupied depth below ground	m		0.0							
	Bldg area for vapor intrusion	m^2	A_B	100.0							
	Ratio of A_{crack} to A_B		η	4E-04							
	Area of cracks	m^2	A_{crack}	4E-02							
	Air exchange rate	$hour^{-1}$	**ach**	0.45							
	Building ventilation rate	m^3/day	Q_{bldg}	2.64E+03							
	Pressure difference between outdoors-indoors	$kg/m\text{-}s^2$	ΔP	1.0							
	Viscosity of air	kg/m-s	μ_a	1.8E-05							
	Crack length (bldg perimeter)	m	X_{crack}	40							
	Crack depth below ground	m	Z_{crack}	0.10							
	Crack radius	m	r_{crack}	1E-03							
	Soil gas flow rate into bldg	m^3/day	Q_{soil}	7.20							
	Indoor air concentrations resulting from groundwater vapor intrusion into a building are estimated using the relationships described by Johnson and Ettinger (Heuristic model for predicting the intrusion rate of contaminant vapors into buildings, 1991), which USEPA recommends for screening level calculations, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.										
	The effective diffusion term DeffT is calculated based on a silty clay soil, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Program.										

Attachment C.11: Cancer Risk and Hazard Index Calculations for Vapor Intrusion into a Residential Building (Slab-on-Grade) from Perched Water at VP-8 (Parcel 2) Whirlpool, Fort Smith, Arkansas

							Cancer				Noncancer	
Chem Group	**Chemical**	**CASRN**	**Carc Class**	**ADAF**	**C_{gw}** (mg/L)	**$C_{building}$** (mg/m^3)	**URF** (m^3/mg)	**f_{inh}**	**Risk**		**RfC** (mg/m^3)	**HQ**
VOC	Acetone	67-64-1	ID	N	7.51E-02	1.81E-05					3.1E+01	5.6E-07
VOC	Benzene	71-43-2	A	N	7.30E-04	1.01E-06	7.8E-03		3.3E-09		3.0E-02	3.2E-05
VOC	2-Butanone	78-93-3	ID	N	1.18E-02	2.71E-06					5.0E+00	5.2E-07
VOC	Chloromethane	74-87-3	D	N	6.60E-04	1.08E-06					9.0E-02	1.1E-05
VOC	2-Hexanone	591-78-6	ID	N	3.00E-03	7.60E-07					3.0E-02	2.4E-05
VOC	4-Methyl-2-pentanone	108-10-1	ID	N	6.20E-04	1.60E-07					3.0E+00	5.1E-08
VOC	Toluene	108-88-3	ID	N	2.80E-04	3.77E-07					5.0E+00	7.2E-08
VOC	Trichloroethene	79-01-6	HC	Y	2.90E-03	4.67E-06	4.1E-03	0.2439	1.1E-08		2.0E-03	2.2E-03
VOC	Vinyl Chloride	75-01-4	A	N	1.80E-04	5.92E-07	4.4E-03		3.7E-09		1.0E-01	5.7E-06
							Cumulative Risk:		2E-08		**HI:**	2E-03
Note:												
f_{inh} is the fraction of the inhalation URF that USEPA identified as having a mutagenic mode of action.												
Only VOCs detected in the Annual 2017 water sample at VP-8 (Parcel 2) are shown.												
Risks were calculated assuming residential exposure to groundwater-derived vapors in indoor air for 24 hours per day and 350 days per year for 30 years.												

Attachment C.12: Soil Moisture Profile for Residential Building (Slab-on-Grade) at Groundwater Monitoring Well MW-175 (Parcel 2) Whirlpool, Fort Smith, Arkansas



Notes:
The soil-water profile in the vadose zone is estimated using the van Genuchten soil-water retention equation with default water retention parameters appropriate for silt clay, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.

Attachment C.13: Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Groundwater at MW-175 (Parcel 2) Whirlpool, Fort Smith, Arkansas

Chem Group	Chemical	CASRN	D_{air} (m^2/day)	D_{water} (m^2/day)	H (unitless)	D_{crack} (m^2/day)	D_{eff}^T (m^2/day)	α_{soil}	α_{slab}	α_{∞}	C_{bldg} (L-water/m^3)
VOC	Benzene	71-43-2	7.60E-01	8.47E-05	1.59E-01	1.22E-01	8.15E-04	3.17E-03	2.73E-03	8.67E-06	1.38E-03
VOC	Bromomethane	74-83-9	6.29E-01	1.05E-04	2.01E-01	1.01E-01	7.43E-04	2.89E-03	2.73E-03	7.90E-06	1.59E-03
VOC	2-Butanone	78-93-3	6.98E-01	8.47E-05	2.00E-03	1.12E-01	9.94E-03	3.74E-02	2.73E-03	1.02E-04	2.04E-04
VOC	cis-1,2-Dichloroethene	156-59-2	6.36E-01	9.76E-05	1.19E-01	1.02E-01	9.72E-04	3.78E-03	2.73E-03	1.03E-05	1.22E-03
VOC	Trichloroethene	79-01-6	6.83E-01	7.86E-05	2.88E-01	1.10E-01	5.23E-04	2.04E-03	2.73E-03	5.57E-06	1.60E-03
Notes:	**Crack Soil and Building Characteristics**			**Crack Soil**							
	SCS Soil texture class			Sand							
	Bulk density	kg/L	ρ_b	1.66							
	Total porosity	L/L-soil	θ_T	0.375							
	Water-filled porosity	L/L-soil	θ_w	0.054							
	Air-filled porosity	L/L-soil	θ_a	0.321							
	Residual saturation	L/L-soil	θ_r	0.053							
	Hydraulic conductivity	cm/s	K	7.4E-03							
	Dynamic viscosity of water	g/cm-s	μ_w	0.01307							
	Density of water	g/cm^3	ρ_w	1.0							
	Gravitational acceleration	cm/s^2	g	980.7							
	Intrinsic permeability	cm^2	k	9.9E-08							
	Relative saturation	unitless	S_e	0.004							
	van Genuchten N	unitless	N	3.177							
	van Genuchten M	unitless	M	0.685							
	Relative air permeability	unitless	k_{rg}	0.998							
	Permeability to vapor	cm^2	k_v	9.89E-08							
	Distance from building foundation to source	m	L_{T-gw}	3.56							
	Bldg foundation thickness	m	L_{crack}	0.1							
	Bldg foundation length	m		10.00							
	Bldg foundation width	m		10.00							
	Bldg occupied height	m		2.44							
	Bldg occupied volume	m^3		244.00							
	Occupied depth below ground	m		0.0							
	Bldg area for vapor intrusion	m^2	A_B	100.0							
	Ratio of A_{crack} to A_B		η	4E-04							
	Area of cracks	m^2	A_{crack}	4E-02							
	Air exchange rate	$hour^{-1}$	ach	0.45							
	Building ventilation rate	m^3/day	Q_{bldg}	2.64E+03							
	Pressure difference between outdoors-indoors	$kg/m\text{-}s^2$	ΔP	1.0							
	Viscosity of air	kg/m-s	μ_a	1.8E-05							
	Crack length (bldg perimeter)	m	X_{crack}	40							
	Crack depth below ground	m	Z_{crack}	0.10							
	Crack radius	m	r_{crack}	1E-03							
	Soil gas flow rate into bldg	m^3/day	Q_{soil}	7.20							
	Indoor air concentrations resulting from groundwater vapor intrusion into a building are estimated using the relationships described by Johnson and Ettinger (Heuristic model for predicting the intrusion rate of contaminant vapors into buildings, 1991), which USEPA recommends for screening level calculations, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.										
	The effective diffusion term DeffT is calculated based on a silty clay soil, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Program.										

Attachment C.14: Cancer Risk and Hazard Index Calculations for Vapor Intrusion into a Residential Building (Slab-on-Grade) from Groundwater at MW-175 (Parcel 2) Whirlpool, Fort Smith, Arkansas

							Cancer				Noncancer	
Chem Group	**Chemical**	**CASRN**	**Carc Class**	**ADAF**	**C_{gw}** (mg/L)	**$C_{building}$** (mg/m^3)	**URF** (m^3/mg)	**f_{inh}**	**Risk**		**RfC** (mg/m^3)	**HQ**
VOC	Benzene	71-43-2	A	N	1.20E-04	1.65E-07	7.8E-03		5.3E-10		3.0E-02	5.3E-06
VOC	Bromomethane	74-83-9	ID	N	3.80E-04	6.04E-07					5.0E-03	1.2E-04
VOC	2-Butanone	78-93-3	ID	N	3.20E-03	6.53E-07					5.0E+00	1.3E-07
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	2.70E-04	3.31E-07						
VOC	Trichloroethene	79-01-6	HC	Y	7.22E-02	1.16E-04	4.1E-03	0.2439	2.7E-07		2.0E-03	5.6E-02
							Cumulative Risk:		3E-07		**HI:**	6E-02
Note:												
f_{inh} is the fraction of the inhalation URF that USEPA identified as having a mutagenic mode of action.												
Only VOCs detected in the Annual 2017 groundwater sample at MW-175 (Parcel 2) are shown.												
Risks were calculated assuming residential exposure to groundwater-derived vapors in indoor air for 24 hours per day and 350 days per year for 30 years.												

Attachment C.15 Cancer Risk and Hazard Index Calculations for Vapor Intrusion into a Residential Building (Slab-on-Grade) from Soil Vapor at VP-9 (Parcel 3) Whirlpool, Fort Smith, Arkansas

							Cancer				Noncancer	
Chem Group	**Chemical**	**CASRN**	**Carc Class**	**ADAF**	**C_{sv}** (mg/m^3)	**$C_{building}$** (mg/m^3)	**URF** (m^3/mg)	**f_{inh}**	**Risk**		**RfC** (mg/m^3)	**HQ**
VOC	1,1-Dichloroethane	75-34-3	SC	N	3.10E-04	9.30E-06					5.0E-01	1.8E-05
VOC	1,2-Dichloroethane	107-06-2	B2	N	2.80E-04	8.40E-06	2.6E-02		9.0E-08		7.0E-03	1.2E-03
VOC	1,1-Dichloroethene	75-35-4	C	N	1.90E-04	5.70E-06					2.0E-01	2.7E-05
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	1.60E-04	4.80E-06						
VOC	trans-1,2-Dichloroethene	156-60-5	ID	N	5.90E-04	1.77E-05						
VOC	Tetrachloroethene	127-18-4	LC	N	2.80E-04	8.40E-06	2.6E-04		9.0E-10		4.0E-02	2.0E-04
VOC	Trichloroethene	79-01-6	HC	Y	4.00E-01	1.20E-02	4.1E-03	0.244	2.8E-05		2.0E-03	5.8E+00
VOC	Vinyl Chloride	75-01-4	A	N	4.60E-04	1.38E-05	4.4E-03		8.6E-08		1.0E-01	1.3E-04
							Cumulative Risk:		3E-05		**HI:**	**6E+00**

Note:

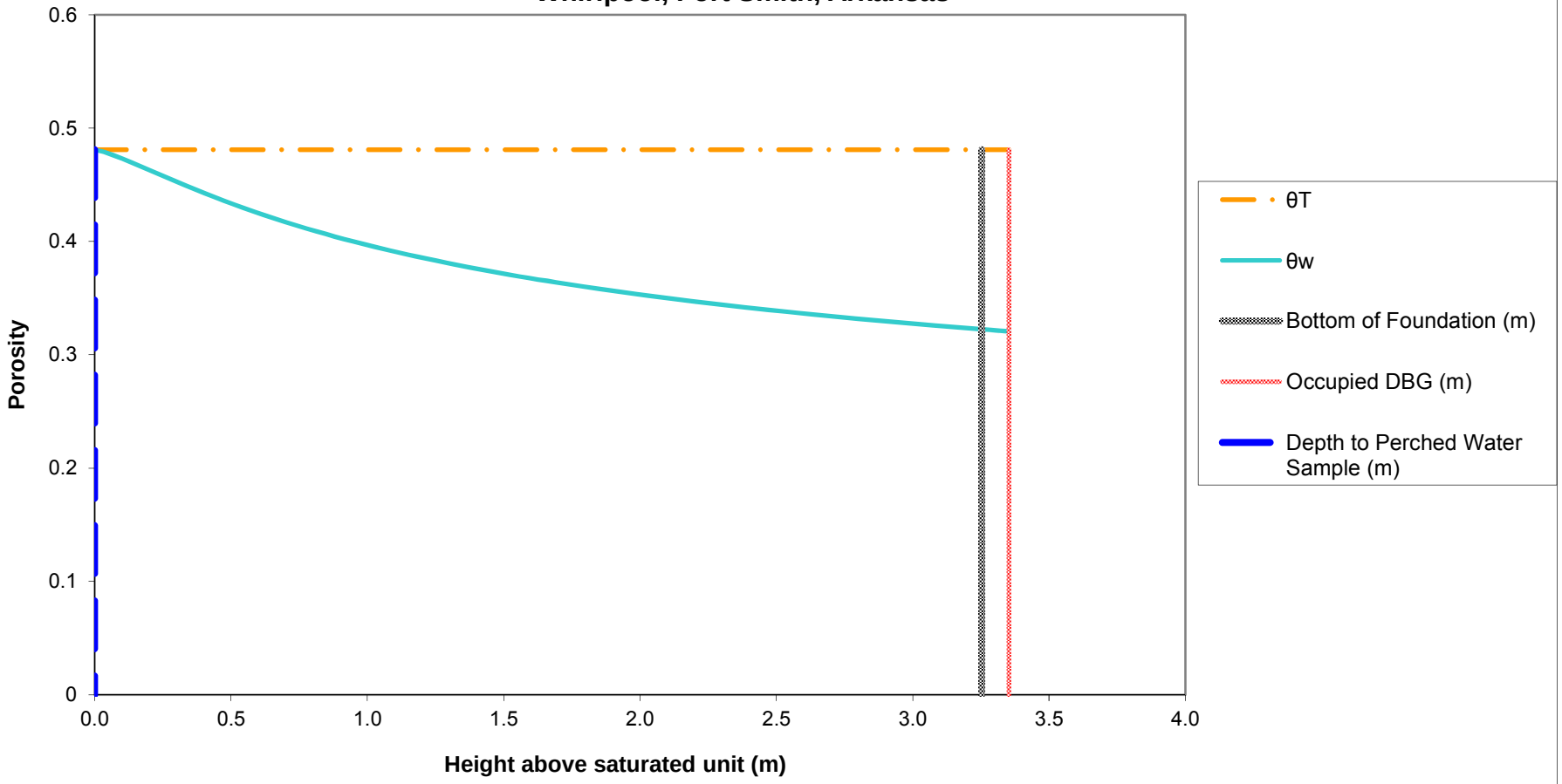
f_{inh} is the fraction of the inhalation toxicity value that USEPA identified as having a mutagenic mode of action.

Only VOCs detected in the Annual 2017 soil vapor sample at VP-9 (Parcel 3) are shown.

Residential risks were calculated assuming residents could be exposed to soil vapor intrusion into indoor air for 24 hours per day and 350 days per year for 30 years.

Indoor air concentrations due to intrusion of soil vapor were calculated using USEPA's 95th percentile subslab soil gas attenuaion factor of 0.03 (EPA's Vapor Intrusion Database: Evaluation and Characterization of Attenuation Factors for Chlorinated Volatile Organic Compounds and Residential Buildings, 2012), as discussed in Appendix A, Section 6.8.2 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.

Attachment C.16: Soil Moisture Profile for Residential Building (Slab-on-Grade) at Soil Vapor Monitoring Point VP-10 (Parcel 3) Whirlpool, Fort Smith, Arkansas



Notes:
The soil-water profile in the vadose zone is estimated using the van Genuchten soil-water retention equation with default water retention parameters appropriate for silt clay, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.

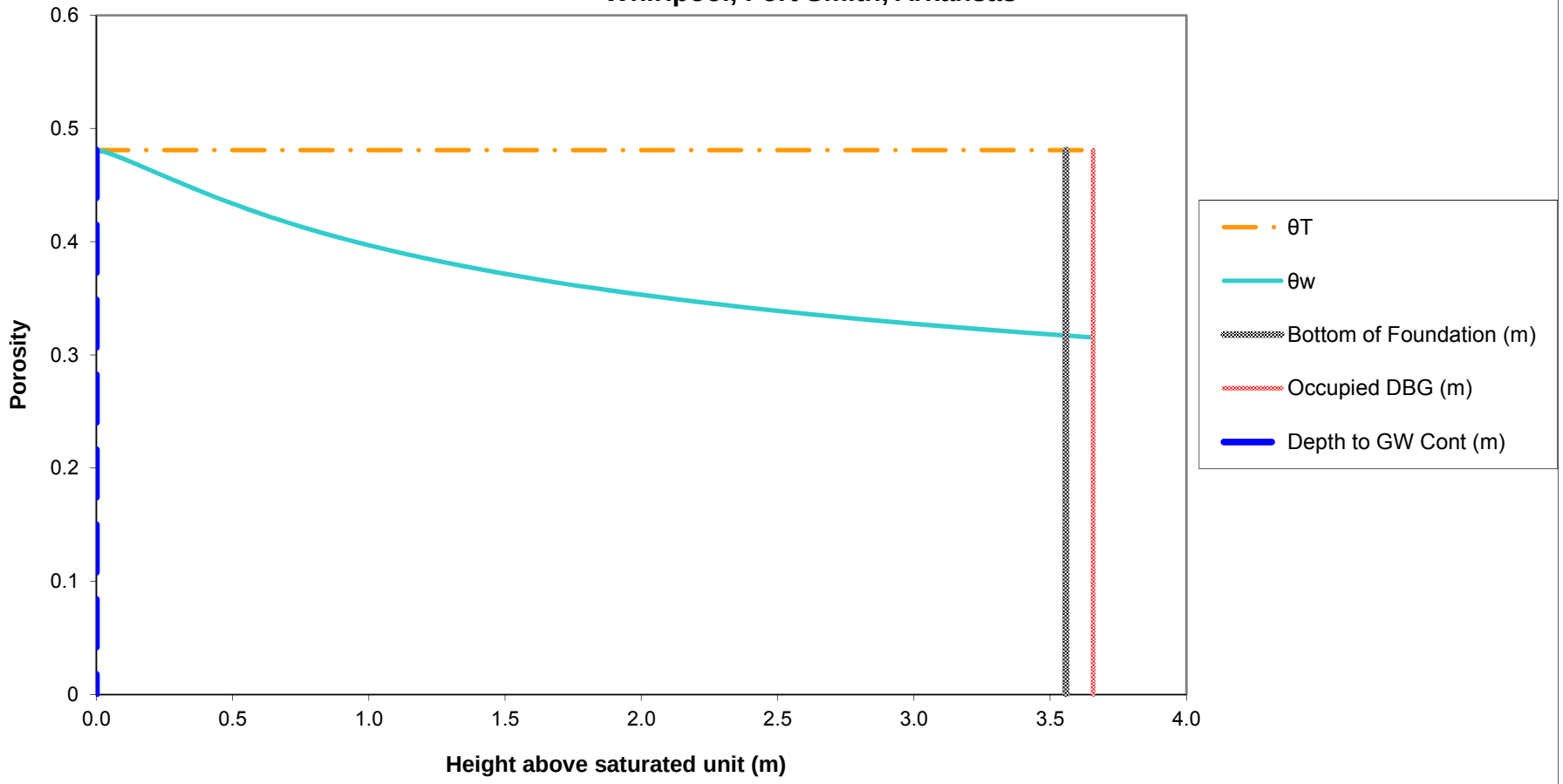
Attachment C.17: Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Perched Water at VP-10 (Parcel 3)
Whirlpool, Fort Smith, Arkansas

Chem Group	Chemical	CASRN	D_{air} (m^2/day)	D_{water} (m^2/day)	H (unitless)	D_{crack} (m^2/day)	D_{eff}^T (m^2/day)	α_{soil}	α_{slab}	α_∞	C_{bldg} (L-water/m^3)
VOC	Benzene	71-43-2	7.60E-01	8.47E-05	1.59E-01	1.22E-01	7.54E-04	3.21E-03	2.73E-03	8.77E-06	1.39E-03
VOC	Carbon Disulfide	75-15-0	8.99E-01	8.64E-05	9.26E-01	1.44E-01	2.69E-04	1.15E-03	2.73E-03	3.14E-06	2.90E-03
VOC	Chloroform	67-66-3	8.99E-01	8.64E-05	1.07E-01	1.44E-01	1.03E-03	4.38E-03	2.73E-03	1.20E-05	1.28E-03
VOC	1,1-Dichloroethene	75-35-4	7.78E-01	8.99E-05	8.10E-01	1.25E-01	2.87E-04	1.22E-03	2.73E-03	3.34E-06	2.71E-03
VOC	cis-1,2-Dichloroethene	156-59-2	6.36E-01	9.76E-05	1.19E-01	1.02E-01	9.03E-04	3.84E-03	2.73E-03	1.05E-05	1.24E-03
VOC	trans-1,2-Dichloroethene	156-60-5	6.11E-01	1.03E-04	2.81E-01	9.78E-02	5.51E-04	2.35E-03	2.73E-03	6.41E-06	1.81E-03
VOC	Toluene	108-88-3	7.52E-01	7.43E-05	1.80E-01	1.20E-01	6.43E-04	2.74E-03	2.73E-03	7.49E-06	1.35E-03
VOC	Trichloroethene	79-01-6	6.83E-01	7.86E-05	2.88E-01	1.09E-01	4.82E-04	2.06E-03	2.73E-03	5.62E-06	1.62E-03
VOC	Vinyl Chloride	75-01-4	9.16E-01	1.06E-04	9.00E-01	1.47E-01	3.16E-04	1.35E-03	2.73E-03	3.68E-06	3.31E-03
Notes:	**Crack Soil and Building Characteristics**			**Crack Soil**							
	SCS Soil texture class			Sand							
	Bulk density	kg/L	ρ_b	1.66							
	Total porosity	L/L-soil	θ_T	0.375							
	Water-filled porosity	L/L-soil	θ_w	0.055							
	Air-filled porosity	L/L-soil	θ_a	0.320							
	Residual saturation	L/L-soil	θ_r	0.053							
	Hydraulic conductivity	cm/s	**K**	7.4E-03							
	Dynamic viscosity of water	g/cm-s	μ_w	0.01307							
	Density of water	g/cm^3	ρ_w	1.0							
	Gravitational acceleration	cm/s^2	**g**	980.7							
	Intrinsic permeability	cm^2	**k**	9.9E-08							
	Relative saturation	unitless	S_e	0.005							
	van Genuchten N	unitless	**N**	3.177							
	van Genuchten M	unitless	**M**	0.685							
	Relative air permeability	unitless	k_{rg}	0.997							
	Permeability to vapor	cm^2	k_v	9.89E-08							
	Distance from building foundation to source	m	L_{T-gw}	3.25							
	Bldg foundation thickness	m	L_{crack}	0.1							
	Bldg foundation length	m		10.00							
	Bldg foundation width	m		10.00							
	Bldg occupied height	m		2.44							
	Bldg occupied volume	m^3		244.00							
	Occupied depth below ground	m		0.0							
	Bldg area for vapor intrusion	m^2	A_B	100.0							
	Ratio of A_{crack} to A_B		η	4E-04							
	Area of cracks	m^2	A_{crack}	4E-02							
	Air exchange rate	$hour^{-1}$	**ach**	0.45							
	Building ventilation rate	m^3/day	Q_{bldg}	2.64E+03							
	Pressure difference between outdoors-indoors	$kg/m\text{-}s^2$	ΔP	1.0							
	Viscosity of air	kg/m-s	μ_a	1.8E-05							
	Crack length (bldg perimeter)	m	X_{crack}	40							
	Crack depth below ground	m	Z_{crack}	0.10							
	Crack radius	m	r_{crack}	1E-03							
	Soil gas flow rate into bldg	m^3/day	Q_{soil}	7.20							
	Indoor air concentrations resulting from groundwater vapor intrusion into a building are estimated using the relationships described by Johnson and Ettinger (Heuristic model for predicting the intrusion rate of contaminant vapors into buildings, 1991), which USEPA recommends for screening level calculations, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.										
	The effective diffusion term DeffT is calculated based on a silty clay soil, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Program.										

Attachment C.18: Cancer Risk and Hazard Index Calculations for Vapor Intrusion into a Residential Building (Slab-on-Grade) from Perched Water at VP-10 (Parcel 3) Whirlpool, Fort Smith, Arkansas

							Cancer				Noncancer	
Chem Group	**Chemical**	**CASRN**	**Carc Class**	**ADAF**	**C_{gw}** (mg/L)	**$C_{building}$** (mg/m^3)	**URF** (m^3/mg)	**f_{inh}**	**Risk**		**RfC** (mg/m^3)	**HQ**
VOC	Benzene	71-43-2	A	N	2.10E-04	2.93E-07	7.8E-03		9.4E-10		3.0E-02	9.4E-06
VOC	Carbon Disulfide	75-15-0		N	5.60E-04	1.63E-06					7.0E-01	2.2E-06
VOC	Chloroform	67-66-3	B2	N	6.10E-04	7.84E-07	2.3E-02		7.4E-09		5.0E-02	1.5E-05
VOC	1,1-Dichloroethene	75-35-4	C	N	1.60E-03	4.33E-06					2.0E-01	2.1E-05
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	1.27E-02	1.58E-05						
VOC	trans-1,2-Dichloroethene	156-60-5	ID	N	2.70E-04	4.87E-07						
VOC	Toluene	108-88-3	ID	N	4.20E-04	5.67E-07					5.0E+00	1.1E-07
VOC	Trichloroethene	79-01-6	HC	Y	2.11E-01	3.41E-04	4.1E-03	0.2439	7.9E-07		2.0E-03	1.6E-01
VOC	Vinyl Chloride	75-01-4	A	N	4.20E-04	1.39E-06	4.4E-03		8.6E-09		1.0E-01	1.3E-05
							Cumulative Risk:		8E-07		**HI:**	2E-01
Note:												
f_{inh} is the fraction of the inhalation URF that USEPA identified as having a mutagenic mode of action.												
Only VOCs detected in the Annual 2017 water sample at VP-10 (Parcel 3) are shown.												
Risks were calculated assuming residential exposure to groundwater-derived vapors in indoor air for 24 hours per day and 350 days per year for 30 years.												

Attachment C.19: Soil Moisture Profile for Residential Building (Slab-on-Grade) at Groundwater Monitoring Well MW-176 (Parcel 3) Whirlpool, Fort Smith, Arkansas



Notes:
The soil-water profile in the vadose zone is estimated using the van Genuchten soil-water retention equation with default water retention parameters appropriate for silt clay, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.

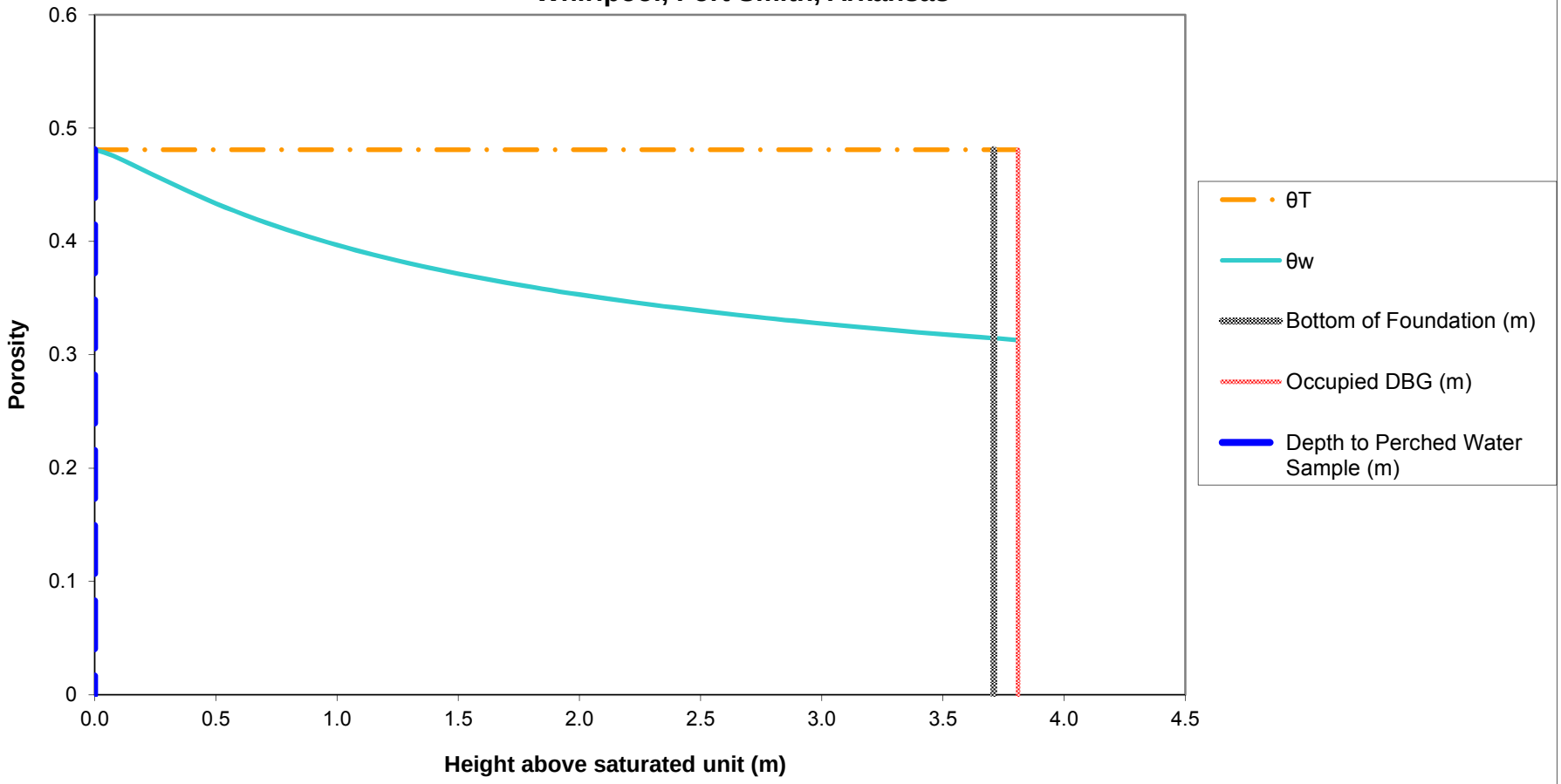
Attachment C.20: Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Groundwater at MW-176 (Parcel 3) Whirlpool, Fort Smith, Arkansas

Chem Group	Chemical	CASRN	D_{air} (m^2/day)	D_{water} (m^2/day)	H (unitless)	D_{crack} (m^2/day)	D_{eff}^T (m^2/day)	α_{soil}	α_{slab}	α_{∞}	C_{bldg} (L-water/m^3)
VOC	Benzene	71-43-2	7.60E-01	8.47E-05	1.59E-01	1.22E-01	8.15E-04	3.17E-03	2.73E-03	8.67E-06	1.38E-03
VOC	1,1-Dichloroethene	75-35-4	7.78E-01	8.99E-05	8.10E-01	1.25E-01	3.12E-04	1.22E-03	2.73E-03	3.32E-06	2.69E-03
VOC	cis-1,2-Dichloroethene	156-59-2	6.36E-01	9.76E-05	1.19E-01	1.02E-01	9.72E-04	3.78E-03	2.73E-03	1.03E-05	1.22E-03
VOC	trans-1,2-Dichloroethene	156-60-5	6.11E-01	1.03E-04	2.81E-01	9.81E-02	5.96E-04	2.32E-03	2.73E-03	6.35E-06	1.79E-03
VOC	Trichloroethene	79-01-6	6.83E-01	7.86E-05	2.88E-01	1.10E-01	5.23E-04	2.04E-03	2.73E-03	5.57E-06	1.60E-03
VOC	Vinyl Chloride	75-01-4	9.16E-01	1.06E-04	9.00E-01	1.47E-01	3.44E-04	1.34E-03	2.73E-03	3.66E-06	3.30E-03
Notes:	**Crack Soil and Building Characteristics**			**Crack Soil**							
	SCS Soil texture class			Sand							
	Bulk density	kg/L	ρ_b	1.66							
	Total porosity	L/L-soil	θ_T	0.375							
	Water-filled porosity	L/L-soil	θ_w	0.054							
	Air-filled porosity	L/L-soil	θ_a	0.321							
	Residual saturation	L/L-soil	θ_r	0.053							
	Hydraulic conductivity	cm/s	K	7.4E-03							
	Dynamic viscosity of water	g/cm-s	μ_w	0.01307							
	Density of water	g/cm^3	ρ_w	1.0							
	Gravitational acceleration	cm/s^2	g	980.7							
	Intrinsic permeability	cm^2	k	9.9E-08							
	Relative saturation	unitless	S_e	0.004							
	van Genuchten N	unitless	N	3.177							
	van Genuchten M	unitless	M	0.685							
	Relative air permeability	unitless	k_{rg}	0.998							
	Permeability to vapor	cm^2	k_v	9.89E-08							
	Distance from building foundation to source	m	L_{T-gw}	3.56							
	Bldg foundation thickness	m	L_{crack}	0.1							
	Bldg foundation length	m		10.00							
	Bldg foundation width	m		10.00							
	Bldg occupied height	m		2.44							
	Bldg occupied volume	m^3		244.00							
	Occupied depth below ground	m		0.0							
	Bldg area for vapor intrusion	m^2	A_B	100.0							
	Ratio of A_{crack} to A_B		η	4E-04							
	Area of cracks	m^2	A_{crack}	4E-02							
	Air exchange rate	$hour^{-1}$	ach	0.45							
	Building ventilation rate	m^3/day	Q_{bldg}	2.64E+03							
	Pressure difference between outdoors-indoors	kg/m-s^2	ΔP	1.0							
	Viscosity of air	kg/m-s	μ_a	1.8E-05							
	Crack length (bldg perimeter)	m	X_{crack}	40							
	Crack depth below ground	m	Z_{crack}	0.10							
	Crack radius	m	r_{crack}	1E-03							
	Soil gas flow rate into bldg	m^3/day	Q_{soil}	7.20							
	Indoor air concentrations resulting from groundwater vapor intrusion into a building are estimated using the relationships described by Johnson and Ettinger (Heuristic model for predicting the intrusion rate of contaminant vapors into buildings, 1991), which USEPA recommends for screening level calculations, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.										
	The effective diffusion term DeffT is calculated based on a silty clay soil, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Program.										

Attachment C.21: Cancer Risk and Hazard Index Calculations for Vapor Intrusion into a Residential Building (Slab-on-Grade) from Groundwater at MW-176 (Parcel 3) Whirlpool, Fort Smith, Arkansas

							Cancer				Noncancer	
Chem Group	**Chemical**	**CASRN**	**Carc Class**	**ADAF**	**C_{gw}** (mg/L)	**$C_{building}$** (mg/m^3)	**URF** (m^3/mg)	**f_{inh}**	**Risk**		**RfC** (mg/m^3)	**HQ**
VOC	Benzene	71-43-2	A	N	1.10E-04	1.52E-07	7.8E-03		4.9E-10		3.0E-02	4.8E-06
VOC	1,1-Dichloroethene	75-35-4	C	N	3.30E-03	8.88E-06					2.0E-01	4.3E-05
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	1.87E-01	2.29E-04						
VOC	trans-1,2-Dichloroethene	156-60-5	ID	N	1.30E-03	2.32E-06						
VOC	Trichloroethene	79-01-6	HC	Y	2.81E-01	4.51E-04	4.1E-03	0.2439	1.0E-06		2.0E-03	2.2E-01
VOC	Vinyl Chloride	75-01-4	A	N	2.90E-04	9.56E-07	4.4E-03		5.9E-09		1.0E-01	9.2E-06
							Cumulative Risk:		1E-06		**HI:**	2E-01
Note:												
f_{inh} is the fraction of the inhalation URF that USEPA identified as having a mutagenic mode of action.												
Only VOCs detected in the Annual 2017 groundwater sample at MW-176 (Parcel 3) are shown.												
Risks were calculated assuming residential exposure to groundwater-derived vapors in indoor air for 24 hours per day and 350 days per year for 30 years.												

Attachment C.22: Soil Moisture Profile for Residential Building (Slab-on-Grade) at Soil Vapor Monitoring Point VP-12 (Parcel 4) Whirlpool, Fort Smith, Arkansas



Notes:
The soil-water profile in the vadose zone is estimated using the van Genuchten soil-water retention equation with default water retention parameters appropriate for silt clay, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.

Attachment C.23: Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Perched Water at VP-12 (Parcel 4)
Whirlpool, Fort Smith, Arkansas

Chem Group	Chemical	CASRN	D_{air} (m^2/day)	D_{water} (m^2/day)	H (unitless)	D_{crack} (m^2/day)	D_{eff}^T (m^2/day)	α_{soil}	α_{slab}	α_∞	C_{bldg} (L-water/m^3)
VOC	Acetone	67-64-1	1.07E+00	9.85E-05	1.14E-03	1.72E-01	1.87E-02	6.55E-02	2.73E-03	1.79E-04	2.04E-04
VOC	Benzene	71-43-2	7.60E-01	8.47E-05	1.59E-01	1.22E-01	8.46E-04	3.16E-03	2.73E-03	8.62E-06	1.37E-03
VOC	Trichloroethene	79-01-6	6.83E-01	7.86E-05	2.88E-01	1.10E-01	5.43E-04	2.03E-03	2.73E-03	5.54E-06	1.60E-03

Notes:	Crack Soil and Building Characteristics			Crack Soil
	SCS Soil texture class			Sand
	Bulk density	kg/L	ρ_b	1.66
	Total porosity	L/L-soil	θ_T	0.375
	Water-filled porosity	L/L-soil	θ_w	0.054
	Air-filled porosity	L/L-soil	θ_a	0.321
	Residual saturation	L/L-soil	θ_r	0.053
	Hydraulic conductivity	cm/s	K	7.4E-03
	Dynamic viscosity of water	g/cm-s	μ_w	0.01307
	Density of water	g/cm^3	ρ_w	1.0
	Gravitational acceleration	cm/s^2	g	980.7
	Intrinsic permeability	cm^2	k	9.9E-08
	Relative saturation	unitless	S_e	0.004
	van Genuchten N	unitless	N	3.177
	van Genuchten M	unitless	M	0.685
	Relative air permeability	unitless	k_{rg}	0.998
	Permeability to vapor	cm^2	k_v	9.89E-08
	Distance from building foundation to source	m	L_{T-gw}	3.71
	Bldg foundation thickness	m	L_{crack}	0.1
	Bldg foundation length	m		10.00
	Bldg foundation width	m		10.00
	Bldg occupied height	m		2.44
	Bldg occupied volume	m^3		244.00
	Occupied depth below ground	m		0.0
	Bldg area for vapor intrusion	m^2	A_B	100.0
	Ratio of A_{crack} to A_B		η	4E-04
	Area of cracks	m^2	A_{crack}	4E-02
	Air exchange rate	$hour^{-1}$	ach	0.45
	Building ventilation rate	m^3/day	Q_{bldg}	2.64E+03
	Pressure difference between outdoors-indoors	$kg/m\text{-}s^2$	ΔP	1.0
	Viscosity of air	kg/m-s	μ_a	1.8E-05
	Crack length (bldg perimeter)	m	X_{crack}	40
	Crack depth below ground	m	Z_{crack}	0.10
	Crack radius	m	r_{crack}	1E-03
	Soil gas flow rate into bldg	m^3/day	Q_{soil}	7.20

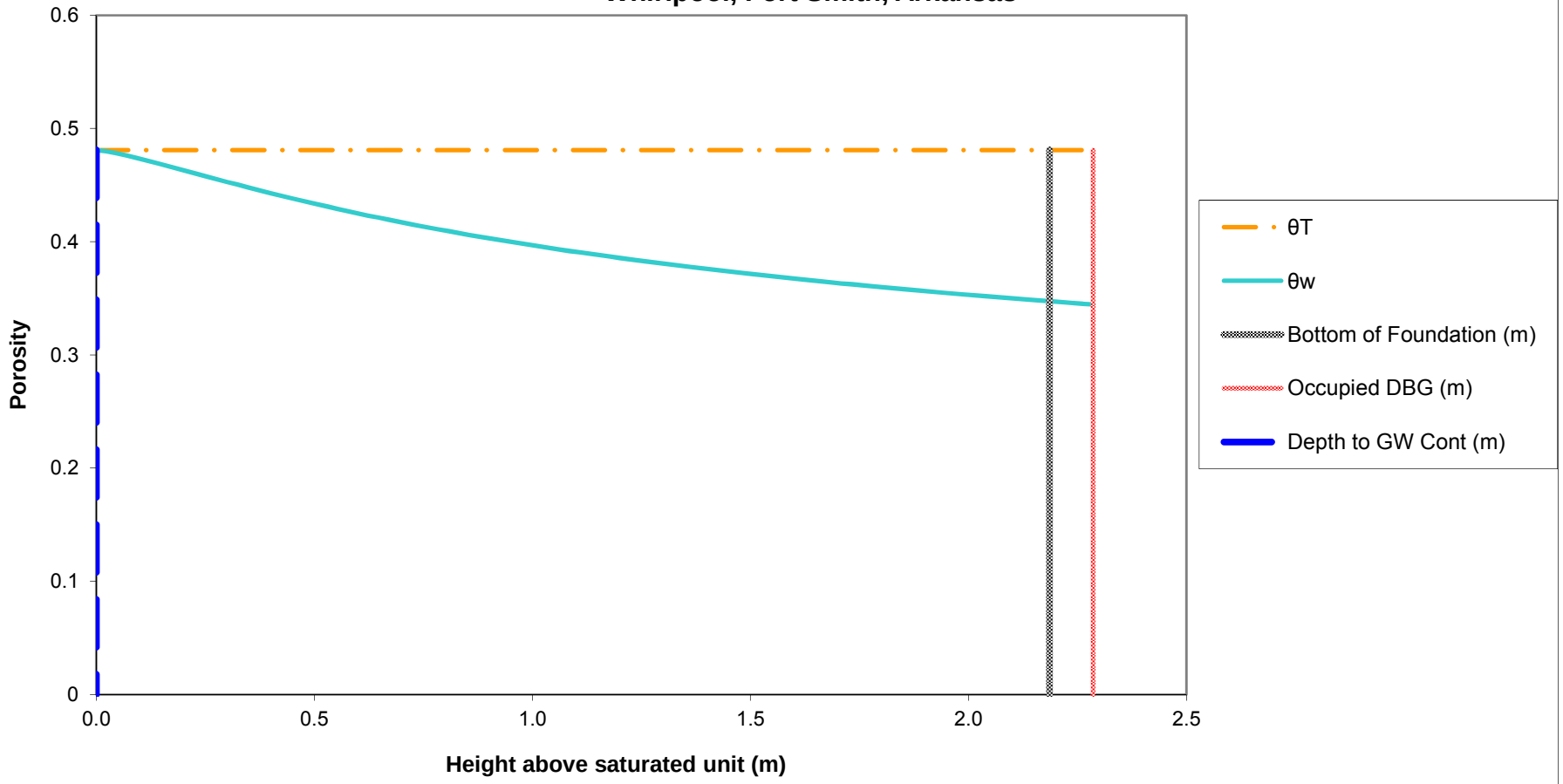
Indoor air concentrations resulting from groundwater vapor intrusion into a building are estimated using the relationships described by Johnson and Ettinger (Heuristic model for predicting the intrusion rate of contaminant vapors into buildings, 1991), which USEPA recommends for screening level calculations, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.

The effective diffusion term DeffT is calculated based on a silty clay soil, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Program.

Attachment C.24: Cancer Risk and Hazard Index Calculations for Vapor Intrusion into a Residential Building (Slab-on-Grade) from Perched Water at VP-12 (Parcel 4) Whirlpool, Fort Smith, Arkansas

							Cancer				Noncancer	
Chem Group	**Chemical**	**CASRN**	**Carc Class**	**ADAF**	**C_{gw}** (mg/L)	**$C_{building}$** (mg/m^3)	**URF** (m^3/mg)	**f_{inh}**	**Risk**		**RfC** (mg/m^3)	**HQ**
VOC	Acetone	67-64-1	ID	N	2.20E-03	4.49E-07					3.1E+01	1.4E-08
VOC	Benzene	71-43-2	A	N	1.50E-04	2.06E-07	7.8E-03		6.6E-10		3.0E-02	6.6E-06
VOC	Trichloroethene	79-01-6	HC	Y	2.20E-04	3.52E-07	4.1E-03	0.2439	8.1E-10		2.0E-03	1.7E-04
							Cumulative Risk:		1E-09		**HI:**	2E-04
Note:												
f_{inh} is the fraction of the inhalation URF that USEPA identified as having a mutagenic mode of action.												
Only VOCs detected in the Annual 2017 water sample at VP-12 (Parcel 4) are shown.												
Risks were calculated assuming residential exposure to groundwater-derived vapors in indoor air for 24 hours per day and 350 days per year for 30 years.												

Attachment C.25: Soil Moisture Profile for Residential Building (Slab-on-Grade) at Groundwater Monitoring Well MW-178 (Parcel 5) Whirlpool, Fort Smith, Arkansas



Notes:
The soil-water profile in the vadose zone is estimated using the van Genuchten soil-water retention equation with default water retention parameters appropriate for silt clay, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.

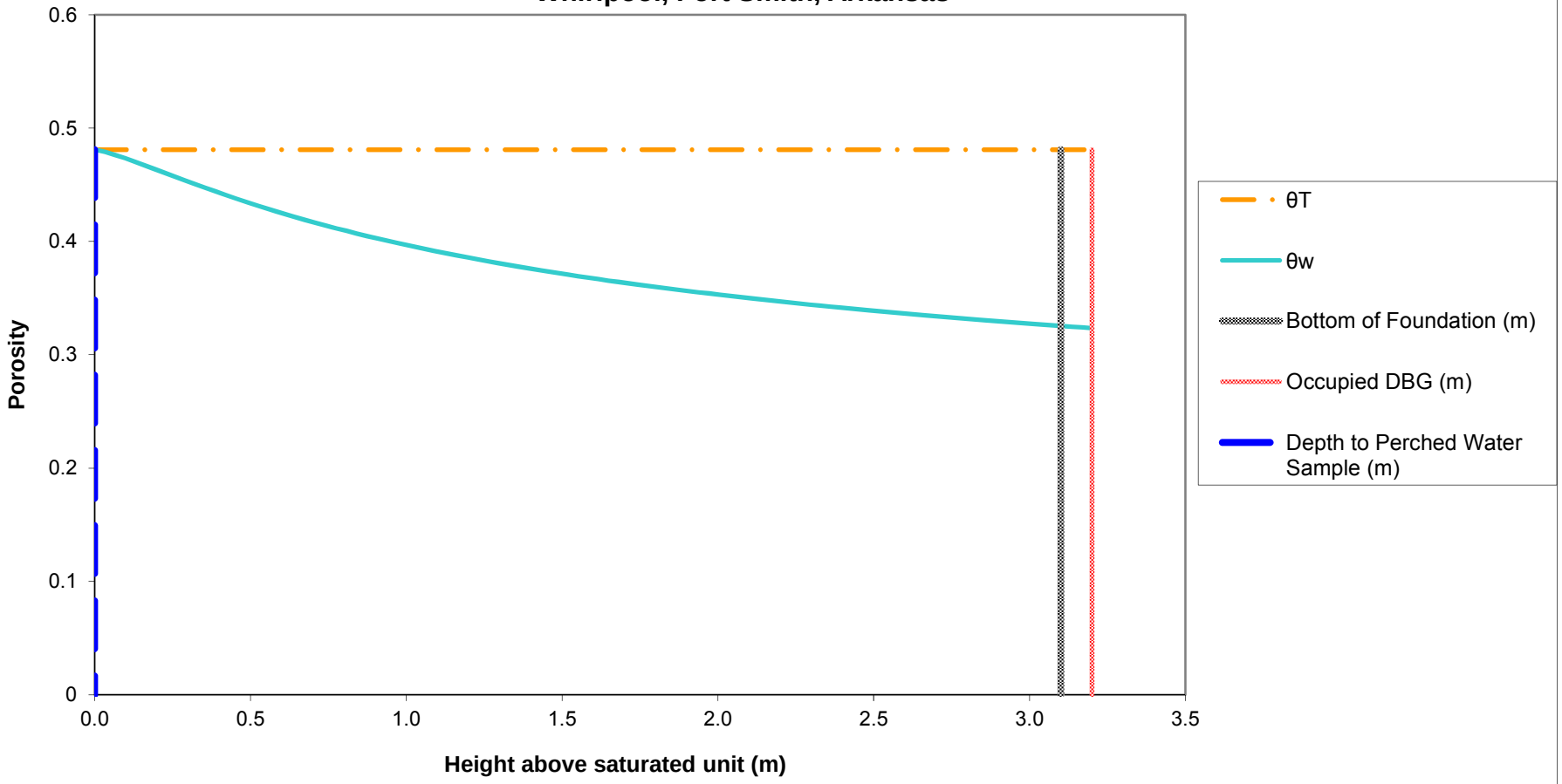
Attachment C.26: Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Perched Water at MW-178 (Parcel 5) Whirlpool, Fort Smith, Arkansas

Chem Group	Chemical	CASRN	D_{air} (m^2/day)	D_{water} (m^2/day)	H (unitless)	D_{crack} (m^2/day)	D_{eff}^T (m^2/day)	α_{soil}	α_{slab}	α_∞	C_{bldg} (L-water/m^3)
VOC	Acetone	67-64-1	1.07E+00	9.85E-05	1.14E-03	1.72E-01	1.87E-02	6.80E-02	2.73E-03	1.86E-04	2.12E-04
VOC	Benzene	71-43-2	7.60E-01	8.47E-05	1.59E-01	1.22E-01	8.15E-04	3.17E-03	2.73E-03	8.67E-06	1.38E-03
VOC	Chloromethane	74-87-3	1.09E+00	5.62E-05	3.33E-01	1.75E-01	4.61E-04	1.80E-03	2.73E-03	4.90E-06	1.63E-03
VOC	cis-1,2-Dichloroethene	156-59-2	6.36E-01	9.76E-05	1.19E-01	1.02E-01	9.72E-04	3.78E-03	2.73E-03	1.03E-05	1.22E-03
VOC	Trichloroethene	79-01-6	6.83E-01	7.86E-05	2.88E-01	1.10E-01	5.23E-04	2.04E-03	2.73E-03	5.57E-06	1.60E-03
Notes:	**Crack Soil and Building Characteristics**			**Crack Soil**							
	SCS Soil texture class			Sand							
	Bulk density	kg/L	ρ_b	1.66							
	Total porosity	L/L-soil	θ_T	0.375							
	Water-filled porosity	L/L-soil	θ_w	0.054							
	Air-filled porosity	L/L-soil	θ_a	0.321							
	Residual saturation	L/L-soil	θ_r	0.053							
	Hydraulic conductivity	cm/s	K	7.4E-03							
	Dynamic viscosity of water	g/cm-s	μ_w	0.01307							
	Density of water	g/cm^3	ρ_w	1.0							
	Gravitational acceleration	cm/s^2	g	980.7							
	Intrinsic permeability	cm^2	k	9.9E-08							
	Relative saturation	unitless	S_e	0.004							
	van Genuchten N	unitless	N	3.177							
	van Genuchten M	unitless	M	0.685							
	Relative air permeability	unitless	k_{rg}	0.998							
	Permeability to vapor	cm^2	k_v	9.89E-08							
	Distance from building foundation to source	m	L_{T-gw}	3.56							
	Bldg foundation thickness	m	L_{crack}	0.1							
	Bldg foundation length	m		10.00							
	Bldg foundation width	m		10.00							
	Bldg occupied height	m		2.44							
	Bldg occupied volume	m^3		244.00							
	Occupied depth below ground	m		0.0							
	Bldg area for vapor intrusion	m^2	A_B	100.0							
	Ratio of A_{crack} to A_B		η	4E-04							
	Area of cracks	m^2	A_{crack}	4E-02							
	Air exchange rate	$hour^{-1}$	ach	0.45							
	Building ventilation rate	m^3/day	Q_{bldg}	2.64E+03							
	Pressure difference between outdoors-indoors	$kg/m\text{-}s^2$	ΔP	1.0							
	Viscosity of air	kg/m-s	μ_a	1.8E-05							
	Crack length (bldg perimeter)	m	X_{crack}	40							
	Crack depth below ground	m	Z_{crack}	0.10							
	Crack radius	m	r_{crack}	1E-03							
	Soil gas flow rate into bldg	m^3/day	Q_{soil}	7.20							
	Indoor air concentrations resulting from groundwater vapor intrusion into a building are estimated using the relationships described by Johnson and Ettinger (Heuristic model for predicting the intrusion rate of contaminant vapors into buildings, 1991), which USEPA recommends for screening level calculations, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.										
	The effective diffusion term DeffT is calculated based on a silty clay soil, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Program.										

Attachment C.27: Cancer Risk and Hazard Index Calculations for Vapor Intrusion into a Residential Building (Slab-on-Grade) from Perched Water at MW-178 (Parcel 5) Whirlpool, Fort Smith, Arkansas

							Cancer				Noncancer	
Chem Group	**Chemical**	**CASRN**	**Carc Class**	**ADAF**	**C_{gw}** (mg/L)	**$C_{building}$** (mg/m^3)	**URF** (m^3/mg)	**f_{inh}**	**Risk**		**RfC** (mg/m^3)	**HQ**
VOC	Acetone	67-64-1	ID	N	2.00E-03	4.24E-07					3.1E+01	1.3E-08
VOC	Benzene	71-43-2	A	N	1.50E-04	2.07E-07	7.8E-03		6.6E-10		3.0E-02	6.6E-06
VOC	Chloromethane	74-87-3	D	N	1.20E-04	1.96E-07					9.0E-02	2.1E-06
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	9.70E-04	1.19E-06						
VOC	Trichloroethene	79-01-6	HC	Y	3.90E-03	6.26E-06	4.1E-03	0.2439	1.4E-08		2.0E-03	3.0E-03
							Cumulative Risk:		2E-08		**HI:**	3E-03
Note:												
f_{inh} is the fraction of the inhalation URF that USEPA identified as having a mutagenic mode of action.												
Only VOCs detected in the Annual 2017 groundwater sample at MW-178 (Parcel 5) are shown.												
Risks were calculated assuming residential exposure to groundwater-derived vapors in indoor air for 24 hours per day and 350 days per year for 30 years.												

Attachment C.28: Soil Moisture Profile for Residential Building (Slab-on-Grade) at Soil Vapor Monitoring Point VP-14 (Parcel 5) Whirlpool, Fort Smith, Arkansas



Notes:
The soil-water profile in the vadose zone is estimated using the van Genuchten soil-water retention equation with default water retention parameters appropriate for silt clay, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.

RAMBOLL ENVIRON

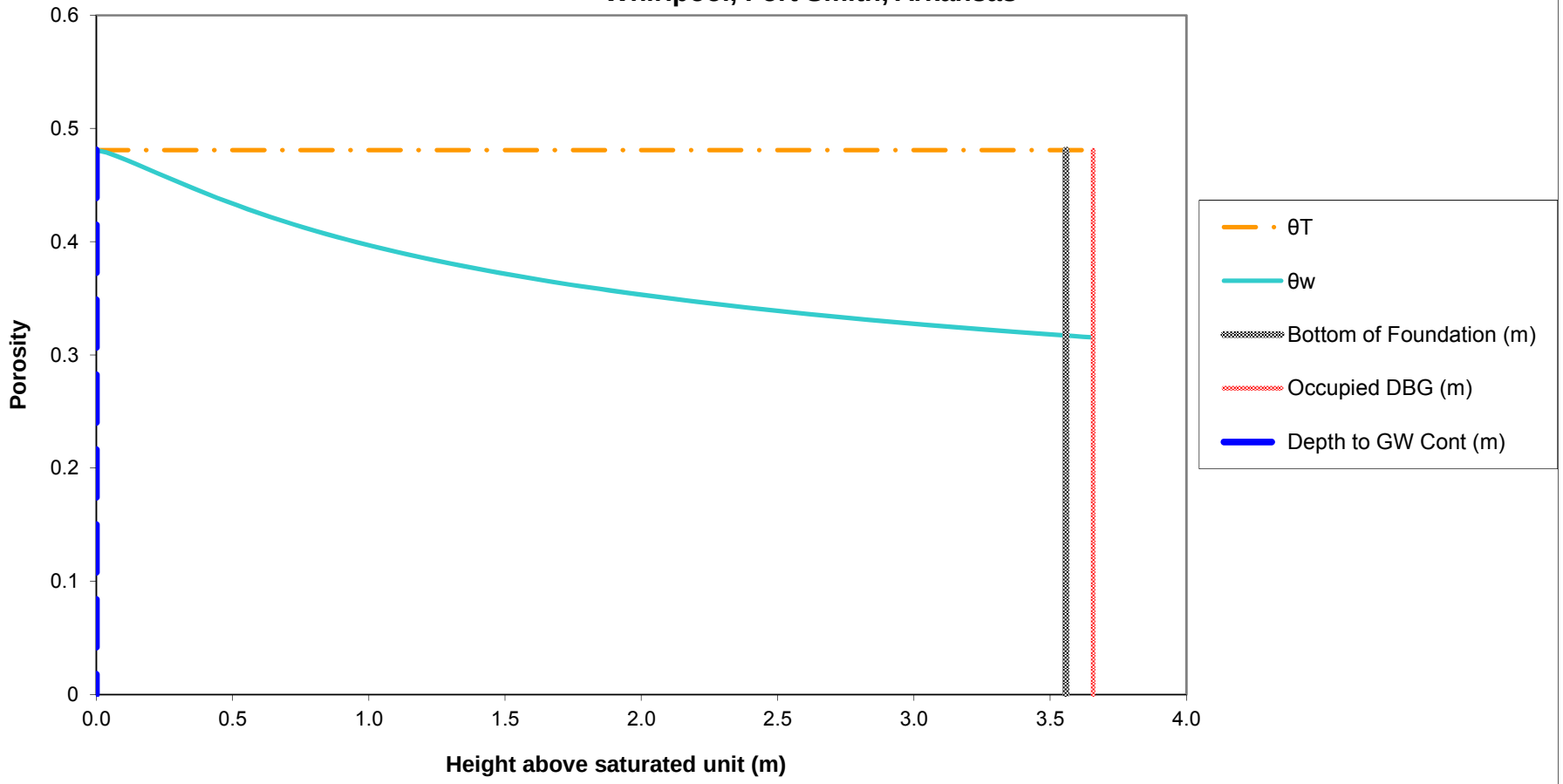
Attachment C.29: Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Perched Water at VP-14 (Parcel 5) Whirlpool, Fort Smith, Arkansas

Chem Group	Chemical	CASRN	D_{air} (m^2/day)	D_{water} (m^2/day)	H (unitless)	D_{crack} (m^2/day)	D_{eff}^T (m^2/day)	α_{soil}	α_{slab}	α_{∞}	C_{bldg} (L-water/m^3)
VOC	Benzene	71-43-2	7.60E-01	8.47E-05	1.59E-01	1.21E-01	7.17E-04	3.20E-03	2.73E-03	8.74E-06	1.39E-03
VOC	Chloroform	67-66-3	8.99E-01	8.64E-05	1.07E-01	1.44E-01	9.79E-04	4.37E-03	2.73E-03	1.19E-05	1.28E-03
VOC	1,1-Dichloroethene	75-35-4	7.78E-01	8.99E-05	8.10E-01	1.24E-01	2.71E-04	1.21E-03	2.73E-03	3.32E-06	2.69E-03
VOC	cis-1,2-Dichloroethene	156-59-2	6.36E-01	9.76E-05	1.19E-01	1.02E-01	8.60E-04	3.84E-03	2.73E-03	1.05E-05	1.24E-03
VOC	trans-1,2-Dichloroethene	156-60-5	6.11E-01	1.03E-04	2.81E-01	9.76E-02	5.23E-04	2.34E-03	2.73E-03	6.39E-06	1.80E-03
VOC	Trichloroethene	79-01-6	6.83E-01	7.86E-05	2.88E-01	1.09E-01	4.58E-04	2.05E-03	2.73E-03	5.59E-06	1.61E-03
Notes:	**Crack Soil and Building Characteristics**			**Crack Soil**							
	SCS Soil texture class			Sand							
	Bulk density	kg/L	ρ_b	1.66							
	Total porosity	L/L-soil	θ_T	0.375							
	Water-filled porosity	L/L-soil	θ_w	0.055							
	Air-filled porosity	L/L-soil	θ_a	0.320							
	Residual saturation	L/L-soil	θ_r	0.053							
	Hydraulic conductivity	cm/s	K	7.4E-03							
	Dynamic viscosity of water	g/cm-s	μ_w	0.01307							
	Density of water	g/cm^3	ρ_w	1.0							
	Gravitational acceleration	cm/s^2	g	980.7							
	Intrinsic permeability	cm^2	k	9.9E-08							
	Relative saturation	unitless	S_e	0.005							
	van Genuchten N	unitless	N	3.177							
	van Genuchten M	unitless	M	0.685							
	Relative air permeability	unitless	k_{rg}	0.997							
	Permeability to vapor	cm^2	k_v	9.88E-08							
	Distance from building foundation to source	m	L_{T-gw}	3.10							
	Bldg foundation thickness	m	L_{crack}	0.1							
	Bldg foundation length	m		10.00							
	Bldg foundation width	m		10.00							
	Bldg occupied height	m		2.44							
	Bldg occupied volume	m^3		244.00							
	Occupied depth below ground	m		0.0							
	Bldg area for vapor intrusion	m^2	A_B	100.0							
	Ratio of A_{crack} to A_B		η	4E-04							
	Area of cracks	m^2	A_{crack}	4E-02							
	Air exchange rate	$hour^{-1}$	ach	0.45							
	Building ventilation rate	m^3/day	Q_{bldg}	2.64E+03							
	Pressure difference between outdoors-indoors	kg/m-s^2	ΔP	1.0							
	Viscosity of air	kg/m-s	μ_a	1.8E-05							
	Crack length (bldg perimeter)	m	X_{crack}	40							
	Crack depth below ground	m	Z_{crack}	0.10							
	Crack radius	m	r_{crack}	1E-03							
	Soil gas flow rate into bldg	m^3/day	Q_{soil}	7.20							
	Indoor air concentrations resulting from groundwater vapor intrusion into a building are estimated using the relationships described by Johnson and Ettinger (Heuristic model for predicting the intrusion rate of contaminant vapors into buildings, 1991), which USEPA recommends for screening level calculations, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.										
	The effective diffusion term DeffT is calculated based on a silty clay soil, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Program.										

Attachment C.30: Cancer Risk and Hazard Index Calculations for Vapor Intrusion into a Residential Building (Slab-on-Grade) from Perched Water at VP-14 (Parcel 5) Whirlpool, Fort Smith, Arkansas

							Cancer				Noncancer	
Chem Group	**Chemical**	**CASRN**	**Carc Class**	**ADAF**	**C_{gw}** (mg/L)	**$C_{building}$** (mg/m^3)	**URF** (m^3/mg)	**f_{inh}**	**Risk**		**RfC** (mg/m^3)	**HQ**
VOC	Benzene	71-43-2	A	N	1.80E-04	2.50E-07	7.8E-03		8.0E-10		3.0E-02	8.0E-06
VOC	Chloroform	67-66-3	B2	N	4.40E-04	5.64E-07	2.3E-02		5.3E-09		5.0E-02	1.1E-05
VOC	1,1-Dichloroethene	75-35-4	C	N	9.30E-04	2.50E-06					2.0E-01	1.2E-05
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	3.30E-03	4.10E-06						
VOC	trans-1,2-Dichloroethene	156-60-5	ID	N	2.70E-04	4.86E-07						
VOC	Trichloroethene	79-01-6	HC	Y	6.90E-02	1.11E-04	4.1E-03	0.2439	2.6E-07		2.0E-03	5.3E-02
							Cumulative Risk:		3E-07		**HI:**	5E-02
Note:												
f_{inh} is the fraction of the inhalation URF that USEPA identified as having a mutagenic mode of action.												
Only VOCs detected in the Annual 2017 water sample at VP-14 (Parcel 5) are shown.												
Risks were calculated assuming residential exposure to groundwater-derived vapors in indoor air for 24 hours per day and 350 days per year for 30 years.												

Attachment C.31: Soil Moisture Profile for Residential Building (Slab-on-Grade) at Groundwater Monitoring Well MW-179 (Parcel 5) Whirlpool, Fort Smith, Arkansas



Notes:
The soil-water profile in the vadose zone is estimated using the van Genuchten soil-water retention equation with default water retention parameters appropriate for silt clay, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.

Attachment C.32: Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Groundwater at MW-179 (Parcel 5) Whirlpool, Fort Smith, Arkansas

Chem Group	Chemical	CASRN	D_{air} (m^2/day)	D_{water} (m^2/day)	H (unitless)	D_{crack} (m^2/day)	D_{eff}^T (m^2/day)	α_{soil}	α_{slab}	α_∞	C_{bldg} (L-water/m^3)
VOC	Acetone	67-64-1	1.07E+00	9.85E-05	1.14E-03	1.72E-01	1.87E-02	6.80E-02	2.73E-03	1.86E-04	2.12E-04
VOC	cis-1,2-Dichloroethene	156-59-2	6.36E-01	9.76E-05	1.19E-01	1.02E-01	9.72E-04	3.78E-03	2.73E-03	1.03E-05	1.22E-03
VOC	Trichloroethene	79-01-6	6.83E-01	7.86E-05	2.88E-01	1.10E-01	5.23E-04	2.04E-03	2.73E-03	5.57E-06	1.60E-03

Notes:	Crack Soil and Building Characteristics			Crack Soil
	SCS Soil texture class			Sand
	Bulk density	kg/L	ρ_b	1.66
	Total porosity	L/L-soil	θ_T	0.375
	Water-filled porosity	L/L-soil	θ_w	0.054
	Air-filled porosity	L/L-soil	θ_a	0.321
	Residual saturation	L/L-soil	θ_r	0.053
	Hydraulic conductivity	cm/s	K	7.4E-03
	Dynamic viscosity of water	g/cm-s	μ_w	0.01307
	Density of water	g/cm^3	ρ_w	1.0
	Gravitational acceleration	cm/s^2	g	980.7
	Intrinsic permeability	cm^2	k	9.9E-08
	Relative saturation	unitless	S_e	0.004
	van Genuchten N	unitless	N	3.177
	van Genuchten M	unitless	M	0.685
	Relative air permeability	unitless	k_{rg}	0.998
	Permeability to vapor	cm^2	k_v	9.89E-08
	Distance from building foundation to source	m	L_{T-gw}	3.56
	Bldg foundation thickness	m	L_{crack}	0.1
	Bldg foundation length	m		10.00
	Bldg foundation width	m		10.00
	Bldg occupied height	m		2.44
	Bldg occupied volume	m^3		244.00
	Occupied depth below ground	m		0.0
	Bldg area for vapor intrusion	m^2	A_B	100.0
	Ratio of A_{crack} to A_B		η	4E-04
	Area of cracks	m^2	A_{crack}	4E-02
	Air exchange rate	$hour^{-1}$	ach	0.45
	Building ventilation rate	m^3/day	Q_{bldg}	2.64E+03
	Pressure difference between outdoors-indoors	$kg/m\text{-}s^2$	ΔP	1.0
	Viscosity of air	kg/m-s	μ_a	1.8E-05
	Crack length (bldg perimeter)	m	X_{crack}	40
	Crack depth below ground	m	Z_{crack}	0.10
	Crack radius	m	r_{crack}	1E-03
	Soil gas flow rate into bldg	m^3/day	Q_{soil}	7.20

Indoor air concentrations resulting from groundwater vapor intrusion into a building are estimated using the relationships described by Johnson and Ettinger (Heuristic model for predicting the intrusion rate of contaminant vapors into buildings, 1991), which USEPA recommends for screening level calculations, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Plan, which was used as the basis for the ADEQ Remedial Action Decision.

The effective diffusion term DeffT is calculated based on a silty clay soil, as discussed in Appendix A, Section 3.3.1 of the ADEQ-approved Revised Risk Management Program.

Attachment C.33: Cancer Risk and Hazard Index Calculations for Vapor Intrusion into a Residential Building (Slab-on-Grade) from Shallow Groundwater at MW-179 (Parcel 5) Whirlpool, Fort Smith, Arkansas

							Cancer				Noncancer	
Chem Group	**Chemical**	**CASRN**	**Carc Class**	**ADAF**	**C_{gw}** (mg/L)	**$C_{building}$** (mg/m^3)	**URF** (m^3/mg)	**f_{inh}**	**Risk**		**RfC** (mg/m^3)	**HQ**
VOC	Acetone	67-64-1	ID	N	2.20E-03	4.66E-07					3.1E+01	1.4E-08
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	3.50E-04	4.29E-07						
VOC	Trichloroethene	79-01-6	HC	Y	1.07E-02	1.72E-05	4.1E-03	0.2439	4.0E-08		2.0E-03	8.2E-03
							Cumulative Risk:		4E-08		**HI:**	8E-03
Note:												
f_{inh} is the fraction of the inhalation URF that USEPA identified as having a mutagenic mode of action.												
Only VOCs detected in the Annual 2017 groundwater sample at MW-179 (Parcel 5) are shown.												
Risks were calculated assuming residential exposure to groundwater-derived vapors in indoor air for 24 hours per day and 350 days per year for 30 years.												

Attachment C

Laboratory Analytical Data

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

November 28, 2017

Nick Zurweller
Ramboll Environ
7500 College Blvd.
Ste. 295
Overland Park, KS 66210

RE: Project: FT SMITH
Pace Project No.: 60256266

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on October 24, 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.

RV-1 revised report, parameters added to TMW-11

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

Sincerely,

Richard Mannz
richard.mannz@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: Tamara House-Knight, Ramboll Environ
M. Wilson

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: FT SMITH
Pace Project No.: 60256266

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 17-016-0
Illinois Certification #: 200030
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212018-1
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587
Missouri Certification: 10070

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: FT SMITH
Pace Project No.: 60256266

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60256266001	**MW-63R-201710**	Water	10/23/17 16:46	10/24/17 07:00
60256266002	**MW-194-201710**	Water	10/23/17 16:12	10/24/17 07:00
60256266003	**TMW-29-201710**	Water	10/23/17 15:25	10/24/17 07:00
60256266004	**TB-03-201710**	Water	10/23/17 08:00	10/24/17 07:00
60256266005	**MW-195-201710**	Water	10/23/17 16:30	10/24/17 07:00
60256266006	**TMW-20-201710**	Water	10/23/17 17:20	10/24/17 07:00
60256266007	**FD-01-201710**	Water	10/23/17 17:20	10/24/17 07:00
60256266008	**EB-01-201710**	Water	10/23/17 17:50	10/24/17 07:00
60256266009	**TMW-11-201710**	Water	10/23/17 16:00	10/24/17 07:00
60256266010	**MW-50-201710**	Water	10/23/17 17:10	10/24/17 07:00
60256266011	**MW-61R-201710**	Water	10/23/17 16:52	10/24/17 07:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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(913)599-5665

SAMPLE ANALYTE COUNT

Project: FT SMITH
Pace Project No.: 60256266

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60256266001	**MW-63R-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256266002	**MW-194-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256266003	**TMW-29-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256266004	**TB-03-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256266005	**MW-195-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256266006	**TMW-20-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256266007	**FD-01-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256266008	**EB-01-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256266009	**TMW-11-201710**	EPA 6010	TDS	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 2320B	JSS	3	PASI-K
		SM 4500-S-2 D	JSS	1	PASI-K
		EPA 300.0	OL	1	PASI-K
		EPA 350.1	CRS	1	PASI-K
		EPA 353.2	OL	3	PASI-K
		EPA 353.2	CRS	1	PASI-K
		SM 5310C	LDF	1	PASI-K
60256266010	**MW-50-201710**	EPA 6010	TDS	2	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 2320B	JSS	3	PASI-K
		SM 4500-S-2 D	JSS	1	PASI-K
		EPA 300.0	OL	2	PASI-K
		EPA 350.1	CRS	1	PASI-K
		EPA 353.2	RAD	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256266011	**MW-61R-201710**	EPA 6010	TDS	2	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 2320B	JSS	3	PASI-K
		SM 4500-S-2 D	JSS	1	PASI-K
		EPA 300.0	OL	2	PASI-K
		EPA 350.1	CRS	1	PASI-K
		EPA 353.2	RAD	3	PASI-K
		SM 5310C	LDF	1	PASI-K

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PROJECT NARRATIVE

Project: FT SMITH
Pace Project No.: 60256266

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Ramboll Environ_AR
Date: November 28, 2017

General Information:
3 samples were analyzed for EPA 6010. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 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.

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: FT SMITH
Pace Project No.: 60256266

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: November 28, 2017

General Information:
11 samples were analyzed for EPA 5030B/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: 500583

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

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PROJECT NARRATIVE

Project: FT SMITH
Pace Project No.: 60256266

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: Ramboll Environ_AR
Date: November 28, 2017

General Information:
3 samples were analyzed for SM 2320B. 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.

H1: Analysis conducted outside the EPA method holding time.
- TMW-11-201710 (Lab ID: 60256266009)

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.

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

QC Batch: 503814

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.
- DUP (Lab ID: 2062996)
  - Alkalinity, Carbonate (CaCO3)

Additional Comments:

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PROJECT NARRATIVE

Project: FT SMITH
Pace Project No.: 60256266

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: Ramboll Environ_AR
Date: November 28, 2017

General Information:
3 samples were analyzed for SM 4500-S-2 D. 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.

H1: Analysis conducted outside the EPA method holding time.
- TMW-11-201710 (Lab ID: 60256266009)

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.

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

Additional Comments:

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PROJECT NARRATIVE

Project: FT SMITH
Pace Project No.: 60256266

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Ramboll Environ_AR
Date: November 28, 2017

General Information:
3 samples were analyzed for EPA 300.0. 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.

H1: Analysis conducted outside the EPA method holding time.
- TMW-11-201710 (Lab ID: 60256266009)

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: FT SMITH
Pace Project No.: 60256266

Method: **EPA 350.1**
Description: 350.1 Ammonia
Client: Ramboll Environ_AR
Date: November 28, 2017

General Information:
3 samples were analyzed for EPA 350.1. 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.

H1: Analysis conducted outside the EPA method holding time.
- TMW-11-201710 (Lab ID: 60256266009)

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.

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

Additional Comments:

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PROJECT NARRATIVE

Project: FT SMITH
Pace Project No.: 60256266

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Ramboll Environ_AR
Date: November 28, 2017

General Information:
3 samples were analyzed for EPA 353.2. 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.

H1: Analysis conducted outside the EPA method holding time.
- TMW-11-201710 (Lab ID: 60256266009)

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

QC Batch: 503840

B: Analyte was detected in the associated method blank.
- BLANK for HBN 503840 [WETA/481 (Lab ID: 2063260)
  - Nitrogen, Nitrite

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: 500221

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60256266011,60256361008

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 2047158)
  - Nitrogen, Nitrate
  - Nitrogen, Nitrite
- MS (Lab ID: 2047160)
  - Nitrogen, Nitrate
  - Nitrogen, Nitrite

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

Additional Comments:

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PROJECT NARRATIVE

Project: FT SMITH
Pace Project No.: 60256266

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 pres.
Client: Ramboll Environ_AR
Date: November 28, 2017

General Information:
1 sample was analyzed for EPA 353.2. 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.

H1: Analysis conducted outside the EPA method holding time.
- TMW-11-201710 (Lab ID: 60256266009)

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: FT SMITH
Pace Project No.: 60256266

Method: **SM 5310C**
Description: 5310C TOC
Client: Ramboll Environ_AR
Date: November 28, 2017

General Information:
3 samples were analyzed for SM 5310C. 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.

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.

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.

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ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: MW-63R-201710 **Lab ID: 60256266001** Collected: 10/23/17 16:46 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 04:56	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 04:56	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 04:56	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 04:56	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 04:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 04:56	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 04:56	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 04:56	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 04:56	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 04:56	75-00-3	
Chloroform	**0.15J**	ug/L	1.0	0.14	1		10/28/17 04:56	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 04:56	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 04:56	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 04:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 04:56	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 04:56	75-35-4	
cis-1,2-Dichloroethene	**0.85J**	ug/L	1.0	0.080	1		10/28/17 04:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 04:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 04:56	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 04:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 04:56	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 04:56	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 04:56	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 04:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 04:56	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 04:56	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 04:56	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 04:56	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 04:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 04:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 04:56	79-00-5	
Trichloroethene	**4.4**	ug/L	1.0	0.17	1		10/28/17 04:56	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 04:56	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 04:56	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/28/17 04:56	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		1		10/28/17 04:56	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		10/28/17 04:56	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 04:56		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: MW-194-201710 **Lab ID: 60256266002** Collected: 10/23/17 16:12 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 05:10	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 05:10	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 05:10	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 05:10	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 05:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 05:10	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 05:10	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 05:10	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 05:10	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 05:10	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 05:10	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 05:10	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 05:10	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 05:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 05:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 05:10	75-35-4	
cis-1,2-Dichloroethene	**1.1**	ug/L	1.0	0.080	1		10/28/17 05:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 05:10	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 05:10	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 05:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 05:10	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 05:10	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 05:10	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 05:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 05:10	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 05:10	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 05:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 05:10	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 05:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 05:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 05:10	79-00-5	
Trichloroethene	**15.4**	ug/L	1.0	0.17	1		10/28/17 05:10	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 05:10	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 05:10	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/28/17 05:10	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		1		10/28/17 05:10	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/28/17 05:10	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 05:10		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: TMW-29-201710 **Lab ID: 60256266003** Collected: 10/23/17 15:25 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 05:25	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 05:25	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 05:25	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 05:25	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 05:25	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 05:25	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 05:25	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 05:25	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 05:25	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 05:25	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 05:25	67-66-3	
Chloromethane	**0.16J**	ug/L	1.0	0.080	1		10/28/17 05:25	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 05:25	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 05:25	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 05:25	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 05:25	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/28/17 05:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 05:25	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 05:25	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 05:25	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 05:25	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 05:25	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 05:25	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 05:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 05:25	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 05:25	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 05:25	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 05:25	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 05:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 05:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 05:25	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/28/17 05:25	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 05:25	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 05:25	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/28/17 05:25	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/28/17 05:25	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		10/28/17 05:25	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 05:25		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: TB-03-201710 **Lab ID: 60256266004** Collected: 10/23/17 08:00 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 02:50	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 02:50	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 02:50	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 02:50	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 02:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 02:50	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 02:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 02:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 02:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 02:50	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 02:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 02:50	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 02:50	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 02:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 02:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 02:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/28/17 02:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 02:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 02:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 02:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 02:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 02:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 02:50	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 02:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 02:50	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 02:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 02:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 02:50	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 02:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 02:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 02:50	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/28/17 02:50	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 02:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 02:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/28/17 02:50	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/28/17 02:50	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/28/17 02:50	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 02:50		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: MW-195-201710 **Lab ID: 60256266005** Collected: 10/23/17 16:30 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 05:39	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 05:39	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 05:39	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 05:39	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 05:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 05:39	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 05:39	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 05:39	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 05:39	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 05:39	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 05:39	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 05:39	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 05:39	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 05:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 05:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 05:39	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/28/17 05:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 05:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 05:39	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 05:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 05:39	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 05:39	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 05:39	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 05:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 05:39	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 05:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 05:39	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 05:39	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 05:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 05:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 05:39	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/28/17 05:39	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 05:39	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 05:39	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-120		1		10/28/17 05:39	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/28/17 05:39	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/28/17 05:39	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 05:39		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: TMW-20-201710 **Lab ID: 60256266006** Collected: 10/23/17 17:20 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 05:53	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 05:53	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 05:53	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 05:53	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 05:53	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 05:53	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 05:53	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 05:53	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 05:53	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 05:53	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 05:53	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 05:53	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 05:53	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 05:53	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 05:53	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 05:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/28/17 05:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 05:53	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 05:53	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 05:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 05:53	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 05:53	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 05:53	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 05:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 05:53	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 05:53	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 05:53	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 05:53	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 05:53	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 05:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 05:53	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/28/17 05:53	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 05:53	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 05:53	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/28/17 05:53	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/28/17 05:53	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/28/17 05:53	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 05:53		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: FD-01-201710 **Lab ID: 60256266007** Collected: 10/23/17 17:20 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 06:35	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 06:35	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 06:35	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 06:35	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 06:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 06:35	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 06:35	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 06:35	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 06:35	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 06:35	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 06:35	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 06:35	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 06:35	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 06:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 06:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 06:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/28/17 06:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 06:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 06:35	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 06:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 06:35	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 06:35	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 06:35	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 06:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 06:35	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 06:35	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 06:35	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 06:35	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 06:35	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 06:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 06:35	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/28/17 06:35	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 06:35	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 06:35	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/28/17 06:35	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/28/17 06:35	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/28/17 06:35	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 06:35		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: EB-01-201710 **Lab ID: 60256266008** Collected: 10/23/17 17:50 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 03:04	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 03:04	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 03:04	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 03:04	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 03:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 03:04	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 03:04	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 03:04	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 03:04	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 03:04	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 03:04	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 03:04	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 03:04	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 03:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 03:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 03:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/28/17 03:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 03:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 03:04	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 03:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 03:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 03:04	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 03:04	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 03:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 03:04	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 03:04	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 03:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 03:04	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 03:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 03:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 03:04	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/28/17 03:04	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 03:04	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 03:04	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/28/17 03:04	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/28/17 03:04	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		10/28/17 03:04	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 03:04		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: TMW-11-201710 **Lab ID: 60256266009** Collected: 10/23/17 16:00 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**8800**	ug/L	50.0	12.4	1	11/20/17 14:50	11/21/17 12:56	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 06:21	67-64-1	
Benzene	**0.11J**	ug/L	1.0	0.060	1		10/28/17 06:21	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 06:21	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 06:21	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 06:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 06:21	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 06:21	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 06:21	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 06:21	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 06:21	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 06:21	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 06:21	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 06:21	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 06:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 06:21	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 06:21	75-35-4	
cis-1,2-Dichloroethene	**1.7**	ug/L	1.0	0.080	1		10/28/17 06:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 06:21	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 06:21	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 06:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 06:21	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 06:21	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 06:21	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 06:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 06:21	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 06:21	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 06:21	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 06:21	127-18-4	
Toluene	**0.47J**	ug/L	1.0	0.17	1		10/28/17 06:21	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 06:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 06:21	79-00-5	
Trichloroethene	**0.62J**	ug/L	1.0	0.17	1		10/28/17 06:21	79-01-6	
Vinyl chloride	**0.70J**	ug/L	1.0	0.13	1		10/28/17 06:21	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 06:21	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/28/17 06:21	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		10/28/17 06:21	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/28/17 06:21	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 06:21		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**566**	mg/L	20.0	4.9	1		11/17/17 16:54		H1
Alkalinity, Carbonate (CaCO3)	ND	mg/L	20.0	4.9	1		11/17/17 16:54		H1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: TMW-11-201710 **Lab ID: 60256266009** Collected: 10/23/17 16:00 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**566**	mg/L	20.0	4.9	1		11/17/17 16:54		H1
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		11/20/17 12:15	18496-25-8	H1
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**0.74J**	mg/L	1.0	0.50	1		11/25/17 08:16	14808-79-8	H1
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**3.0**	mg/L	0.10	0.039	1		11/21/17 09:32	7664-41-7	H1
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.050	1		11/18/17 08:46		H1
Nitrogen, Nitrite	**0.065J**	mg/L	0.10	0.030	1		11/18/17 08:46		B,H1
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.050	1		11/18/17 08:46		H1
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.11**	mg/L	0.10	0.050	1		11/21/17 15:16		H1
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**3.7**	mg/L	1.0	0.13	1		11/20/17 09:38	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: MW-50-201710 **Lab ID: 60256266010** Collected: 10/23/17 17:10 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**919**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 18:58	7439-89-6	
Manganese	**17.3**	ug/L	5.0	1.8	1	10/30/17 11:47	10/30/17 18:58	7439-96-5	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 06:49	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 06:49	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 06:49	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 06:49	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 06:49	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 06:49	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 06:49	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 06:49	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 06:49	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 06:49	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 06:49	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 06:49	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 06:49	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 06:49	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 06:49	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 06:49	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/28/17 06:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 06:49	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 06:49	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 06:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 06:49	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 06:49	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 06:49	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 06:49	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 06:49	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 06:49	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 06:49	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 06:49	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 06:49	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 06:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 06:49	79-00-5	
Trichloroethene	**0.26J**	ug/L	1.0	0.17	1		10/28/17 06:49	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 06:49	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 06:49	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/28/17 06:49	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		1		10/28/17 06:49	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/28/17 06:49	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 06:49		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**250**	mg/L	20.0	4.9	1		10/26/17 14:28		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: MW-50-201710 **Lab ID: 60256266010** Collected: 10/23/17 17:10 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Carbonate (CaCO3)	ND	mg/L	20.0	4.9	1		10/26/17 14:28		
Alkalinity, Total as CaCO3	**250**	mg/L	20.0	4.9	1		10/26/17 14:28		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**0.0070J**	mg/L	0.050	0.0048	1		10/25/17 13:00	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**224**	mg/L	20.0	10.0	20		11/03/17 16:25	16887-00-6	
Sulfate	**17.1**	mg/L	1.0	0.50	1		11/02/17 00:27	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	ND	mg/L	0.10	0.039	1		10/31/17 14:12	7664-41-7	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.050	1		10/25/17 11:35		
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/25/17 11:35		
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.050	1		10/25/17 11:35		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.33J**	mg/L	1.0	0.13	1		10/27/17 09:55	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: MW-61R-201710 **Lab ID: 60256266011** Collected: 10/23/17 16:52 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**12000**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:00	7439-89-6	
Manganese	**1120**	ug/L	5.0	1.8	1	10/30/17 11:47	10/30/17 19:00	7439-96-5	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/28/17 06:07	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/28/17 06:07	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/28/17 06:07	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/28/17 06:07	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/28/17 06:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/28/17 06:07	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/28/17 06:07	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/28/17 06:07	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/28/17 06:07	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/28/17 06:07	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/28/17 06:07	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/28/17 06:07	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/28/17 06:07	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/28/17 06:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/28/17 06:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 06:07	75-35-4	
cis-1,2-Dichloroethene	**2.1**	ug/L	1.0	0.080	1		10/28/17 06:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/28/17 06:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/28/17 06:07	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/28/17 06:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/28/17 06:07	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/28/17 06:07	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/28/17 06:07	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/28/17 06:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/28/17 06:07	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/28/17 06:07	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/28/17 06:07	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/28/17 06:07	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/28/17 06:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/28/17 06:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/28/17 06:07	79-00-5	
Trichloroethene	**2.9**	ug/L	1.0	0.17	1		10/28/17 06:07	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/28/17 06:07	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/28/17 06:07	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/28/17 06:07	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/28/17 06:07	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/28/17 06:07	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/28/17 06:07		
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**411**	mg/L	20.0	4.9	1		10/26/17 14:44		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FT SMITH
Pace Project No.: 60256266

Sample: MW-61R-201710 **Lab ID: 60256266011** Collected: 10/23/17 16:52 Received: 10/24/17 07:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Carbonate (CaCO3)	ND	mg/L	20.0	4.9	1		10/26/17 14:44		
Alkalinity, Total as CaCO3	**411**	mg/L	20.0	4.9	1		10/26/17 14:44		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**0.021J**	mg/L	0.050	0.0048	1		10/25/17 13:01	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**96.5**	mg/L	10.0	5.0	10		11/03/17 16:39	16887-00-6	
Sulfate	**8.9**	mg/L	1.0	0.50	1		11/02/17 01:11	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.87**	mg/L	0.10	0.039	1		10/31/17 14:14	7664-41-7	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.050	1		10/25/17 11:36		M1
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/25/17 11:36		M1
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.050	1		10/25/17 11:36		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.2**	mg/L	1.0	0.13	1		10/27/17 10:08	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 500794 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 60256266010, 60256266011

METHOD BLANK: 2050410 Matrix: Water
Associated Lab Samples: 60256266010, 60256266011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	50.0	12.4	10/30/17 18:42	
Manganese	ug/L	ND	5.0	1.8	10/30/17 18:42	

LABORATORY CONTROL SAMPLE: 2050411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9760	98	80-120	
Manganese	ug/L	1000	1010	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2050412 2050413

Parameter	Units	60256450001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	159	10000	10000	10100	9670	100	95	75-125	5	20	
Manganese	ug/L	ND	1000	1000	991	959	99	96	75-125	3	20	

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 504025 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 60256266009

METHOD BLANK: 2064306 Matrix: Water
Associated Lab Samples: 60256266009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	50.0	12.4	11/21/17 12:54	

LABORATORY CONTROL SAMPLE: 2064307

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	10300	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2064308 2064309

Parameter	Units	60258357001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	ND	10000	10000	10200	10200	102	102	75-125	0	20	

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 500583 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256266001, 60256266002, 60256266003, 60256266004, 60256266005, 60256266006, 60256266007, 60256266008, 60256266009, 60256266010, 60256266011

METHOD BLANK: 2049109 Matrix: Water
Associated Lab Samples: 60256266001, 60256266002, 60256266003, 60256266004, 60256266005, 60256266006, 60256266007, 60256266008, 60256266009, 60256266010, 60256266011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/28/17 02:36	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/28/17 02:36	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/28/17 02:36	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/28/17 02:36	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/28/17 02:36	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/28/17 02:36	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/28/17 02:36	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/28/17 02:36	
2-Hexanone	ug/L	ND	10.0	1.2	10/28/17 02:36	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/28/17 02:36	
Acetone	ug/L	ND	10.0	1.9	10/28/17 02:36	
Benzene	ug/L	ND	1.0	0.060	10/28/17 02:36	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/28/17 02:36	
Bromoform	ug/L	ND	1.0	0.070	10/28/17 02:36	
Bromomethane	ug/L	ND	5.0	0.16	10/28/17 02:36	
Carbon disulfide	ug/L	ND	5.0	0.12	10/28/17 02:36	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/28/17 02:36	
Chlorobenzene	ug/L	ND	1.0	0.21	10/28/17 02:36	
Chloroethane	ug/L	ND	1.0	0.15	10/28/17 02:36	
Chloroform	ug/L	ND	1.0	0.14	10/28/17 02:36	
Chloromethane	ug/L	ND	1.0	0.080	10/28/17 02:36	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/28/17 02:36	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/28/17 02:36	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/28/17 02:36	
Ethylbenzene	ug/L	ND	1.0	0.18	10/28/17 02:36	
Methylene chloride	ug/L	ND	1.0	0.15	10/28/17 02:36	
Styrene	ug/L	ND	1.0	0.12	10/28/17 02:36	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/28/17 02:36	
Toluene	ug/L	ND	1.0	0.17	10/28/17 02:36	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/28/17 02:36	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/28/17 02:36	
Trichloroethene	ug/L	ND	1.0	0.17	10/28/17 02:36	
Vinyl chloride	ug/L	ND	1.0	0.13	10/28/17 02:36	
Xylene (Total)	ug/L	ND	3.0	0.42	10/28/17 02:36	
1,2-Dichloroethane-d4 (S)	%	97	80-120		10/28/17 02:36	
4-Bromofluorobenzene (S)	%	99	80-120		10/28/17 02:36	
Toluene-d8 (S)	%	101	80-120		10/28/17 02:36	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

LABORATORY CONTROL SAMPLE: 2049110

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.2	101	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	19.2	96	74-124	
1,1,2-Trichloroethane	ug/L	20	21.0	105	81-118	
1,1-Dichloroethane	ug/L	20	21.2	106	82-122	
1,1-Dichloroethene	ug/L	20	20.0	100	78-123	
1,2-Dichloroethane	ug/L	20	20.0	100	78-117	
1,2-Dichloropropane	ug/L	20	21.4	107	81-118	
2-Butanone (MEK)	ug/L	100	99.5	100	72-117	
2-Hexanone	ug/L	100	103	103	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	100	100	77-124	
Acetone	ug/L	100	99.4	99	66-127	
Benzene	ug/L	20	20.7	103	82-115	
Bromodichloromethane	ug/L	20	20.3	102	83-123	
Bromoform	ug/L	20	20.3	102	79-126	
Bromomethane	ug/L	20	23.2	116	39-146	
Carbon disulfide	ug/L	20	19.9	100	75-121	
Carbon tetrachloride	ug/L	20	21.6	108	82-117	
Chlorobenzene	ug/L	20	20.3	102	89-114	
Chloroethane	ug/L	20	18.7	94	71-133	
Chloroform	ug/L	20	20.2	101	78-117	
Chloromethane	ug/L	20	20.6	103	19-181	
cis-1,2-Dichloroethene	ug/L	20	19.6	98	78-119	
cis-1,3-Dichloropropene	ug/L	20	20.4	102	81-116	
Dibromochloromethane	ug/L	20	19.6	98	81-122	
Ethylbenzene	ug/L	20	20.2	101	83-112	
Methylene chloride	ug/L	20	22.0	110	78-127	
Styrene	ug/L	20	21.0	105	88-117	
Tetrachloroethene	ug/L	20	20.1	101	80-121	
Toluene	ug/L	20	20.4	102	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.1	100	79-120	
trans-1,3-Dichloropropene	ug/L	20	19.4	97	81-119	
Trichloroethene	ug/L	20	19.9	100	78-118	
Vinyl chloride	ug/L	20	20.4	102	66-133	
Xylene (Total)	ug/L	60	63.4	106	83-114	
1,2-Dichloroethane-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			101	80-120	

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 500420 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 60256266010, 60256266011

METHOD BLANK: 2048178 Matrix: Water
Associated Lab Samples: 60256266010, 60256266011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Carbonate (CaCO3)	mg/L	ND	20.0	4.9	10/26/17 13:46	
Alkalinity, Total as CaCO3	mg/L	ND	20.0	4.9	10/26/17 13:46	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	20.0	4.9	10/26/17 13:46	

LABORATORY CONTROL SAMPLE: 2048179

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	531	106	90-110	

SAMPLE DUPLICATE: 2048180

Parameter	Units	60255952003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Carbonate (CaCO3)	mg/L	ND	ND		10	
Alkalinity, Total as CaCO3	mg/L	293	279	5	10	
Alkalinity,Bicarbonate (CaCO3)	mg/L	293	279	5	10	

SAMPLE DUPLICATE: 2048182

Parameter	Units	60256331002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Carbonate (CaCO3)	mg/L	ND	ND		10	
Alkalinity, Total as CaCO3	mg/L	81.3	80.3	1	10	
Alkalinity,Bicarbonate (CaCO3)	mg/L	81.3	80.3	1	10	

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 503814 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 60256266009

METHOD BLANK: 2062994 Matrix: Water
Associated Lab Samples: 60256266009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Carbonate (CaCO3)	mg/L	ND	20.0	4.9	11/17/17 16:47	
Alkalinity, Total as CaCO3	mg/L	ND	20.0	4.9	11/17/17 16:47	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	20.0	4.9	11/17/17 16:47	

LABORATORY CONTROL SAMPLE: 2062995

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	523	105	90-110	

SAMPLE DUPLICATE: 2062996

Parameter	Units	60258189001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Carbonate (CaCO3)	mg/L	ND	28.6		10	D6
Alkalinity, Total as CaCO3	mg/L	ND	595		10	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	567		10	

SAMPLE DUPLICATE: 2062997

Parameter	Units	60258155003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Carbonate (CaCO3)	mg/L	ND	ND		10	
Alkalinity, Total as CaCO3	mg/L	367	376	3	10	
Alkalinity,Bicarbonate (CaCO3)	mg/L	367	376	3	10	

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 500239 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 60256266010, 60256266011

METHOD BLANK: 2047298 Matrix: Water
Associated Lab Samples: 60256266010, 60256266011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	ND	0.050	0.0048	10/25/17 12:36	

LABORATORY CONTROL SAMPLE: 2047299

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	.5	0.45	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2047300 2047301

Parameter	Units	60256300001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	ND	.5	.5	0.64	0.64	119	119	75-125	0	20	

SAMPLE DUPLICATE: 2047302

Parameter	Units	60256331002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.39	0.39	1	20	

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 503953
QC Batch Method: SM 4500-S-2 D
Analysis Method: SM 4500-S-2 D
Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 60256266009

METHOD BLANK: 2063947
Matrix: Water
Associated Lab Samples: 60256266009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	ND	0.050	0.0048	11/20/17 12:14	

LABORATORY CONTROL SAMPLE: 2063948

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	.5	0.46	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2063950 2063951

Parameter	Units	60258414003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	ND	.5	.5	0.51	0.51	103	103	75-125	0	20	

SAMPLE DUPLICATE: 2063949

Parameter	Units	60256266009 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	H1

SAMPLE DUPLICATE: 2063952

Parameter	Units	60258414005 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 2063953

Parameter	Units	60258414001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 2063954

Parameter	Units	60258414004 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

SAMPLE DUPLICATE: 2063955

Parameter	Units	60258414006 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 2063956

Parameter	Units	60258414007 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 501190 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60256266010, 60256266011

METHOD BLANK: 2051682 Matrix: Water
Associated Lab Samples: 60256266010, 60256266011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	0.50	11/01/17 20:43	

LABORATORY CONTROL SAMPLE: 2051683

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.0	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2051684 2051685

Parameter	Units	60256473001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	ND	1000	1000	1080	1060	96	94	80-120	2	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 501399 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60256266010, 60256266011

METHOD BLANK: 2052396 Matrix: Water
Associated Lab Samples: 60256266010, 60256266011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.50	11/03/17 11:51	

LABORATORY CONTROL SAMPLE: 2052397

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	94	90-110	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 504542 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60256266009

METHOD BLANK: 2066993 Matrix: Water
Associated Lab Samples: 60256266009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	0.50	11/25/17 07:42	

LABORATORY CONTROL SAMPLE: 2066994

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	4.8	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2066995 2066996

Parameter	Units	60256266009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	0.74J	5	5	5.5	5.6	96	98	80-120	2	15	H1

MATRIX SPIKE SAMPLE: 2066997

Parameter	Units	60257601001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	68.5	25	92.1	94	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 500772 Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60256266010, 60256266011

METHOD BLANK: 2050349 Matrix: Water
Associated Lab Samples: 60256266010, 60256266011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	0.039	10/31/17 13:46	

LABORATORY CONTROL SAMPLE: 2050350

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	5.3	105	90-110	

MATRIX SPIKE SAMPLE: 2050351

Parameter	Units	2064075001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2.3	5	7.4	102	90-110	

SAMPLE DUPLICATE: 2050352

Parameter	Units	60256002003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	ND	ND		18	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 503942 Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60256266009

METHOD BLANK: 2063903 Matrix: Water
Associated Lab Samples: 60256266009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	0.039	11/21/17 09:22	

LABORATORY CONTROL SAMPLE: 2063904

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	5.2	103	90-110	

MATRIX SPIKE SAMPLE: 2063905

Parameter	Units	60255793017 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	5	5.1	102	90-110	H1

MATRIX SPIKE SAMPLE: 2063907

Parameter	Units	60257757003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.99	5	5.9	98	90-110	

SAMPLE DUPLICATE: 2063906

Parameter	Units	60257942001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	4.3	4.3	1	18	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 500221 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 60256266010, 60256266011

METHOD BLANK: 2047156 Matrix: Water
Associated Lab Samples: 60256266010, 60256266011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.050	10/25/17 11:00	
Nitrogen, Nitrite	mg/L	ND	0.10	0.030	10/25/17 11:00	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.050	10/25/17 11:00	

LABORATORY CONTROL SAMPLE: 2047157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.2	116	70-130	
Nitrogen, Nitrite	mg/L	1	1.0	104	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	2.2	110	90-110	

MATRIX SPIKE SAMPLE: 2047158

Parameter	Units	60256266011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	1.7	168	70-130	M1
Nitrogen, Nitrite	mg/L	ND	1	0.40	39	90-110	M1
Nitrogen, NO2 plus NO3	mg/L	ND	2	2.1	104	90-110	

MATRIX SPIKE SAMPLE: 2047160

Parameter	Units	60256361008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	1.7	172	70-130	M1
Nitrogen, Nitrite	mg/L	ND	1	0.40	38	90-110	M1
Nitrogen, NO2 plus NO3	mg/L	ND	2	2.1	106	90-110	

SAMPLE DUPLICATE: 2047159

Parameter	Units	60256357002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	ND	ND		20	
Nitrogen, Nitrite	mg/L	ND	0.032J		20	
Nitrogen, NO2 plus NO3	mg/L	ND	ND		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 503840
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 60256266009

METHOD BLANK: 2063260 Matrix: Water
Associated Lab Samples: 60256266009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.050	11/18/17 08:44	
Nitrogen, Nitrite	mg/L	0.065J	0.10	0.030	11/18/17 08:44	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.050	11/18/17 08:44	

LABORATORY CONTROL SAMPLE: 2063261

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.1	106	70-130	
Nitrogen, Nitrite	mg/L	1	1.0	100	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	2.1	103	90-110	

MATRIX SPIKE SAMPLE: 2063262

Parameter	Units	60258248002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	6.8	5	11.6	97	70-130	
Nitrogen, Nitrite	mg/L	0.33J	5	5.8	109	90-110	
Nitrogen, NO2 plus NO3	mg/L	7.1	10	17.4	103	90-110	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 504295
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 60256266009

METHOD BLANK: 2065625 Matrix: Water
Associated Lab Samples: 60256266009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.050	11/21/17 15:15	

LABORATORY CONTROL SAMPLE: 2065626

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.1	103	90-110	

MATRIX SPIKE SAMPLE: 2065627

Parameter	Units	60256266009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.11	2	2.2	106	90-110	H1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 500485 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon
Associated Lab Samples: 60256266010, 60256266011

METHOD BLANK: 2048506 Matrix: Water
Associated Lab Samples: 60256266010, 60256266011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.13	10/27/17 09:16	

LABORATORY CONTROL SAMPLE: 2048507

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.5	111	80-120	

MATRIX SPIKE SAMPLE: 2048508

Parameter	Units	60256331001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	ND	5	6.0	110	80-120	

SAMPLE DUPLICATE: 2048509

Parameter	Units	60256331002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	ND	0.48J		25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FT SMITH
Pace Project No.: 60256266

QC Batch: 503825 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon
Associated Lab Samples: 60256266009

METHOD BLANK: 2063031 Matrix: Water
Associated Lab Samples: 60256266009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.13	11/20/17 09:00	

LABORATORY CONTROL SAMPLE: 2063032

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.2	103	80-120	

MATRIX SPIKE SAMPLE: 2063033

Parameter	Units	60256266009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	3.7	5	8.3	94	80-120	

SAMPLE DUPLICATE: 2063034

Parameter	Units	10410637001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	61.0	61.0	0	25	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: FT SMITH
Pace Project No.: 60256266

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.

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-K	Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: 500583

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
H1	Analysis conducted outside the EPA method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FT SMITH
Pace Project No.: 60256266

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60256266009	**TMW-11-201710**	EPA 3010	504025	EPA 6010	504251
60256266010	**MW-50-201710**	EPA 3010	500794	EPA 6010	500920
60256266011	**MW-61R-201710**	EPA 3010	500794	EPA 6010	500920
60256266001	**MW-63R-201710**	EPA 5030B/8260	500583		
60256266002	**MW-194-201710**	EPA 5030B/8260	500583		
60256266003	**TMW-29-201710**	EPA 5030B/8260	500583		
60256266004	**TB-03-201710**	EPA 5030B/8260	500583		
60256266005	**MW-195-201710**	EPA 5030B/8260	500583		
60256266006	**TMW-20-201710**	EPA 5030B/8260	500583		
60256266007	**FD-01-201710**	EPA 5030B/8260	500583		
60256266008	**EB-01-201710**	EPA 5030B/8260	500583		
60256266009	**TMW-11-201710**	EPA 5030B/8260	500583		
60256266010	**MW-50-201710**	EPA 5030B/8260	500583		
60256266011	**MW-61R-201710**	EPA 5030B/8260	500583		
60256266009	**TMW-11-201710**	SM 2320B	503814		
60256266010	**MW-50-201710**	SM 2320B	500420		
60256266011	**MW-61R-201710**	SM 2320B	500420		
60256266009	**TMW-11-201710**	SM 4500-S-2 D	503953		
60256266010	**MW-50-201710**	SM 4500-S-2 D	500239		
60256266011	**MW-61R-201710**	SM 4500-S-2 D	500239		
60256266009	**TMW-11-201710**	EPA 300.0	504542		
60256266010	**MW-50-201710**	EPA 300.0	501190		
60256266010	**MW-50-201710**	EPA 300.0	501399		
60256266011	**MW-61R-201710**	EPA 300.0	501190		
60256266011	**MW-61R-201710**	EPA 300.0	501399		
60256266009	**TMW-11-201710**	EPA 350.1	503942		
60256266010	**MW-50-201710**	EPA 350.1	500772		
60256266011	**MW-61R-201710**	EPA 350.1	500772		
60256266009	**TMW-11-201710**	EPA 353.2	503840		
60256266010	**MW-50-201710**	EPA 353.2	500221		
60256266011	**MW-61R-201710**	EPA 353.2	500221		
60256266009	**TMW-11-201710**	EPA 353.2	504295		
60256266009	**TMW-11-201710**	SM 5310C	503825		
60256266010	**MW-50-201710**	SM 5310C	500485		
60256266011	**MW-61R-201710**	SM 5310C	500485		

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Sample Condition Upon Receipt

WO# : 60256266

60256266

Client Name: ~~PASI Pittsburgh~~ Environ Ramboll

Courier: FedEx ☐ UPS ☐ VIA ☑ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☑ No ☐

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☑ Bubble Bags ☑ Foam ☐ None ☐ Other ☐

Thermometer Used: CF 0.0 T-266 / CF +0.3 T-239 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 2.0 **Corr. Factor** (CF 0.0) CF +0.3 **Corrected** 2.0

Date and initials of person examining contents: CS 10/24/17

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	NO_2/NO_3 - 48 hr
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	☑Yes ☐No ☐N/A	
Cyanide water sample checks: ☑N/A Lead acetate strip turns dark? (Record only) Potassium iodide test strip turns blue/purple? (Preserve)	 ☐Yes ☐No ☐Yes ☐No	
Trip Blank present:	☑Yes ☐No ☐N/A	
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Richard Mannz Digitally signed by: Richard Mannz DN: CN = Richard Mannz C = US O = Pace Analytical OU = Client Services Date: 2017.10.24 19:07:01 -05'00' Date: _____

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Pittsburgh, PA 15238
412-826-5245

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of

009858

Section A — **Required** Client Information:

- Company: Ramboll
- Address: 124 W. Capitol Ave Suite 1105, Little Rock, AR
- Email To: thauxknight@ramboll.com
- Phone: 501-907-9437 Fax:
- Requested Due Date/TAT: STD

Section B — **Required** Project Information:

- Report To: Tamara Haux-Knight
- Copy To:
- Purchase Order No.:
- Project Name: Ft. Smith
- Project Number:

Section C — Invoice Information:

- Attention: Tamara Haux Knight
- Company Name: 124 W. Capitol Ave
- Address: Ste 1105, Little Rock, AR
- Pace Quote Reference:
- Pace Project Manager:
- Pace Profile #:

Ramboll

REGULATORY AGENCY

NPDES | GROUND WATER | DRINKING WATER
UST | RCRA | OTHER

Site Location STATE: AR

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N)

Pace Project No./ Lab I.D.: 60256266

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	TSP	BAK	Zinc Acetate & NaOH	Other	Analysis Test Y/N	8260 VOCs	Sulfate, Alkalinity, Chloride	Sulfide	Metals (Mn, Fe)	Phosphate, NH3, Nitrate, Nitrite		TOC	Chloroethane KS	6010-Iron				Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-103R-201710	W	G			10/23/17	1046		3				X						X													3D69H 001
2	MW-194-201710	W	G			10/23/17	1012		3				X						X													002
3	TMW-29-201710	W	G			10/23/17	1525		3				X						X													003
4	TB-03-201710	W	G			10/23/17	0800		2				X						X													2 004
5	MW-195-201710	W	G			10/23/17	1030		3				X						X													3 005
6	TMW-20-201710	W	G			10/23/17	1720		3				X						X													006
7	~~DUP~~ FD-01-201710	W	G			10/23/17	1720		3				X						X													007
8	EB-01-201710	W	G			10/23/17	1750		3				X						X													008
9	TMW-11-201710	W	G		1600	10/23/17	~~1600~~		3				X						X												BF	3U AG3S BP3Z BP3N 009
10	MW-50-201710	WT	G			10/23/17	1710		8	X	X	X	X			X			X	X	X	X	X		X	X	X					010
11	MW-612-201710	WT	G			10/23/17	1052		7	X	X	X	X			X			X	X	X	X	X		X		X					011
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Victoria Siegler / REH	10/23/17	~~1600~~ 1800 VS	[signature] / PASI	10/24/17	0700	2.0	Y	Y	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Siegler

SIGNATURE of SAMPLER: Victoria Siegler

DATE Signed (MM/DD/YY): 10/23/17

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

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

Pace Analytical Services, LLC
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November 17, 2017

Nick Zurweller
Ramboll Environ
7500 College Blvd.
Ste. 295
Overland Park, KS 66210

RE: Project: FORT SMITH, AR
Pace Project No.: 60256365

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on October 25, 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.

RV-1 - Revised report, sample ID corrected for MW-175-201710.

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

Sincerely,

Richard Mannz
richard.mannz@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: Tamara House-Knight, Ramboll Environ
M. Wilson

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 17-016-0
Illinois Certification #: 200030
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212018-1
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587
Missouri Certification: 10070

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SAMPLE SUMMARY

Project: FORT SMITH, AR
Pace Project No.: 60256365

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60256365001	**MW-60R-201710**	Water	10/24/17 09:25	10/25/17 02:30
60256365002	**TMW-16-201710**	Water	10/24/17 10:58	10/25/17 02:30
60256365003	**TMW-26-201710**	Water	10/24/17 12:48	10/25/17 02:30
60256365004	**MW-182-201710**	Water	10/24/17 15:05	10/25/17 02:30
60256365005	**TMW-30-201710**	Water	10/24/17 16:58	10/25/17 02:30
60256365006	**MW-68-201710**	Water	10/24/17 17:08	10/25/17 02:30
60256365007	**FD-02-201710**	Water	10/24/17 15:36	10/25/17 02:30
60256365008	**MW-57R-201710**	Water	10/24/17 15:20	10/25/17 02:30
60256365009	**MW-56R-201710**	Water	10/24/17 16:00	10/25/17 02:30
60256365010	**MW-175-201710**	Water	10/24/17 16:40	10/25/17 02:30
60256365011	**TMW-21-201710**	Water	10/24/17 14:26	10/25/17 02:30
60256365012	**TMW-24-201710**	Water	10/24/17 12:50	10/25/17 02:30
60256365013	**MW-185-201710**	Water	10/24/17 15:20	10/25/17 02:30
60256365014	**MW-176-201710**	Water	10/24/17 09:35	10/25/17 02:30
60256365015	**MW-46R-201710**	Water	10/24/17 10:43	10/25/17 02:30
60256365016	**RW-69-201710**	Water	10/24/17 09:40	10/25/17 02:30
60256365017	**MW-58R-201710**	Water	10/24/17 12:20	10/25/17 02:30
60256365018	**IW-73-201710**	Water	10/24/17 11:25	10/25/17 02:30
60256365019	**MW-82-201710**	Water	10/24/17 15:25	10/25/17 02:30
60256365020	**FD-03-201710**	Water	10/24/17 15:25	10/25/17 02:30
60256365021	**MW-40R-201710**	Water	10/24/17 13:00	10/25/17 02:30
60256365022	**IW-77-201710**	Water	10/24/17 16:55	10/25/17 02:30
60256365023	**MW-196-201710**	Water	10/24/17 09:35	10/25/17 02:30
60256365024	**MW-99-201710**	Water	10/24/17 09:48	10/25/17 02:30
60256365025	**MW-98-201710**	Water	10/24/17 12:36	10/25/17 02:30
60256365026	**MW-184-201710**	Water	10/24/17 10:57	10/25/17 02:30
60256365027	**TMW-19-201710**	Water	10/24/17 09:40	10/25/17 02:30
60256365028	**MW-186-201710**	Water	10/24/17 10:40	10/25/17 02:30
60256365029	**FD-04-201710**	Water	10/24/17 10:40	10/25/17 02:30
60256365030	**MW-187-201710**	Water	10/24/17 12:00	10/25/17 02:30
60256365031	**MW-188-201710**	Water	10/24/17 13:05	10/25/17 02:30
60256365032	**TMW-10-201710**	Water	10/24/17 14:50	10/25/17 02:30
60256365033	**TMW-22-201710**	Water	10/24/17 16:50	10/25/17 02:30
60256365034	**EB-02-201710**	Water	10/24/17 17:25	10/25/17 02:30
60256365035	**TB-02-201710**	Water	10/24/17 09:35	10/25/17 02:30
60256365036	**TB-03-201710**	Water	10/24/17 09:35	10/25/17 02:30

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60256365

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60256365001	MW-60R-201710	EPA 5030B/8260	EAG	38	PASI-K
60256365002	TMW-16-201710	EPA 5030B/8260	EAG	38	PASI-K
60256365003	TMW-26-201710	EPA 5030B/8260	EAG	38	PASI-K
60256365004	MW-182-201710	EPA 5030B/8260	EAG	38	PASI-K
60256365005	TMW-30-201710	EPA 5030B/8260	EAG	38	PASI-K
60256365006	MW-68-201710	EPA 5030B/8260	EAG	38	PASI-K
60256365007	FD-02-201710	EPA 5030B/8260	EAG, PGH	38	PASI-K
60256365008	MW-57R-201710	EPA 5030B/8260	EAG, PGH	38	PASI-K
60256365009	MW-56R-201710	EPA 5030B/8260	EAG, PGH	38	PASI-K
60256365010	MW-175-201710	EPA 5030B/8260	EAG	38	PASI-K
60256365011	TMW-21-201710	EPA 5030B/8260	EAG, PGH	38	PASI-K
60256365012	TMW-24-201710	EPA 5030B/8260	EAG, PGH	38	PASI-K
60256365013	MW-185-201710	EPA 5030B/8260	EAG	38	PASI-K
60256365014	MW-176-201710	EPA 5030B/8260	EAG	38	PASI-K
60256365015	MW-46R-201710	EPA 5030B/8260	PGH	38	PASI-K
60256365016	RW-69-201710	EPA 6010	TDS	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	2	PASI-K
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256365017	MW-58R-201710	EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	2	PASI-K
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256365018	IW-73-201710	EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	2	PASI-K
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256365019	MW-82-201710	EPA 5030B/8260	PGH	38	PASI-K
60256365020	FD-03-201710	EPA 5030B/8260	PGH	38	PASI-K
60256365021	MW-40R-201710	EPA 5030B/8260	PGH	38	PASI-K
60256365022	IW-77-201710	EPA 5030B/8260	PGH	38	PASI-K
60256365023	MW-196-201710	EPA 5030B/8260	PGH	38	PASI-K
60256365024	MW-99-201710	EPA 5030B/8260	PGH	38	PASI-K

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60256365

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60256365025	**MW-98-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256365026	**MW-184-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256365027	**TMW-19-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256365028	**MW-186-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256365029	**FD-04-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256365030	**MW-187-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256365031	**MW-188-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256365032	**TMW-10-201710**	EPA 6010	TDS	2	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	2	PASI-K
		EPA 353.2	CRS	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256365033	**TMW-22-201710**	EPA 5030B/8260	EAG, PGH	38	PASI-K
60256365034	**EB-02-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256365035	**TB-02-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256365036	**TB-03-201710**	EPA 5030B/8260	PGH	38	PASI-K

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256365

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Ramboll Environ_AR
Date: November 17, 2017

General Information:
2 samples were analyzed for EPA 6010. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 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.

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256365

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: November 17, 2017

General Information:
36 samples were analyzed for EPA 5030B/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.

QC Batch: 500633

B: Analyte was detected in the associated method blank.
- BLANK for HBN 500633 [MSV/8566 (Lab ID: 2049409)
  - Bromomethane

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

QC Batch: 500633

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: 2049410)
  - Bromoform
  - Carbon tetrachloride
  - Dibromochloromethane
  - Tetrachloroethene

QC Batch: 501472

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: 2052654)
  - Bromoform

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256365

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: November 17, 2017

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

QC Batch: 500633
A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 500637
A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 500793
A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 500795
A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 500837
A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 501009
A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 501472
A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256365

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: Ramboll Environ_AR
Date: November 17, 2017

General Information:
4 samples were analyzed for SM 4500-S-2 D. 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.

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.

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

Additional Comments:

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256365

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Ramboll Environ_AR
Date: November 17, 2017

General Information:
4 samples were analyzed for EPA 300.0. 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.

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

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

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

Additional Comments:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256365

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Ramboll Environ_AR
Date: November 17, 2017

General Information:
4 samples were analyzed for EPA 353.2. 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.

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: 500272

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60256363012,60256369001

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

- MS (Lab ID: 2047451)
  - Nitrogen, Nitrate
  - Nitrogen, Nitrite
- MS (Lab ID: 2047453)
  - Nitrogen, NO2 plus NO3
  - Nitrogen, Nitrite

QC Batch: 500371

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60256422001,60256491001

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

- MS (Lab ID: 2047956)
  - Nitrogen, NO2 plus NO3
  - Nitrogen, Nitrate
  - Nitrogen, Nitrite
- MS (Lab ID: 2047958)
  - Nitrogen, NO2 plus NO3
  - Nitrogen, Nitrite

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

Additional Comments:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256365

Method: **SM 5310C**
Description: 5310C TOC
Client: Ramboll Environ_AR
Date: November 17, 2017

General Information:
4 samples were analyzed for SM 5310C. 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.

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.

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.

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-60R-201710 **Lab ID: 60256365001** Collected: 10/24/17 09:25 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 20:46	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 20:46	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 20:46	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 20:46	75-25-2	L1
Bromomethane	**0.53J**	ug/L	5.0	0.16	1		10/27/17 20:46	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 20:46	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 20:46	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 20:46	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 20:46	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 20:46	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 20:46	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 20:46	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 20:46	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 20:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 20:46	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 20:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/27/17 20:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 20:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 20:46	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 20:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 20:46	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 20:46	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 20:46	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 20:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 20:46	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 20:46	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 20:46	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 20:46	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 20:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 20:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 20:46	79-00-5	
Trichloroethene	**0.83J**	ug/L	1.0	0.17	1		10/27/17 20:46	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 20:46	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 20:46	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/27/17 20:46	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-120		1		10/27/17 20:46	17060-07-0	
Toluene-d8 (S)	104	%	80-120		1		10/27/17 20:46	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 20:46		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TMW-16-201710 **Lab ID: 60256365002** Collected: 10/24/17 10:58 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 17:57	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 17:57	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 17:57	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 17:57	75-25-2	L1
Bromomethane	**0.69J**	ug/L	5.0	0.16	1		10/27/17 17:57	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 17:57	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 17:57	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 17:57	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 17:57	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 17:57	75-00-3	
Chloroform	**1.5**	ug/L	1.0	0.14	1		10/27/17 17:57	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 17:57	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 17:57	124-48-1	L1
1,1-Dichloroethane	**0.39J**	ug/L	1.0	0.050	1		10/27/17 17:57	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 17:57	107-06-2	
1,1-Dichloroethene	**1.6**	ug/L	1.0	0.20	1		10/27/17 17:57	75-35-4	
cis-1,2-Dichloroethene	**10.4**	ug/L	1.0	0.080	1		10/27/17 17:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 17:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 17:57	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 17:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 17:57	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 17:57	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 17:57	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 17:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 17:57	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 17:57	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 17:57	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 17:57	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 17:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 17:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 17:57	79-00-5	
Trichloroethene	**956**	ug/L	10.0	1.7	10		10/27/17 18:26	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 17:57	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 17:57	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/27/17 17:57	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	80-120		1		10/27/17 17:57	17060-07-0	
Toluene-d8 (S)	104	%	80-120		1		10/27/17 17:57	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 17:57		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TMW-26-201710 **Lab ID: 60256365003** Collected: 10/24/17 12:48 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 20:18	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 20:18	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 20:18	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 20:18	75-25-2	L1
Bromomethane	**0.75J**	ug/L	5.0	0.16	1		10/27/17 20:18	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 20:18	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 20:18	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 20:18	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 20:18	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 20:18	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 20:18	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 20:18	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 20:18	124-48-1	L1
1,1-Dichloroethane	**0.22J**	ug/L	1.0	0.050	1		10/27/17 20:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 20:18	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 20:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/27/17 20:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 20:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 20:18	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 20:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 20:18	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 20:18	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 20:18	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 20:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 20:18	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 20:18	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 20:18	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 20:18	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 20:18	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 20:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 20:18	79-00-5	
Trichloroethene	**36.3**	ug/L	1.0	0.17	1		10/27/17 20:18	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 20:18	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 20:18	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/27/17 20:18	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/27/17 20:18	17060-07-0	
Toluene-d8 (S)	104	%	80-120		1		10/27/17 20:18	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 20:18		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-182-201710 **Lab ID: 60256365004** Collected: 10/24/17 15:05 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 20:32	67-64-1	
Benzene	**0.15J**	ug/L	1.0	0.060	1		10/27/17 20:32	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 20:32	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 20:32	75-25-2	L1
Bromomethane	**0.38J**	ug/L	5.0	0.16	1		10/27/17 20:32	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 20:32	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 20:32	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 20:32	56-23-5	L1
Chlorobenzene	**3.2**	ug/L	1.0	0.21	1		10/27/17 20:32	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 20:32	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 20:32	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 20:32	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 20:32	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 20:32	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 20:32	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 20:32	75-35-4	
cis-1,2-Dichloroethene	**5.7**	ug/L	1.0	0.080	1		10/27/17 20:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 20:32	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 20:32	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 20:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 20:32	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 20:32	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 20:32	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 20:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 20:32	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 20:32	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 20:32	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 20:32	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 20:32	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 20:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 20:32	79-00-5	
Trichloroethene	**92.2**	ug/L	1.0	0.17	1		10/27/17 20:32	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 20:32	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 20:32	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/27/17 20:32	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-120		1		10/27/17 20:32	17060-07-0	
Toluene-d8 (S)	104	%	80-120		1		10/27/17 20:32	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 20:32		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TMW-30-201710 **Lab ID: 60256365005** Collected: 10/24/17 16:58 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 21:00	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 21:00	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 21:00	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 21:00	75-25-2	L1
Bromomethane	**1.3J**	ug/L	5.0	0.16	1		10/27/17 21:00	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 21:00	78-93-3	
Carbon disulfide	**1.0J**	ug/L	5.0	0.12	1		10/27/17 21:00	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 21:00	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 21:00	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 21:00	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 21:00	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 21:00	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 21:00	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 21:00	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 21:00	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 21:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/27/17 21:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 21:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 21:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 21:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 21:00	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 21:00	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 21:00	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 21:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 21:00	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 21:00	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 21:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 21:00	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 21:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 21:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 21:00	79-00-5	
Trichloroethene	**0.55J**	ug/L	1.0	0.17	1		10/27/17 21:00	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 21:00	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 21:00	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/27/17 21:00	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		10/27/17 21:00	17060-07-0	
Toluene-d8 (S)	103	%	80-120		1		10/27/17 21:00	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 21:00		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-68-201710 **Lab ID: 60256365006** Collected: 10/24/17 17:08 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 21:14	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 21:14	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 21:14	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 21:14	75-25-2	L1
Bromomethane	**0.28J**	ug/L	5.0	0.16	1		10/27/17 21:14	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 21:14	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 21:14	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 21:14	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 21:14	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 21:14	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 21:14	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 21:14	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 21:14	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 21:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 21:14	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 21:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/27/17 21:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 21:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 21:14	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 21:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 21:14	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 21:14	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 21:14	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 21:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 21:14	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 21:14	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 21:14	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 21:14	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 21:14	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 21:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 21:14	79-00-5	
Trichloroethene	**0.31J**	ug/L	1.0	0.17	1		10/27/17 21:14	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 21:14	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 21:14	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/27/17 21:14	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	80-120		1		10/27/17 21:14	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/27/17 21:14	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 21:14		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: FD-02-201710 **Lab ID: 60256365007** Collected: 10/24/17 15:36 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 20:04	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 20:04	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 20:04	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 20:04	75-25-2	L1
Bromomethane	ND	ug/L	5.0	0.16	1		10/27/17 20:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 20:04	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 20:04	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 20:04	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 20:04	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 20:04	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 20:04	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 20:04	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 20:04	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 20:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 20:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 20:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/27/17 20:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 20:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 20:04	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 20:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 20:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 20:04	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 20:04	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 20:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 20:04	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 20:04	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 20:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 20:04	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 20:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 20:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 20:04	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 14:39	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 20:04	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 20:04	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/27/17 20:04	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-120		1		10/27/17 20:04	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		10/27/17 20:04	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 20:04		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-57R-201710 **Lab ID: 60256365008** Collected: 10/24/17 15:20 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 18:54	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 18:54	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 18:54	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 18:54	75-25-2	L1
Bromomethane	**0.37J**	ug/L	5.0	0.16	1		10/27/17 18:54	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 18:54	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 18:54	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 18:54	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 18:54	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 18:54	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 18:54	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 18:54	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 18:54	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 18:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 18:54	107-06-2	
1,1-Dichloroethene	**2.1**	ug/L	1.0	0.20	1		10/27/17 18:54	75-35-4	
cis-1,2-Dichloroethene	**17.5**	ug/L	1.0	0.080	1		10/27/17 18:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 18:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 18:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 18:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 18:54	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 18:54	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 18:54	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 18:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 18:54	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 18:54	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 18:54	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 18:54	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 18:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 18:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 18:54	79-00-5	
Trichloroethene	**441**	ug/L	10.0	1.7	10		10/30/17 14:53	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 18:54	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 18:54	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/27/17 18:54	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	80-120		1		10/27/17 18:54	17060-07-0	
Toluene-d8 (S)	103	%	80-120		1		10/27/17 18:54	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 18:54		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-56R-201710 **Lab ID: 60256365009** Collected: 10/24/17 16:00 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 19:08	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 19:08	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 19:08	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 19:08	75-25-2	L1
Bromomethane	**0.53J**	ug/L	5.0	0.16	1		10/27/17 19:08	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 19:08	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 19:08	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 19:08	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 19:08	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 19:08	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 19:08	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 19:08	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 19:08	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 19:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 19:08	107-06-2	
1,1-Dichloroethene	**2.7**	ug/L	1.0	0.20	1		10/27/17 19:08	75-35-4	
cis-1,2-Dichloroethene	**33.8**	ug/L	1.0	0.080	1		10/27/17 19:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 19:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 19:08	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 19:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 19:08	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 19:08	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 19:08	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 19:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 19:08	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 19:08	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 19:08	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 19:08	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 19:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 19:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 19:08	79-00-5	
Trichloroethene	**815**	ug/L	10.0	1.7	10		10/30/17 20:02	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 19:08	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 19:08	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/27/17 19:08	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	80-120		1		10/27/17 19:08	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/27/17 19:08	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 19:08		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-175-201710 **Lab ID: 60256365010** Collected: 10/24/17 16:40 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 19:22	67-64-1	
Benzene	**0.12J**	ug/L	1.0	0.060	1		10/27/17 19:22	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 19:22	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 19:22	75-25-2	L1
Bromomethane	**0.38J**	ug/L	5.0	0.16	1		10/27/17 19:22	74-83-9	B
2-Butanone (MEK)	**3.2J**	ug/L	10.0	0.59	1		10/27/17 19:22	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 19:22	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 19:22	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 19:22	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 19:22	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 19:22	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 19:22	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 19:22	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 19:22	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 19:22	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 19:22	75-35-4	
cis-1,2-Dichloroethene	**0.27J**	ug/L	1.0	0.080	1		10/27/17 19:22	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 19:22	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 19:22	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 19:22	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 19:22	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 19:22	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 19:22	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 19:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 19:22	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 19:22	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 19:22	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 19:22	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 19:22	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 19:22	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 19:22	79-00-5	
Trichloroethene	**72.2**	ug/L	1.0	0.17	1		10/27/17 19:22	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 19:22	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 19:22	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/27/17 19:22	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		10/27/17 19:22	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/27/17 19:22	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 19:22		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TMW-21-201710 **Lab ID: 60256365011** Collected: 10/24/17 14:26 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 19:36	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 19:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 19:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 19:36	75-25-2	L1
Bromomethane	ND	ug/L	5.0	0.16	1		10/27/17 19:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 19:36	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 19:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 19:36	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 19:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 19:36	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 19:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 19:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 19:36	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 19:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 19:36	107-06-2	
1,1-Dichloroethene	**1.3**	ug/L	1.0	0.20	1		10/27/17 19:36	75-35-4	
cis-1,2-Dichloroethene	**9.2**	ug/L	1.0	0.080	1		10/27/17 19:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 19:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 19:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 19:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 19:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 19:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 19:36	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 19:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 19:36	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 19:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 19:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 19:36	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 19:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 19:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 19:36	79-00-5	
Trichloroethene	**461**	ug/L	10.0	1.7	10		10/30/17 20:16	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 19:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 19:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/27/17 19:36	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	80-120		1		10/27/17 19:36	17060-07-0	
Toluene-d8 (S)	103	%	80-120		1		10/27/17 19:36	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 19:36		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TMW-24-201710 **Lab ID: 60256365012** Collected: 10/24/17 12:50 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 19:50	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 19:50	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 19:50	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 19:50	75-25-2	L1
Bromomethane	**0.21J**	ug/L	5.0	0.16	1		10/27/17 19:50	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 19:50	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 19:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 19:50	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 19:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 19:50	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 19:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 19:50	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 19:50	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 19:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 19:50	107-06-2	
1,1-Dichloroethene	**1.4**	ug/L	1.0	0.20	1		10/27/17 19:50	75-35-4	
cis-1,2-Dichloroethene	**8.1**	ug/L	1.0	0.080	1		10/27/17 19:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 19:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 19:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 19:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 19:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 19:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 19:50	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 19:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 19:50	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 19:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 19:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 19:50	127-18-4	L1
Toluene	**0.27J**	ug/L	1.0	0.17	1		10/27/17 19:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 19:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 19:50	79-00-5	
Trichloroethene	**385**	ug/L	10.0	1.7	10		10/30/17 20:30	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 19:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 19:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/27/17 19:50	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-120		1		10/27/17 19:50	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/27/17 19:50	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 19:50		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-185-201710 **Lab ID: 60256365013** Collected: 10/24/17 15:20 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 21:28	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/27/17 21:28	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 21:28	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 21:28	75-25-2	L1
Bromomethane	ND	ug/L	5.0	0.16	1		10/27/17 21:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 21:28	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 21:28	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 21:28	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 21:28	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 21:28	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 21:28	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 21:28	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 21:28	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 21:28	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 21:28	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 21:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/27/17 21:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/27/17 21:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 21:28	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 21:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 21:28	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 21:28	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 21:28	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 21:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 21:28	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 21:28	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 21:28	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 21:28	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 21:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 21:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 21:28	79-00-5	
Trichloroethene	**12.7**	ug/L	1.0	0.17	1		10/27/17 21:28	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/27/17 21:28	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 21:28	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/27/17 21:28	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/27/17 21:28	17060-07-0	
Toluene-d8 (S)	103	%	80-120		1		10/27/17 21:28	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 21:28		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-176-201710 **Lab ID: 60256365014** Collected: 10/24/17 09:35 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/27/17 18:12	67-64-1	
Benzene	**0.11J**	ug/L	1.0	0.060	1		10/27/17 18:12	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/27/17 18:12	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/27/17 18:12	75-25-2	L1
Bromomethane	ND	ug/L	5.0	0.16	1		10/27/17 18:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/27/17 18:12	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/27/17 18:12	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/27/17 18:12	56-23-5	L1
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/27/17 18:12	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/27/17 18:12	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/27/17 18:12	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/27/17 18:12	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/27/17 18:12	124-48-1	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/27/17 18:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/27/17 18:12	107-06-2	
1,1-Dichloroethene	**3.3**	ug/L	1.0	0.20	1		10/27/17 18:12	75-35-4	
cis-1,2-Dichloroethene	**187**	ug/L	1.0	0.080	1		10/27/17 18:12	156-59-2	
trans-1,2-Dichloroethene	**1.3**	ug/L	1.0	0.20	1		10/27/17 18:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/27/17 18:12	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/27/17 18:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/27/17 18:12	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/27/17 18:12	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/27/17 18:12	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/27/17 18:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/27/17 18:12	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/27/17 18:12	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/27/17 18:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/27/17 18:12	127-18-4	L1
Toluene	ND	ug/L	1.0	0.17	1		10/27/17 18:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/27/17 18:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/27/17 18:12	79-00-5	
Trichloroethene	**281**	ug/L	10.0	1.7	10		10/27/17 18:40	79-01-6	
Vinyl chloride	**0.29J**	ug/L	1.0	0.13	1		10/27/17 18:12	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/27/17 18:12	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/27/17 18:12	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	80-120		1		10/27/17 18:12	17060-07-0	
Toluene-d8 (S)	103	%	80-120		1		10/27/17 18:12	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/27/17 18:12		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-46R-201710 **Lab ID: 60256365015** Collected: 10/24/17 10:43 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 19:20	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 19:20	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 19:20	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 19:20	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 19:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 19:20	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 19:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 19:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 19:20	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 19:20	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 19:20	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 19:20	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 19:20	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 19:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 19:20	107-06-2	
1,1-Dichloroethene	**1.2**	ug/L	1.0	0.20	1		10/30/17 19:20	75-35-4	
cis-1,2-Dichloroethene	**10.7**	ug/L	1.0	0.080	1		10/30/17 19:20	156-59-2	
trans-1,2-Dichloroethene	**0.32J**	ug/L	1.0	0.20	1		10/30/17 19:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 19:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 19:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 19:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 19:20	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 19:20	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 19:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 19:20	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 19:20	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 19:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 19:20	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 19:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 19:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 19:20	79-00-5	
Trichloroethene	**408**	ug/L	10.0	1.7	10		10/31/17 13:55	79-01-6	
Vinyl chloride	**0.51J**	ug/L	1.0	0.13	1		10/30/17 19:20	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 19:20	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/30/17 19:20	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/30/17 19:20	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/30/17 19:20	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 19:20		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: RW-69-201710 **Lab ID: 60256365016** Collected: 10/24/17 09:40 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**276**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:10	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 19:06	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 19:06	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 19:06	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 19:06	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 19:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 19:06	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 19:06	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 19:06	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 19:06	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 19:06	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 19:06	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 19:06	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 19:06	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 19:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 19:06	107-06-2	
1,1-Dichloroethene	**0.74J**	ug/L	1.0	0.20	1		10/30/17 19:06	75-35-4	
cis-1,2-Dichloroethene	**5.2**	ug/L	1.0	0.080	1		10/30/17 19:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 19:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 19:06	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 19:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 19:06	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 19:06	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 19:06	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 19:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 19:06	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 19:06	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 19:06	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 19:06	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 19:06	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 19:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 19:06	79-00-5	
Trichloroethene	**159**	ug/L	1.0	0.17	1		10/30/17 19:06	79-01-6	
Vinyl chloride	**0.21J**	ug/L	1.0	0.13	1		10/30/17 19:06	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 19:06	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 19:06	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/30/17 19:06	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/30/17 19:06	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 19:06		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:10	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: RW-69-201710 **Lab ID: 60256365016** Collected: 10/24/17 09:40 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**272**	mg/L	20.0	10.0	20		11/04/17 11:10	16887-00-6	
Sulfate	**1.7**	mg/L	1.0	0.50	1		11/04/17 10:27	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.050	1		10/25/17 15:45		
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/25/17 15:45		
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.050	1		10/25/17 15:45		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.23J**	mg/L	1.0	0.13	1		10/27/17 12:44	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-58R-201710 **Lab ID: 60256365017** Collected: 10/24/17 12:20 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/29/17 18:44	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/29/17 18:44	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/29/17 18:44	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/29/17 18:44	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/29/17 18:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/29/17 18:44	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/29/17 18:44	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/29/17 18:44	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/29/17 18:44	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/29/17 18:44	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/29/17 18:44	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/29/17 18:44	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/29/17 18:44	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/29/17 18:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/17 18:44	107-06-2	
1,1-Dichloroethene	**1.9**	ug/L	1.0	0.20	1		10/29/17 18:44	75-35-4	
cis-1,2-Dichloroethene	**10.0**	ug/L	1.0	0.080	1		10/29/17 18:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 18:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/29/17 18:44	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/29/17 18:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/29/17 18:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/29/17 18:44	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/29/17 18:44	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/29/17 18:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/29/17 18:44	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/17 18:44	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/17 18:44	79-34-5	
Tetrachloroethene	**0.13J**	ug/L	1.0	0.10	1		10/29/17 18:44	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/29/17 18:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/17 18:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/29/17 18:44	79-00-5	
Trichloroethene	**360**	ug/L	5.0	0.85	5		10/30/17 17:14	79-01-6	
Vinyl chloride	**0.65J**	ug/L	1.0	0.13	1		10/29/17 18:44	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/29/17 18:44	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/29/17 18:44	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/29/17 18:44	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/29/17 18:44	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/29/17 18:44		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:10	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**235**	mg/L	20.0	10.0	20		11/04/17 13:25	16887-00-6	
Sulfate	**1.4**	mg/L	1.0	0.50	1		11/04/17 12:56	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-58R-201710 **Lab ID: 60256365017** Collected: 10/24/17 12:20 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.050	1		10/25/17 15:56		
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/25/17 15:56		
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.050	1		10/25/17 15:56		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.16J**	mg/L	1.0	0.13	1		10/27/17 12:57	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: IW-73-201710 **Lab ID: 60256365018** Collected: 10/24/17 11:25 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/29/17 18:58	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/29/17 18:58	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/29/17 18:58	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/29/17 18:58	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/29/17 18:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/29/17 18:58	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/29/17 18:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/29/17 18:58	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/29/17 18:58	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/29/17 18:58	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/29/17 18:58	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/29/17 18:58	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/29/17 18:58	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/29/17 18:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/17 18:58	107-06-2	
1,1-Dichloroethene	**0.39J**	ug/L	1.0	0.20	1		10/29/17 18:58	75-35-4	
cis-1,2-Dichloroethene	**3.3**	ug/L	1.0	0.080	1		10/29/17 18:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 18:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/29/17 18:58	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/29/17 18:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/29/17 18:58	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/29/17 18:58	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/29/17 18:58	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/29/17 18:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/29/17 18:58	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/17 18:58	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/17 18:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/29/17 18:58	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/29/17 18:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/17 18:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/29/17 18:58	79-00-5	
Trichloroethene	**126**	ug/L	1.0	0.17	1		10/29/17 18:58	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/29/17 18:58	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/29/17 18:58	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/29/17 18:58	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/29/17 18:58	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/29/17 18:58	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/29/17 18:58		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:11	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**284**	mg/L	20.0	10.0	20		11/04/17 14:09	16887-00-6	
Sulfate	**14.4**	mg/L	1.0	0.50	1		11/04/17 13:54	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: IW-73-201710 **Lab ID: 60256365018** Collected: 10/24/17 11:25 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.050	1		10/25/17 15:51		
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/25/17 15:51		
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.050	1		10/25/17 15:51		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.28J**	mg/L	1.0	0.13	1		10/27/17 13:10	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-82-201710 **Lab ID: 60256365019** Collected: 10/24/17 15:25 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**14.7**	ug/L	10.0	1.9	1		10/30/17 11:23	67-64-1	
Benzene	**0.18J**	ug/L	1.0	0.060	1		10/30/17 11:23	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 11:23	75-27-4	
Bromoform	**1.0**	ug/L	1.0	0.070	1		10/30/17 11:23	75-25-2	
Bromomethane	**0.76J**	ug/L	5.0	0.16	1		10/30/17 11:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 11:23	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 11:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 11:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 11:23	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 11:23	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 11:23	67-66-3	
Chloromethane	**3.5**	ug/L	1.0	0.080	1		10/30/17 11:23	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 11:23	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 11:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 11:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 11:23	75-35-4	
cis-1,2-Dichloroethene	**0.80J**	ug/L	1.0	0.080	1		10/30/17 11:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 11:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 11:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 11:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 11:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 11:23	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 11:23	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 11:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 11:23	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 11:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 11:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 11:23	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 11:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 11:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 11:23	79-00-5	
Trichloroethene	**34.3**	ug/L	1.0	0.17	1		10/30/17 11:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 11:23	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 11:23	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/30/17 11:23	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/30/17 11:23	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/30/17 11:23	2037-26-5	
Preservation pH	**4.0**		0.10	0.10	1		10/30/17 11:23		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: FD-03-201710 **Lab ID: 60256365020** Collected: 10/24/17 15:25 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**14.1**	ug/L	10.0	1.9	1		10/30/17 11:37	67-64-1	
Benzene	**0.18J**	ug/L	1.0	0.060	1		10/30/17 11:37	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 11:37	75-27-4	
Bromoform	**1.1**	ug/L	1.0	0.070	1		10/30/17 11:37	75-25-2	
Bromomethane	**0.81J**	ug/L	5.0	0.16	1		10/30/17 11:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 11:37	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 11:37	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 11:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 11:37	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 11:37	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 11:37	67-66-3	
Chloromethane	**3.3**	ug/L	1.0	0.080	1		10/30/17 11:37	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 11:37	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 11:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 11:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 11:37	75-35-4	
cis-1,2-Dichloroethene	**0.80J**	ug/L	1.0	0.080	1		10/30/17 11:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 11:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 11:37	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 11:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 11:37	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 11:37	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 11:37	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 11:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 11:37	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 11:37	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 11:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 11:37	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 11:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 11:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 11:37	79-00-5	
Trichloroethene	**34.1**	ug/L	1.0	0.17	1		10/30/17 11:37	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 11:37	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 11:37	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/30/17 11:37	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/30/17 11:37	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/30/17 11:37	2037-26-5	
Preservation pH	**4.0**		0.10	0.10	1		10/30/17 11:37		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-40R-201710 **Lab ID: 60256365021** Collected: 10/24/17 13:00 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/29/17 18:16	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/29/17 18:16	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/29/17 18:16	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/29/17 18:16	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/29/17 18:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/29/17 18:16	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/29/17 18:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/29/17 18:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/29/17 18:16	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/29/17 18:16	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/29/17 18:16	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/29/17 18:16	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/29/17 18:16	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/29/17 18:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/17 18:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 18:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/29/17 18:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 18:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/29/17 18:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/29/17 18:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/29/17 18:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/29/17 18:16	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/29/17 18:16	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/29/17 18:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/29/17 18:16	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/17 18:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/17 18:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/29/17 18:16	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/29/17 18:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/17 18:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/29/17 18:16	79-00-5	
Trichloroethene	**0.31J**	ug/L	1.0	0.17	1		10/29/17 18:16	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/29/17 18:16	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/29/17 18:16	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/29/17 18:16	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/29/17 18:16	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/29/17 18:16	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/29/17 18:16		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: IW-77-201710 **Lab ID: 60256365022** Collected: 10/24/17 16:55 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**13.7**	ug/L	10.0	1.9	1		10/30/17 11:51	67-64-1	
Benzene	**0.10J**	ug/L	1.0	0.060	1		10/30/17 11:51	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 11:51	75-27-4	
Bromoform	**0.39J**	ug/L	1.0	0.070	1		10/30/17 11:51	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 11:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 11:51	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 11:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 11:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 11:51	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 11:51	75-00-3	
Chloroform	**0.17J**	ug/L	1.0	0.14	1		10/30/17 11:51	67-66-3	
Chloromethane	**1.0**	ug/L	1.0	0.080	1		10/30/17 11:51	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 11:51	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 11:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 11:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 11:51	75-35-4	
cis-1,2-Dichloroethene	**2.9**	ug/L	1.0	0.080	1		10/30/17 11:51	156-59-2	
trans-1,2-Dichloroethene	**0.49J**	ug/L	1.0	0.20	1		10/30/17 11:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 11:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 11:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 11:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 11:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 11:51	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 11:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 11:51	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 11:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 11:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 11:51	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 11:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 11:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 11:51	79-00-5	
Trichloroethene	**161**	ug/L	1.0	0.17	1		10/30/17 11:51	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 11:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 11:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/30/17 11:51	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/30/17 11:51	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 11:51	2037-26-5	
Preservation pH	**7.0**		0.10	0.10	1		10/30/17 11:51		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-196-201710 **Lab ID: 60256365023** Collected: 10/24/17 09:35 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 01:17	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 01:17	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 01:17	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 01:17	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 01:17	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 01:17	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 01:17	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 01:17	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 01:17	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 01:17	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 01:17	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 01:17	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 01:17	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 01:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 01:17	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 01:17	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 01:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 01:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 01:17	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 01:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 01:17	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 01:17	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 01:17	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 01:17	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 01:17	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 01:17	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 01:17	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 01:17	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 01:17	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 01:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 01:17	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 01:17	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 01:17	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 01:17	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/30/17 01:17	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/30/17 01:17	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 01:17	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 01:17		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-99-201710 **Lab ID: 60256365024** Collected: 10/24/17 09:48 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/29/17 18:30	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/29/17 18:30	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/29/17 18:30	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/29/17 18:30	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/29/17 18:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/29/17 18:30	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/29/17 18:30	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/29/17 18:30	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/29/17 18:30	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/29/17 18:30	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/29/17 18:30	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/29/17 18:30	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/29/17 18:30	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/29/17 18:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/17 18:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 18:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/29/17 18:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 18:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/29/17 18:30	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/29/17 18:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/29/17 18:30	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/29/17 18:30	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/29/17 18:30	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/29/17 18:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/29/17 18:30	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/17 18:30	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/17 18:30	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/29/17 18:30	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/29/17 18:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/17 18:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/29/17 18:30	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/29/17 18:30	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/29/17 18:30	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/29/17 18:30	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/29/17 18:30	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/29/17 18:30	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/29/17 18:30	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/29/17 18:30		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-98-201710 **Lab ID: 60256365025** Collected: 10/24/17 12:36 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.7J**	ug/L	10.0	1.9	1		10/30/17 00:07	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 00:07	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 00:07	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 00:07	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 00:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 00:07	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 00:07	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 00:07	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 00:07	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 00:07	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 00:07	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 00:07	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 00:07	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 00:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 00:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 00:07	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 00:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 00:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 00:07	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 00:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 00:07	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 00:07	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 00:07	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 00:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 00:07	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 00:07	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 00:07	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 00:07	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 00:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 00:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 00:07	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 00:07	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 00:07	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 00:07	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/30/17 00:07	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/30/17 00:07	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/30/17 00:07	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 00:07		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-184-201710 **Lab ID: 60256365026** Collected: 10/24/17 10:57 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 00:21	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 00:21	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 00:21	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 00:21	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 00:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 00:21	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 00:21	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 00:21	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 00:21	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 00:21	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 00:21	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 00:21	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 00:21	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 00:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 00:21	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 00:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 00:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 00:21	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 00:21	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 00:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 00:21	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 00:21	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 00:21	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 00:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 00:21	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 00:21	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 00:21	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 00:21	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 00:21	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 00:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 00:21	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 00:21	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 00:21	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 00:21	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/30/17 00:21	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/30/17 00:21	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 00:21	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 00:21		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TMW-19-201710 **Lab ID: 60256365027** Collected: 10/24/17 09:40 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 00:35	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 00:35	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 00:35	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 00:35	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 00:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 00:35	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 00:35	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 00:35	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 00:35	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 00:35	75-00-3	
Chloroform	**0.31J**	ug/L	1.0	0.14	1		10/30/17 00:35	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 00:35	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 00:35	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 00:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 00:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 00:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 00:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 00:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 00:35	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 00:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 00:35	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 00:35	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 00:35	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 00:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 00:35	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 00:35	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 00:35	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 00:35	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 00:35	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 00:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 00:35	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 00:35	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 00:35	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 00:35	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/30/17 00:35	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/30/17 00:35	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		10/30/17 00:35	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 00:35		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-186-201710 **Lab ID: 60256365028** Collected: 10/24/17 10:40 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 00:49	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 00:49	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 00:49	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 00:49	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 00:49	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 00:49	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 00:49	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 00:49	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 00:49	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 00:49	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 00:49	67-66-3	
Chloromethane	**0.17J**	ug/L	1.0	0.080	1		10/30/17 00:49	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 00:49	124-48-1	
1,1-Dichloroethane	**1.1**	ug/L	1.0	0.050	1		10/30/17 00:49	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 00:49	107-06-2	
1,1-Dichloroethene	**0.55J**	ug/L	1.0	0.20	1		10/30/17 00:49	75-35-4	
cis-1,2-Dichloroethene	**4.1**	ug/L	1.0	0.080	1		10/30/17 00:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 00:49	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 00:49	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 00:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 00:49	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 00:49	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 00:49	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 00:49	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 00:49	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 00:49	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 00:49	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 00:49	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 00:49	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 00:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 00:49	79-00-5	
Trichloroethene	**7.8**	ug/L	1.0	0.17	1		10/30/17 00:49	79-01-6	
Vinyl chloride	**0.14J**	ug/L	1.0	0.13	1		10/30/17 00:49	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 00:49	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 00:49	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/30/17 00:49	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/30/17 00:49	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 00:49		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: FD-04-201710 **Lab ID: 60256365029** Collected: 10/24/17 10:40 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 01:45	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 01:45	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 01:45	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 01:45	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 01:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 01:45	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 01:45	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 01:45	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 01:45	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 01:45	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 01:45	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 01:45	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 01:45	124-48-1	
1,1-Dichloroethane	**1.1**	ug/L	1.0	0.050	1		10/30/17 01:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 01:45	107-06-2	
1,1-Dichloroethene	**0.45J**	ug/L	1.0	0.20	1		10/30/17 01:45	75-35-4	
cis-1,2-Dichloroethene	**3.8**	ug/L	1.0	0.080	1		10/30/17 01:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 01:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 01:45	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 01:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 01:45	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 01:45	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 01:45	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 01:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 01:45	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 01:45	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 01:45	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 01:45	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 01:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 01:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 01:45	79-00-5	
Trichloroethene	**7.8**	ug/L	1.0	0.17	1		10/30/17 01:45	79-01-6	
Vinyl chloride	**0.16J**	ug/L	1.0	0.13	1		10/30/17 01:45	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 01:45	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 01:45	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		1		10/30/17 01:45	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		10/30/17 01:45	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 01:45		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-187-201710 **Lab ID: 60256365030** Collected: 10/24/17 12:00 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 01:03	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 01:03	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 01:03	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 01:03	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 01:03	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 01:03	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 01:03	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 01:03	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 01:03	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 01:03	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 01:03	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 01:03	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 01:03	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 01:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 01:03	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 01:03	75-35-4	
cis-1,2-Dichloroethene	**0.73J**	ug/L	1.0	0.080	1		10/30/17 01:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 01:03	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 01:03	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 01:03	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 01:03	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 01:03	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 01:03	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 01:03	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 01:03	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 01:03	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 01:03	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 01:03	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 01:03	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 01:03	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 01:03	79-00-5	
Trichloroethene	**0.65J**	ug/L	1.0	0.17	1		10/30/17 01:03	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 01:03	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 01:03	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/30/17 01:03	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/30/17 01:03	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/30/17 01:03	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 01:03		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: MW-188-201710 **Lab ID: 60256365031** Collected: 10/24/17 13:05 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 01:31	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 01:31	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 01:31	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 01:31	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 01:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 01:31	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 01:31	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 01:31	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 01:31	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 01:31	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 01:31	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 01:31	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 01:31	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 01:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 01:31	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 01:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 01:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 01:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 01:31	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 01:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 01:31	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 01:31	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 01:31	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 01:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 01:31	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 01:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 01:31	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 01:31	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 01:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 01:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 01:31	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 01:31	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 01:31	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 01:31	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 01:31	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/30/17 01:31	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/30/17 01:31	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 01:31		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TMW-10-201710 **Lab ID: 60256365032** Collected: 10/24/17 14:50 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**276**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:13	7439-89-6	
Manganese	**37.8**	ug/L	5.0	1.8	1	10/30/17 11:47	10/30/17 19:13	7439-96-5	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 02:00	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 02:00	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 02:00	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 02:00	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 02:00	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 02:00	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 02:00	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 02:00	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 02:00	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 02:00	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 02:00	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 02:00	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 02:00	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 02:00	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 02:00	107-06-2	
1,1-Dichloroethene	**0.22J**	ug/L	1.0	0.20	1		10/30/17 02:00	75-35-4	
cis-1,2-Dichloroethene	**4.5**	ug/L	1.0	0.080	1		10/30/17 02:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 02:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 02:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 02:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 02:00	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 02:00	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 02:00	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 02:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 02:00	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 02:00	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 02:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 02:00	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 02:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 02:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 02:00	79-00-5	
Trichloroethene	**89.5**	ug/L	1.0	0.17	1		10/30/17 02:00	79-01-6	
Vinyl chloride	**0.91J**	ug/L	1.0	0.13	1		10/30/17 02:00	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 02:00	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 02:00	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		1		10/30/17 02:00	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/30/17 02:00	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 02:00		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:11	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TMW-10-201710 **Lab ID: 60256365032** Collected: 10/24/17 14:50 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**167**	mg/L	10.0	5.0	10		11/03/17 18:58	16887-00-6	
Sulfate	**2.0**	mg/L	1.0	0.50	1		11/04/17 14:23	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.050	1		10/26/17 09:45		
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/26/17 09:45		
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.050	1		10/26/17 09:45		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.26J**	mg/L	1.0	0.13	1		10/27/17 13:22	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TMW-22-201710 **Lab ID: 60256365033** Collected: 10/24/17 16:50 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**149**	ug/L	10.0	1.9	1		11/02/17 13:52	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		11/02/17 13:52	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/02/17 13:52	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/02/17 13:52	75-25-2	L1
Bromomethane	ND	ug/L	5.0	0.16	1		11/02/17 13:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/02/17 13:52	78-93-3	
Carbon disulfide	**1.2J**	ug/L	5.0	0.12	1		11/02/17 13:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/02/17 13:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/02/17 13:52	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/02/17 13:52	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		11/02/17 13:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/02/17 13:52	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/02/17 13:52	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		11/02/17 13:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/02/17 13:52	107-06-2	
1,1-Dichloroethene	**0.87J**	ug/L	1.0	0.20	1		11/02/17 13:52	75-35-4	
cis-1,2-Dichloroethene	**9.8**	ug/L	1.0	0.080	1		11/02/17 13:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		11/02/17 13:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/02/17 13:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/02/17 13:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/02/17 13:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/02/17 13:52	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/02/17 13:52	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		11/02/17 13:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	**1.3J**	ug/L	10.0	0.42	1		11/02/17 13:52	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/02/17 13:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/02/17 13:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		11/02/17 13:52	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		11/02/17 13:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/02/17 13:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		11/02/17 13:52	79-00-5	
Trichloroethene	**486**	ug/L	20.0	3.4	20		10/30/17 02:13	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/02/17 13:52	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/02/17 13:52	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	92	%	80-120		1		11/02/17 13:52	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	80-120		1		11/02/17 13:52	17060-07-0	
Toluene-d8 (S)	104	%	80-120		1		11/02/17 13:52	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/02/17 13:52		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: EB-02-201710 **Lab ID: 60256365034** Collected: 10/24/17 17:25 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.1J**	ug/L	10.0	1.9	1		10/29/17 23:11	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/29/17 23:11	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/29/17 23:11	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/29/17 23:11	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/29/17 23:11	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/29/17 23:11	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/29/17 23:11	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/29/17 23:11	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/29/17 23:11	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/29/17 23:11	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/29/17 23:11	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/29/17 23:11	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/29/17 23:11	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/29/17 23:11	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/17 23:11	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 23:11	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/29/17 23:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 23:11	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/29/17 23:11	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/29/17 23:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/29/17 23:11	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/29/17 23:11	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/29/17 23:11	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/29/17 23:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/29/17 23:11	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/17 23:11	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/17 23:11	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/29/17 23:11	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/29/17 23:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/17 23:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/29/17 23:11	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/29/17 23:11	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/29/17 23:11	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/29/17 23:11	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/29/17 23:11	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		1		10/29/17 23:11	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/29/17 23:11	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/29/17 23:11		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TB-02-201710 **Lab ID: 60256365035** Collected: 10/24/17 09:35 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/29/17 22:57	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/29/17 22:57	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/29/17 22:57	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/29/17 22:57	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/29/17 22:57	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/29/17 22:57	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/29/17 22:57	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/29/17 22:57	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/29/17 22:57	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/29/17 22:57	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/29/17 22:57	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/29/17 22:57	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/29/17 22:57	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/29/17 22:57	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/17 22:57	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 22:57	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/29/17 22:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 22:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/29/17 22:57	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/29/17 22:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/29/17 22:57	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/29/17 22:57	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/29/17 22:57	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/29/17 22:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/29/17 22:57	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/17 22:57	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/17 22:57	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/29/17 22:57	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/29/17 22:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/17 22:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/29/17 22:57	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/29/17 22:57	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/29/17 22:57	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/29/17 22:57	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/29/17 22:57	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/29/17 22:57	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/29/17 22:57	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/29/17 22:57		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256365

Sample: TB-03-201710 **Lab ID: 60256365036** Collected: 10/24/17 09:35 Received: 10/25/17 02:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/29/17 22:42	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/29/17 22:42	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/29/17 22:42	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/29/17 22:42	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/29/17 22:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/29/17 22:42	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/29/17 22:42	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/29/17 22:42	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/29/17 22:42	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/29/17 22:42	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/29/17 22:42	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/29/17 22:42	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/29/17 22:42	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/29/17 22:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/29/17 22:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 22:42	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/29/17 22:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/29/17 22:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/29/17 22:42	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/29/17 22:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/29/17 22:42	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/29/17 22:42	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/29/17 22:42	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/29/17 22:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/29/17 22:42	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/29/17 22:42	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/29/17 22:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/29/17 22:42	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/29/17 22:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/29/17 22:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/29/17 22:42	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/29/17 22:42	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/29/17 22:42	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/29/17 22:42	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/29/17 22:42	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/29/17 22:42	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/29/17 22:42	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/29/17 22:42		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500794 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 60256365016, 60256365032

METHOD BLANK: 2050410 Matrix: Water
Associated Lab Samples: 60256365016, 60256365032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	50.0	12.4	10/30/17 18:42	
Manganese	ug/L	ND	5.0	1.8	10/30/17 18:42	

LABORATORY CONTROL SAMPLE: 2050411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9760	98	80-120	
Manganese	ug/L	1000	1010	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2050412 2050413

Parameter	Units	60256450001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	159	10000	10000	10100	9670	100	95	75-125	5	20	
Manganese	ug/L	ND	1000	1000	991	959	99	96	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500633 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256365001, 60256365002, 60256365003, 60256365004, 60256365005, 60256365006, 60256365007, 60256365008, 60256365009, 60256365010, 60256365011, 60256365012, 60256365013, 60256365014

METHOD BLANK: 2049409 Matrix: Water
Associated Lab Samples: 60256365001, 60256365002, 60256365003, 60256365004, 60256365005, 60256365006, 60256365007, 60256365008, 60256365009, 60256365010, 60256365011, 60256365012, 60256365013, 60256365014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/27/17 17:43	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/27/17 17:43	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/27/17 17:43	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/27/17 17:43	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/27/17 17:43	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/27/17 17:43	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/27/17 17:43	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/27/17 17:43	
2-Hexanone	ug/L	ND	10.0	1.2	10/27/17 17:43	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/27/17 17:43	
Acetone	ug/L	ND	10.0	1.9	10/27/17 17:43	
Benzene	ug/L	ND	1.0	0.060	10/27/17 17:43	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/27/17 17:43	
Bromoform	ug/L	ND	1.0	0.070	10/27/17 17:43	
Bromomethane	ug/L	0.95J	5.0	0.16	10/27/17 17:43	
Carbon disulfide	ug/L	ND	5.0	0.12	10/27/17 17:43	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/27/17 17:43	
Chlorobenzene	ug/L	ND	1.0	0.21	10/27/17 17:43	
Chloroethane	ug/L	ND	1.0	0.15	10/27/17 17:43	
Chloroform	ug/L	ND	1.0	0.14	10/27/17 17:43	
Chloromethane	ug/L	ND	1.0	0.080	10/27/17 17:43	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/27/17 17:43	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/27/17 17:43	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/27/17 17:43	
Ethylbenzene	ug/L	ND	1.0	0.18	10/27/17 17:43	
Methylene chloride	ug/L	ND	1.0	0.15	10/27/17 17:43	
Styrene	ug/L	ND	1.0	0.12	10/27/17 17:43	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/27/17 17:43	
Toluene	ug/L	ND	1.0	0.17	10/27/17 17:43	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/27/17 17:43	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/27/17 17:43	
Trichloroethene	ug/L	ND	1.0	0.17	10/27/17 17:43	
Vinyl chloride	ug/L	ND	1.0	0.13	10/27/17 17:43	
Xylene (Total)	ug/L	ND	3.0	0.42	10/27/17 17:43	
1,2-Dichloroethane-d4 (S)	%	101	80-120		10/27/17 17:43	
4-Bromofluorobenzene (S)	%	97	80-120		10/27/17 17:43	
Toluene-d8 (S)	%	103	80-120		10/27/17 17:43	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

LABORATORY CONTROL SAMPLE: 2049410

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	23.7	119	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	19.8	99	74-124	
1,1,2-Trichloroethane	ug/L	20	21.4	107	81-118	
1,1-Dichloroethane	ug/L	20	20.6	103	82-122	
1,1-Dichloroethene	ug/L	20	23.2	116	78-123	
1,2-Dichloroethane	ug/L	20	22.8	114	78-117	
1,2-Dichloropropane	ug/L	20	20.8	104	81-118	
2-Butanone (MEK)	ug/L	100	93.1	93	72-117	
2-Hexanone	ug/L	100	95.4	95	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	94.0	94	77-124	
Acetone	ug/L	100	95.7	96	66-127	
Benzene	ug/L	20	20.3	101	82-115	
Bromodichloromethane	ug/L	20	23.0	115	83-123	
Bromoform	ug/L	20	26.0	130	79-126	L1
Bromomethane	ug/L	20	21.0	105	39-146	
Carbon disulfide	ug/L	20	22.2	111	75-121	
Carbon tetrachloride	ug/L	20	23.8	119	82-117	L1
Chlorobenzene	ug/L	20	22.2	111	89-114	
Chloroethane	ug/L	20	21.2	106	71-133	
Chloroform	ug/L	20	20.9	105	78-117	
Chloromethane	ug/L	20	15.8	79	19-181	
cis-1,2-Dichloroethene	ug/L	20	22.6	113	78-119	
cis-1,3-Dichloropropene	ug/L	20	20.2	101	81-116	
Dibromochloromethane	ug/L	20	25.7	128	81-122	L1
Ethylbenzene	ug/L	20	21.4	107	83-112	
Methylene chloride	ug/L	20	22.2	111	78-127	
Styrene	ug/L	20	22.5	113	88-117	
Tetrachloroethene	ug/L	20	24.5	122	80-121	L1
Toluene	ug/L	20	20.5	103	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.9	105	79-120	
trans-1,3-Dichloropropene	ug/L	20	21.1	105	81-119	
Trichloroethene	ug/L	20	21.3	106	78-118	
Vinyl chloride	ug/L	20	21.6	108	66-133	
Xylene (Total)	ug/L	60	65.3	109	83-114	
1,2-Dichloroethane-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			88	80-120	
Toluene-d8 (S)	%			102	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500637 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256365017, 60256365018, 60256365021, 60256365024

METHOD BLANK: 2049450 Matrix: Water
Associated Lab Samples: 60256365017, 60256365018, 60256365021, 60256365024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/29/17 16:51	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/29/17 16:51	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/29/17 16:51	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/29/17 16:51	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/29/17 16:51	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/29/17 16:51	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/29/17 16:51	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/29/17 16:51	
2-Hexanone	ug/L	ND	10.0	1.2	10/29/17 16:51	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/29/17 16:51	
Acetone	ug/L	ND	10.0	1.9	10/29/17 16:51	
Benzene	ug/L	ND	1.0	0.060	10/29/17 16:51	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/29/17 16:51	
Bromoform	ug/L	ND	1.0	0.070	10/29/17 16:51	
Bromomethane	ug/L	ND	5.0	0.16	10/29/17 16:51	
Carbon disulfide	ug/L	ND	5.0	0.12	10/29/17 16:51	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/29/17 16:51	
Chlorobenzene	ug/L	ND	1.0	0.21	10/29/17 16:51	
Chloroethane	ug/L	ND	1.0	0.15	10/29/17 16:51	
Chloroform	ug/L	ND	1.0	0.14	10/29/17 16:51	
Chloromethane	ug/L	ND	1.0	0.080	10/29/17 16:51	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/29/17 16:51	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/29/17 16:51	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/29/17 16:51	
Ethylbenzene	ug/L	ND	1.0	0.18	10/29/17 16:51	
Methylene chloride	ug/L	ND	1.0	0.15	10/29/17 16:51	
Styrene	ug/L	ND	1.0	0.12	10/29/17 16:51	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/29/17 16:51	
Toluene	ug/L	ND	1.0	0.17	10/29/17 16:51	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/29/17 16:51	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/29/17 16:51	
Trichloroethene	ug/L	ND	1.0	0.17	10/29/17 16:51	
Vinyl chloride	ug/L	ND	1.0	0.13	10/29/17 16:51	
Xylene (Total)	ug/L	ND	3.0	0.42	10/29/17 16:51	
1,2-Dichloroethane-d4 (S)	%	97	80-120		10/29/17 16:51	
4-Bromofluorobenzene (S)	%	98	80-120		10/29/17 16:51	
Toluene-d8 (S)	%	102	80-120		10/29/17 16:51	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

LABORATORY CONTROL SAMPLE: 2049451

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.2	101	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	18.6	93	74-124	
1,1,2-Trichloroethane	ug/L	20	19.3	96	81-118	
1,1-Dichloroethane	ug/L	20	20.4	102	82-122	
1,1-Dichloroethene	ug/L	20	20.4	102	78-123	
1,2-Dichloroethane	ug/L	20	19.7	99	78-117	
1,2-Dichloropropane	ug/L	20	20.8	104	81-118	
2-Butanone (MEK)	ug/L	100	96.0	96	72-117	
2-Hexanone	ug/L	100	93.4	93	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	98.9	99	77-124	
Acetone	ug/L	100	95.9	96	66-127	
Benzene	ug/L	20	20.4	102	82-115	
Bromodichloromethane	ug/L	20	20.3	102	83-123	
Bromoform	ug/L	20	20.0	100	79-126	
Bromomethane	ug/L	20	20.9	105	39-146	
Carbon disulfide	ug/L	20	19.6	98	75-121	
Carbon tetrachloride	ug/L	20	21.1	105	82-117	
Chlorobenzene	ug/L	20	19.8	99	89-114	
Chloroethane	ug/L	20	19.5	98	71-133	
Chloroform	ug/L	20	20.0	100	78-117	
Chloromethane	ug/L	20	19.8	99	19-181	
cis-1,2-Dichloroethene	ug/L	20	19.2	96	78-119	
cis-1,3-Dichloropropene	ug/L	20	19.7	99	81-116	
Dibromochloromethane	ug/L	20	19.6	98	81-122	
Ethylbenzene	ug/L	20	19.5	97	83-112	
Methylene chloride	ug/L	20	20.3	102	78-127	
Styrene	ug/L	20	20.6	103	88-117	
Tetrachloroethene	ug/L	20	19.9	100	80-121	
Toluene	ug/L	20	20.2	101	78-113	
trans-1,2-Dichloroethene	ug/L	20	19.1	96	79-120	
trans-1,3-Dichloropropene	ug/L	20	19.5	98	81-119	
Trichloroethene	ug/L	20	19.0	95	78-118	
Vinyl chloride	ug/L	20	21.0	105	66-133	
Xylene (Total)	ug/L	60	61.9	103	83-114	
1,2-Dichloroethane-d4 (S)	%			98	80-120	
4-Bromofluorobenzene (S)	%			98	80-120	
Toluene-d8 (S)	%			101	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500642 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256365023, 60256365025, 60256365026, 60256365027, 60256365028, 60256365029, 60256365030, 60256365031, 60256365032, 60256365033, 60256365034, 60256365035, 60256365036

METHOD BLANK: 2049461 Matrix: Water
Associated Lab Samples: 60256365023, 60256365025, 60256365026, 60256365027, 60256365028, 60256365029, 60256365030, 60256365031, 60256365032, 60256365033, 60256365034, 60256365035, 60256365036

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/29/17 22:28	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/29/17 22:28	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/29/17 22:28	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/29/17 22:28	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/29/17 22:28	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/29/17 22:28	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/29/17 22:28	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/29/17 22:28	
2-Hexanone	ug/L	ND	10.0	1.2	10/29/17 22:28	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/29/17 22:28	
Acetone	ug/L	ND	10.0	1.9	10/29/17 22:28	
Benzene	ug/L	ND	1.0	0.060	10/29/17 22:28	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/29/17 22:28	
Bromoform	ug/L	ND	1.0	0.070	10/29/17 22:28	
Bromomethane	ug/L	ND	5.0	0.16	10/29/17 22:28	
Carbon disulfide	ug/L	ND	5.0	0.12	10/29/17 22:28	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/29/17 22:28	
Chlorobenzene	ug/L	ND	1.0	0.21	10/29/17 22:28	
Chloroethane	ug/L	ND	1.0	0.15	10/29/17 22:28	
Chloroform	ug/L	ND	1.0	0.14	10/29/17 22:28	
Chloromethane	ug/L	ND	1.0	0.080	10/29/17 22:28	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/29/17 22:28	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/29/17 22:28	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/29/17 22:28	
Ethylbenzene	ug/L	ND	1.0	0.18	10/29/17 22:28	
Methylene chloride	ug/L	ND	1.0	0.15	10/29/17 22:28	
Styrene	ug/L	ND	1.0	0.12	10/29/17 22:28	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/29/17 22:28	
Toluene	ug/L	ND	1.0	0.17	10/29/17 22:28	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/29/17 22:28	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/29/17 22:28	
Trichloroethene	ug/L	ND	1.0	0.17	10/29/17 22:28	
Vinyl chloride	ug/L	ND	1.0	0.13	10/29/17 22:28	
Xylene (Total)	ug/L	ND	3.0	0.42	10/29/17 22:28	
1,2-Dichloroethane-d4 (S)	%	97	80-120		10/29/17 22:28	
4-Bromofluorobenzene (S)	%	96	80-120		10/29/17 22:28	
Toluene-d8 (S)	%	100	80-120		10/29/17 22:28	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

LABORATORY CONTROL SAMPLE: 2049462

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.5	97	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	18.2	91	74-124	
1,1,2-Trichloroethane	ug/L	20	19.5	98	81-118	
1,1-Dichloroethane	ug/L	20	20.3	101	82-122	
1,1-Dichloroethene	ug/L	20	20.1	101	78-123	
1,2-Dichloroethane	ug/L	20	19.4	97	78-117	
1,2-Dichloropropane	ug/L	20	20.7	104	81-118	
2-Butanone (MEK)	ug/L	100	92.7	93	72-117	
2-Hexanone	ug/L	100	92.6	93	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	98.6	99	77-124	
Acetone	ug/L	100	95.1	95	66-127	
Benzene	ug/L	20	20.3	102	82-115	
Bromodichloromethane	ug/L	20	20.2	101	83-123	
Bromoform	ug/L	20	19.1	95	79-126	
Bromomethane	ug/L	20	22.4	112	39-146	
Carbon disulfide	ug/L	20	19.3	97	75-121	
Carbon tetrachloride	ug/L	20	21.3	106	82-117	
Chlorobenzene	ug/L	20	19.8	99	89-114	
Chloroethane	ug/L	20	19.1	96	71-133	
Chloroform	ug/L	20	19.5	98	78-117	
Chloromethane	ug/L	20	19.8	99	19-181	
cis-1,2-Dichloroethene	ug/L	20	18.9	95	78-119	
cis-1,3-Dichloropropene	ug/L	20	19.7	98	81-116	
Dibromochloromethane	ug/L	20	18.9	94	81-122	
Ethylbenzene	ug/L	20	19.5	97	83-112	
Methylene chloride	ug/L	20	20.1	101	78-127	
Styrene	ug/L	20	20.3	102	88-117	
Tetrachloroethene	ug/L	20	19.1	96	80-121	
Toluene	ug/L	20	19.8	99	78-113	
trans-1,2-Dichloroethene	ug/L	20	19.3	97	79-120	
trans-1,3-Dichloropropene	ug/L	20	18.3	92	81-119	
Trichloroethene	ug/L	20	18.7	93	78-118	
Vinyl chloride	ug/L	20	20.8	104	66-133	
Xylene (Total)	ug/L	60	61.1	102	83-114	
1,2-Dichloroethane-d4 (S)	%			98	80-120	
4-Bromofluorobenzene (S)	%			98	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2049463 2049464

Parameter	Units	60256365023 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	20	20	18.4	18.6	92	93	49-167	1	11	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	17.2	16.8	86	84	75-118	2	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	18.4	18.1	92	90	76-116	2	13	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		2049463			2049464							
Parameter	Units	60256365023 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethane	ug/L	ND	20	20	19.5	20.1	98	100	82-127	3	15	
1,1-Dichloroethene	ug/L	ND	20	20	18.7	18.8	93	94	79-136	1	14	
1,2-Dichloroethane	ug/L	ND	20	20	18.6	18.3	93	92	58-133	1	14	
1,2-Dichloropropane	ug/L	ND	20	20	20.0	19.4	100	97	81-117	3	11	
2-Butanone (MEK)	ug/L	ND	100	100	85.2	85.9	85	86	64-114	1	21	
2-Hexanone	ug/L	ND	100	100	85.9	85.8	86	86	71-113	0	15	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	86.8	85.9	87	86	64-127	1	14	
Acetone	ug/L	ND	100	100	86.7	82.0	87	82	61-113	6	33	
Benzene	ug/L	ND	20	20	18.9	19.1	95	96	55-145	1	18	
Bromodichloromethane	ug/L	ND	20	20	18.5	18.8	93	94	81-120	1	11	
Bromoform	ug/L	ND	20	20	18.0	18.3	90	91	72-117	2	16	
Bromomethane	ug/L	ND	20	20	18.2	20.1	91	100	39-145	10	37	
Carbon disulfide	ug/L	ND	20	20	17.4	17.9	87	89	82-129	3	11	
Carbon tetrachloride	ug/L	ND	20	20	18.8	19.8	94	99	85-125	5	11	
Chlorobenzene	ug/L	ND	20	20	17.3	17.7	87	88	87-115	2	10	
Chloroethane	ug/L	ND	20	20	17.0	17.1	85	86	62-157	1	20	
Chloroform	ug/L	ND	20	20	18.6	18.3	93	92	79-117	2	12	
Chloromethane	ug/L	ND	20	20	16.7	17.1	84	86	22-194	3	59	
cis-1,2-Dichloroethene	ug/L	ND	20	20	17.9	18.3	90	91	70-134	2	12	
cis-1,3-Dichloropropene	ug/L	ND	20	20	15.0	15.8	75	79	70-117	5	12	
Dibromochloromethane	ug/L	ND	20	20	18.4	18.5	92	92	56-135	0	14	
Ethylbenzene	ug/L	ND	20	20	17.0	17.8	85	89	45-152	4	11	
Methylene chloride	ug/L	ND	20	20	17.8	18.0	89	90	77-123	1	13	
Styrene	ug/L	ND	20	20	16.6	17.7	83	88	64-134	6	11	
Tetrachloroethene	ug/L	ND	20	20	16.4	17.5	82	88	81-126	7	11	
Toluene	ug/L	ND	20	20	17.1	18.5	86	93	52-144	8	12	
trans-1,2-Dichloroethene	ug/L	ND	20	20	18.3	18.5	92	93	80-126	1	12	
trans-1,3-Dichloropropene	ug/L	ND	20	20	14.7	15.4	73	77	72-114	5	15	
Trichloroethene	ug/L	ND	20	20	17.4	18.0	87	90	70-131	3	16	
Vinyl chloride	ug/L	ND	20	20	21.1	21.1	105	106	64-153	0	23	
Xylene (Total)	ug/L	ND	60	60	51.1	54.3	85	91	54-146	6	12	
1,2-Dichloroethane-d4 (S)	%						98	100	80-120			
4-Bromofluorobenzene (S)	%						98	98	80-120			
Toluene-d8 (S)	%						99	101	80-120			
Preservation pH		1.0			1.0	1.0				0		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		2049465			2049466							
Parameter	Units	60256365031 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	20	20	19.9	20.9	99	104	49-167	5	11	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	18.0	17.7	90	89	75-118	2	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	18.1	19.6	91	98	76-116	8	13	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2049465 2049466

Parameter	Units	60256365031 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethane	ug/L	ND	20	20	20.2	20.6	101	103	82-127	2	15	
1,1-Dichloroethene	ug/L	ND	20	20	19.4	20.8	97	104	79-136	7	14	
1,2-Dichloroethane	ug/L	ND	20	20	18.6	19.6	93	98	58-133	5	14	
1,2-Dichloropropane	ug/L	ND	20	20	19.9	20.3	99	101	81-117	2	11	
2-Butanone (MEK)	ug/L	ND	100	100	85.9	88.3	86	88	64-114	3	21	
2-Hexanone	ug/L	ND	100	100	88.0	89.8	88	90	71-113	2	15	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	86.9	91.9	87	92	64-127	6	14	
Acetone	ug/L	ND	100	100	89.8	87.9	90	88	61-113	2	33	
Benzene	ug/L	ND	20	20	19.8	20.3	99	101	55-145	2	18	
Bromodichloromethane	ug/L	ND	20	20	19.5	20.0	97	100	81-120	3	11	
Bromoform	ug/L	ND	20	20	18.0	19.1	90	95	72-117	6	16	
Bromomethane	ug/L	ND	20	20	20.9	21.7	104	109	39-145	4	37	
Carbon disulfide	ug/L	ND	20	20	19.1	19.6	95	98	82-129	3	11	
Carbon tetrachloride	ug/L	ND	20	20	21.6	22.3	108	111	85-125	3	11	
Chlorobenzene	ug/L	ND	20	20	19.1	19.4	95	97	87-115	2	10	
Chloroethane	ug/L	ND	20	20	18.0	17.4	90	87	62-157	3	20	
Chloroform	ug/L	ND	20	20	19.0	19.9	95	100	79-117	5	12	
Chloromethane	ug/L	ND	20	20	18.3	17.4	91	87	22-194	5	59	
cis-1,2-Dichloroethene	ug/L	ND	20	20	18.5	19.0	92	95	70-134	3	12	
cis-1,3-Dichloropropene	ug/L	ND	20	20	15.9	16.5	80	82	70-117	3	12	
Dibromochloromethane	ug/L	ND	20	20	18.8	18.9	94	95	56-135	1	14	
Ethylbenzene	ug/L	ND	20	20	19.0	19.2	95	96	45-152	1	11	
Methylene chloride	ug/L	ND	20	20	18.2	18.9	91	94	77-123	4	13	
Styrene	ug/L	ND	20	20	18.9	18.7	95	93	64-134	1	11	
Tetrachloroethene	ug/L	ND	20	20	19.6	19.5	98	98	81-126	0	11	
Toluene	ug/L	ND	20	20	19.4	19.4	97	97	52-144	0	12	
trans-1,2-Dichloroethene	ug/L	ND	20	20	19.8	20.3	99	101	80-126	2	12	
trans-1,3-Dichloropropene	ug/L	ND	20	20	15.6	16.2	78	81	72-114	4	15	
Trichloroethene	ug/L	ND	20	20	19.0	18.8	95	94	70-131	1	16	
Vinyl chloride	ug/L	ND	20	20	22.2	21.8	111	109	64-153	2	23	
Xylene (Total)	ug/L	ND	60	60	58.2	58.8	97	98	54-146	1	12	
1,2-Dichloroethane-d4 (S)	%						98	99	80-120			
4-Bromofluorobenzene (S)	%						99	98	80-120			
Toluene-d8 (S)	%						101	102	80-120			
Preservation pH		1.0			1.0	1.0				0		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500795 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256365007, 60256365008

METHOD BLANK: 2050414 Matrix: Water
Associated Lab Samples: 60256365007, 60256365008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichloroethene	ug/L	ND	1.0	0.17	10/30/17 10:12	
1,2-Dichloroethane-d4 (S)	%	96	80-120		10/30/17 10:12	
4-Bromofluorobenzene (S)	%	96	80-120		10/30/17 10:12	
Toluene-d8 (S)	%	102	80-120		10/30/17 10:12	

LABORATORY CONTROL SAMPLE: 2050415

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/L	20	19.8	99	78-118	
1,2-Dichloroethane-d4 (S)	%			95	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			98	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500837 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256365009, 60256365011, 60256365012, 60256365015, 60256365016, 60256365017

METHOD BLANK: 2050615 Matrix: Water
Associated Lab Samples: 60256365009, 60256365011, 60256365012, 60256365015, 60256365016, 60256365017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/30/17 15:50	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/30/17 15:50	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/30/17 15:50	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/30/17 15:50	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 15:50	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/30/17 15:50	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/30/17 15:50	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/30/17 15:50	
2-Hexanone	ug/L	ND	10.0	1.2	10/30/17 15:50	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/30/17 15:50	
Acetone	ug/L	ND	10.0	1.9	10/30/17 15:50	
Benzene	ug/L	ND	1.0	0.060	10/30/17 15:50	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/30/17 15:50	
Bromoform	ug/L	ND	1.0	0.070	10/30/17 15:50	
Bromomethane	ug/L	ND	5.0	0.16	10/30/17 15:50	
Carbon disulfide	ug/L	ND	5.0	0.12	10/30/17 15:50	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/30/17 15:50	
Chlorobenzene	ug/L	ND	1.0	0.21	10/30/17 15:50	
Chloroethane	ug/L	ND	1.0	0.15	10/30/17 15:50	
Chloroform	ug/L	ND	1.0	0.14	10/30/17 15:50	
Chloromethane	ug/L	ND	1.0	0.080	10/30/17 15:50	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/30/17 15:50	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/30/17 15:50	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/30/17 15:50	
Ethylbenzene	ug/L	ND	1.0	0.18	10/30/17 15:50	
Methylene chloride	ug/L	ND	1.0	0.15	10/30/17 15:50	
Styrene	ug/L	ND	1.0	0.12	10/30/17 15:50	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/30/17 15:50	
Toluene	ug/L	ND	1.0	0.17	10/30/17 15:50	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 15:50	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/30/17 15:50	
Trichloroethene	ug/L	ND	1.0	0.17	10/30/17 15:50	
Vinyl chloride	ug/L	ND	1.0	0.13	10/30/17 15:50	
Xylene (Total)	ug/L	ND	3.0	0.42	10/30/17 15:50	
1,2-Dichloroethane-d4 (S)	%	98	80-120		10/30/17 15:50	
4-Bromofluorobenzene (S)	%	96	80-120		10/30/17 15:50	
Toluene-d8 (S)	%	99	80-120		10/30/17 15:50	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

LABORATORY CONTROL SAMPLE: 2050616

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.8	104	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	19.8	99	74-124	
1,1,2-Trichloroethane	ug/L	20	20.6	103	81-118	
1,1-Dichloroethane	ug/L	20	21.4	107	82-122	
1,1-Dichloroethene	ug/L	20	20.6	103	78-123	
1,2-Dichloroethane	ug/L	20	21.3	106	78-117	
1,2-Dichloropropane	ug/L	20	22.1	110	81-118	
2-Butanone (MEK)	ug/L	100	104	104	72-117	
2-Hexanone	ug/L	100	98.9	99	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	104	104	77-124	
Acetone	ug/L	100	99.4	99	66-127	
Benzene	ug/L	20	21.5	107	82-115	
Bromodichloromethane	ug/L	20	21.3	107	83-123	
Bromoform	ug/L	20	20.7	103	79-126	
Bromomethane	ug/L	20	22.8	114	39-146	
Carbon disulfide	ug/L	20	19.5	98	75-121	
Carbon tetrachloride	ug/L	20	21.6	108	82-117	
Chlorobenzene	ug/L	20	20.1	101	89-114	
Chloroethane	ug/L	20	18.7	94	71-133	
Chloroform	ug/L	20	20.9	104	78-117	
Chloromethane	ug/L	20	16.3	81	19-181	
cis-1,2-Dichloroethene	ug/L	20	20.2	101	78-119	
cis-1,3-Dichloropropene	ug/L	20	21.6	108	81-116	
Dibromochloromethane	ug/L	20	20.2	101	81-122	
Ethylbenzene	ug/L	20	19.9	99	83-112	
Methylene chloride	ug/L	20	20.2	101	78-127	
Styrene	ug/L	20	20.8	104	88-117	
Tetrachloroethene	ug/L	20	19.9	100	80-121	
Toluene	ug/L	20	20.7	104	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.0	100	79-120	
trans-1,3-Dichloropropene	ug/L	20	20.3	102	81-119	
Trichloroethene	ug/L	20	19.3	97	78-118	
Vinyl chloride	ug/L	20	22.6	113	66-133	
Xylene (Total)	ug/L	60	62.7	105	83-114	
1,2-Dichloroethane-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			101	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 501009 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256365015

METHOD BLANK: 2051042 Matrix: Water
Associated Lab Samples: 60256365015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichloroethene	ug/L	ND	1.0	0.17	10/31/17 09:57	
1,2-Dichloroethane-d4 (S)	%	100	80-120		10/31/17 09:57	
4-Bromofluorobenzene (S)	%	97	80-120		10/31/17 09:57	
Toluene-d8 (S)	%	97	80-120		10/31/17 09:57	

LABORATORY CONTROL SAMPLE: 2051043

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/L	20	19.9	99	78-118	
1,2-Dichloroethane-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			100	80-120	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 501472
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256365033

METHOD BLANK: 2052653
Matrix: Water
Associated Lab Samples: 60256365033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/02/17 11:07	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/02/17 11:07	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	11/02/17 11:07	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	11/02/17 11:07	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	11/02/17 11:07	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	11/02/17 11:07	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	11/02/17 11:07	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	11/02/17 11:07	
2-Hexanone	ug/L	ND	10.0	1.2	11/02/17 11:07	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	11/02/17 11:07	
Acetone	ug/L	ND	10.0	1.9	11/02/17 11:07	
Benzene	ug/L	ND	1.0	0.060	11/02/17 11:07	
Bromodichloromethane	ug/L	ND	1.0	0.19	11/02/17 11:07	
Bromoform	ug/L	ND	1.0	0.070	11/02/17 11:07	
Bromomethane	ug/L	ND	5.0	0.16	11/02/17 11:07	
Carbon disulfide	ug/L	ND	5.0	0.12	11/02/17 11:07	
Carbon tetrachloride	ug/L	ND	1.0	0.18	11/02/17 11:07	
Chlorobenzene	ug/L	ND	1.0	0.21	11/02/17 11:07	
Chloroethane	ug/L	ND	1.0	0.15	11/02/17 11:07	
Chloroform	ug/L	ND	1.0	0.14	11/02/17 11:07	
Chloromethane	ug/L	ND	1.0	0.080	11/02/17 11:07	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	11/02/17 11:07	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	11/02/17 11:07	
Dibromochloromethane	ug/L	ND	1.0	0.21	11/02/17 11:07	
Ethylbenzene	ug/L	ND	1.0	0.18	11/02/17 11:07	
Methylene chloride	ug/L	ND	1.0	0.15	11/02/17 11:07	
Styrene	ug/L	ND	1.0	0.12	11/02/17 11:07	
Tetrachloroethene	ug/L	ND	1.0	0.10	11/02/17 11:07	
Toluene	ug/L	ND	1.0	0.17	11/02/17 11:07	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	11/02/17 11:07	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	11/02/17 11:07	
Vinyl chloride	ug/L	ND	1.0	0.13	11/02/17 11:07	
Xylene (Total)	ug/L	ND	3.0	0.42	11/02/17 11:07	
1,2-Dichloroethane-d4 (S)	%	105	80-120		11/02/17 11:07	
4-Bromofluorobenzene (S)	%	96	80-120		11/02/17 11:07	
Toluene-d8 (S)	%	105	80-120		11/02/17 11:07	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

LABORATORY CONTROL SAMPLE: 2052654

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	22.6	113	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	16.2	81	74-124	
1,1,2-Trichloroethane	ug/L	20	19.3	96	81-118	
1,1-Dichloroethane	ug/L	20	18.0	90	82-122	
1,1-Dichloroethene	ug/L	20	23.1	116	78-123	
1,2-Dichloroethane	ug/L	20	20.3	101	78-117	
1,2-Dichloropropane	ug/L	20	17.4	87	81-118	
2-Butanone (MEK)	ug/L	100	74.6	75	72-117	
2-Hexanone	ug/L	100	80.7	81	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	76.7	77	77-124	
Acetone	ug/L	100	93.2	93	66-127	
Benzene	ug/L	20	17.3	87	82-115	
Bromodichloromethane	ug/L	20	21.6	108	83-123	
Bromoform	ug/L	20	26.9	135	79-126	L1
Bromomethane	ug/L	20	19.3	96	39-146	
Carbon disulfide	ug/L	20	23.3	117	75-121	
Carbon tetrachloride	ug/L	20	21.9	109	82-117	
Chlorobenzene	ug/L	20	20.3	101	89-114	
Chloroethane	ug/L	20	22.6	113	71-133	
Chloroform	ug/L	20	19.1	96	78-117	
Chloromethane	ug/L	20	17.4	87	19-181	
cis-1,2-Dichloroethene	ug/L	20	18.9	94	78-119	
cis-1,3-Dichloropropene	ug/L	20	18.6	93	81-116	
Dibromochloromethane	ug/L	20	23.2	116	81-122	
Ethylbenzene	ug/L	20	19.1	95	83-112	
Methylene chloride	ug/L	20	19.6	98	78-127	
Styrene	ug/L	20	20.5	103	88-117	
Tetrachloroethene	ug/L	20	24.0	120	80-121	
Toluene	ug/L	20	19.0	95	78-113	
trans-1,2-Dichloroethene	ug/L	20	17.3	87	79-120	
trans-1,3-Dichloropropene	ug/L	20	19.6	98	81-119	
Vinyl chloride	ug/L	20	21.7	108	66-133	
Xylene (Total)	ug/L	60	59.4	99	83-114	
1,2-Dichloroethane-d4 (S)	%			108	80-120	
4-Bromofluorobenzene (S)	%			87	80-120	
Toluene-d8 (S)	%			104	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500793 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 7 day
Associated Lab Samples: 60256365019, 60256365020, 60256365022

METHOD BLANK: 2050408 Matrix: Water
Associated Lab Samples: 60256365019, 60256365020, 60256365022

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/30/17 10:12	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/30/17 10:12	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/30/17 10:12	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/30/17 10:12	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 10:12	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/30/17 10:12	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/30/17 10:12	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/30/17 10:12	
2-Hexanone	ug/L	ND	10.0	1.2	10/30/17 10:12	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/30/17 10:12	
Acetone	ug/L	ND	10.0	1.9	10/30/17 10:12	
Benzene	ug/L	ND	1.0	0.060	10/30/17 10:12	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/30/17 10:12	
Bromoform	ug/L	ND	1.0	0.070	10/30/17 10:12	
Bromomethane	ug/L	ND	5.0	0.16	10/30/17 10:12	
Carbon disulfide	ug/L	ND	5.0	0.12	10/30/17 10:12	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/30/17 10:12	
Chlorobenzene	ug/L	ND	1.0	0.21	10/30/17 10:12	
Chloroethane	ug/L	ND	1.0	0.15	10/30/17 10:12	
Chloroform	ug/L	ND	1.0	0.14	10/30/17 10:12	
Chloromethane	ug/L	ND	1.0	0.080	10/30/17 10:12	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/30/17 10:12	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/30/17 10:12	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/30/17 10:12	
Ethylbenzene	ug/L	ND	1.0	0.18	10/30/17 10:12	
Methylene chloride	ug/L	ND	1.0	0.15	10/30/17 10:12	
Styrene	ug/L	ND	1.0	0.12	10/30/17 10:12	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/30/17 10:12	
Toluene	ug/L	ND	1.0	0.17	10/30/17 10:12	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 10:12	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/30/17 10:12	
Trichloroethene	ug/L	ND	1.0	0.17	10/30/17 10:12	
Vinyl chloride	ug/L	ND	1.0	0.13	10/30/17 10:12	
Xylene (Total)	ug/L	ND	3.0	0.42	10/30/17 10:12	
1,2-Dichloroethane-d4 (S)	%	96	80-120		10/30/17 10:12	
4-Bromofluorobenzene (S)	%	96	80-120		10/30/17 10:12	
Toluene-d8 (S)	%	102	80-120		10/30/17 10:12	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

LABORATORY CONTROL SAMPLE: 2050409

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.1	105	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	18.0	90	74-124	
1,1,2-Trichloroethane	ug/L	20	18.6	93	81-118	
1,1-Dichloroethane	ug/L	20	21.4	107	82-122	
1,1-Dichloroethene	ug/L	20	21.1	105	78-123	
1,2-Dichloroethane	ug/L	20	20.5	103	78-117	
1,2-Dichloropropane	ug/L	20	21.8	109	81-118	
2-Butanone (MEK)	ug/L	100	96.5	97	72-117	
2-Hexanone	ug/L	100	90.7	91	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.0	96	77-124	
Acetone	ug/L	100	103	103	66-127	
Benzene	ug/L	20	21.4	107	82-115	
Bromodichloromethane	ug/L	20	21.3	106	83-123	
Bromoform	ug/L	20	19.5	97	79-126	
Bromomethane	ug/L	20	25.0	125	39-146	
Carbon disulfide	ug/L	20	20.7	103	75-121	
Carbon tetrachloride	ug/L	20	22.1	111	82-117	
Chlorobenzene	ug/L	20	20.1	100	89-114	
Chloroethane	ug/L	20	20.2	101	71-133	
Chloroform	ug/L	20	20.7	103	78-117	
Chloromethane	ug/L	20	20.7	103	19-181	
cis-1,2-Dichloroethene	ug/L	20	20.2	101	78-119	
cis-1,3-Dichloropropene	ug/L	20	21.7	108	81-116	
Dibromochloromethane	ug/L	20	19.4	97	81-122	
Ethylbenzene	ug/L	20	20.0	100	83-112	
Methylene chloride	ug/L	20	20.4	102	78-127	
Styrene	ug/L	20	21.3	107	88-117	
Tetrachloroethene	ug/L	20	20.3	101	80-121	
Toluene	ug/L	20	19.9	99	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.8	104	79-120	
trans-1,3-Dichloropropene	ug/L	20	18.5	93	81-119	
Trichloroethene	ug/L	20	19.8	99	78-118	
Vinyl chloride	ug/L	20	23.1	116	66-133	
Xylene (Total)	ug/L	60	63.5	106	83-114	
1,2-Dichloroethane-d4 (S)	%			95	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			98	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500574 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 60256365016, 60256365017, 60256365018, 60256365032

METHOD BLANK: 2049045 Matrix: Water
Associated Lab Samples: 60256365016, 60256365017, 60256365018, 60256365032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	ND	0.050	0.0048	10/28/17 14:04	

LABORATORY CONTROL SAMPLE: 2049046

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	.5	0.54	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2049047 2049048

Parameter	Units	60256365016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	ND	.5	.5	0.44	0.44	87	88	75-125	0	20	

SAMPLE DUPLICATE: 2049049

Parameter	Units	60256365017 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 2049050

Parameter	Units	60256491006 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 501675 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60256365032

METHOD BLANK: 2053526 Matrix: Water
Associated Lab Samples: 60256365032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.50	11/03/17 13:40	

LABORATORY CONTROL SAMPLE: 2053527

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2053528 2053529

Parameter	Units	60256491001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	51.9	50	50	97.8	98.5	92	93	80-120	1	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 501760 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60256365016, 60256365017, 60256365018, 60256365032

METHOD BLANK: 2053939 Matrix: Water
Associated Lab Samples: 60256365016, 60256365017, 60256365018, 60256365032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.50	11/04/17 07:58	
Sulfate	mg/L	ND	1.0	0.50	11/04/17 07:58	

LABORATORY CONTROL SAMPLE: 2053940

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	96	90-110	
Sulfate	mg/L	5	5.1	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2053941 2053942

Parameter	Units	60256365016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	272	100	100	370	370	99	99	80-120	0	15	
Sulfate	mg/L	1.7	5	5	6.8	7.0	102	105	80-120	2	15	

MATRIX SPIKE SAMPLE: 2053943

Parameter	Units	60256365017 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	235	100	335	100	80-120	
Sulfate	mg/L	1.4	5	6.5	102	80-120	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500272 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 60256365016, 60256365017, 60256365018

METHOD BLANK: 2047449 Matrix: Water
Associated Lab Samples: 60256365016, 60256365017, 60256365018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.050	10/25/17 15:33	
Nitrogen, Nitrite	mg/L	ND	0.10	0.030	10/25/17 15:33	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.050	10/25/17 15:33	

LABORATORY CONTROL SAMPLE: 2047450

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.1	114	70-130	
Nitrogen, Nitrite	mg/L	1	1.0	102	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	2.2	108	90-110	

MATRIX SPIKE SAMPLE: 2047451

Parameter	Units	60256363012 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	1.8	177	70-130	M1
Nitrogen, Nitrite	mg/L	ND	1	0.40	40	90-110	M1
Nitrogen, NO2 plus NO3	mg/L	ND	2	2.2	109	90-110	

MATRIX SPIKE SAMPLE: 2047453

Parameter	Units	60256369001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	87.3	20	113	129	70-130	
Nitrogen, Nitrite	mg/L	<0.60	20	9.2	46	90-110	M1
Nitrogen, NO2 plus NO3	mg/L	87.3	40	122	88	90-110	M1

SAMPLE DUPLICATE: 2047452

Parameter	Units	60256419001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	48.5	48.8	1	20	
Nitrogen, Nitrite	mg/L	ND	ND		20	
Nitrogen, NO2 plus NO3	mg/L	48.5	48.8	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500371
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 60256365032

METHOD BLANK: 2047954 Matrix: Water
Associated Lab Samples: 60256365032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.050	10/26/17 09:36	
Nitrogen, Nitrite	mg/L	ND	0.10	0.030	10/26/17 09:36	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.050	10/26/17 09:36	

LABORATORY CONTROL SAMPLE: 2047955

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.2	117	70-130	
Nitrogen, Nitrite	mg/L	1	1.0	100	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	2.2	109	90-110	

MATRIX SPIKE SAMPLE: 2047956

Parameter	Units	60256491001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	6.2	2	7.5	61	70-130	H1,M1
Nitrogen, Nitrite	mg/L	ND	2	0.50	25	90-110	H1,M1
Nitrogen, NO2 plus NO3	mg/L	6.2	4	8.0	43	90-110	H1,M1

MATRIX SPIKE SAMPLE: 2047958

Parameter	Units	60256422001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	7.5	2	9.5	99	70-130	
Nitrogen, Nitrite	mg/L	0.25	2	0.79	27	90-110	M1
Nitrogen, NO2 plus NO3	mg/L	7.8	4	10.3	63	90-110	M1

SAMPLE DUPLICATE: 2047957

Parameter	Units	60256491003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	ND	ND		20	
Nitrogen, Nitrite	mg/L	ND	ND		20	
Nitrogen, NO2 plus NO3	mg/L	ND	ND		20	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256365

QC Batch: 500485 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon
Associated Lab Samples: 60256365016, 60256365017, 60256365018, 60256365032

METHOD BLANK: 2048506 Matrix: Water
Associated Lab Samples: 60256365016, 60256365017, 60256365018, 60256365032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.13	10/27/17 09:16	

LABORATORY CONTROL SAMPLE: 2048507

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.5	111	80-120	

MATRIX SPIKE SAMPLE: 2048508

Parameter	Units	60256331001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	ND	5	6.0	110	80-120	

SAMPLE DUPLICATE: 2048509

Parameter	Units	60256331002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	ND	0.48J		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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60256365

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.

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-K Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: 500633
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 500637
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 500793
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 500795
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 500837
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 501009
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 501472
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60256365

ANALYTE QUALIFIERS

H1	Analysis conducted outside the EPA method holding time.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

Pace Analytical Services, LLC
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Lenexa, KS 66219
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60256365

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60256365016	**RW-69-201710**	EPA 3010	500794	EPA 6010	500920
60256365032	**TMW-10-201710**	EPA 3010	500794	EPA 6010	500920
60256365001	**MW-60R-201710**	EPA 5030B/8260	500633		
60256365002	**TMW-16-201710**	EPA 5030B/8260	500633		
60256365003	**TMW-26-201710**	EPA 5030B/8260	500633		
60256365004	**MW-182-201710**	EPA 5030B/8260	500633		
60256365005	**TMW-30-201710**	EPA 5030B/8260	500633		
60256365006	**MW-68-201710**	EPA 5030B/8260	500633		
60256365007	**FD-02-201710**	EPA 5030B/8260	500633		
60256365007	**FD-02-201710**	EPA 5030B/8260	500795		
60256365008	**MW-57R-201710**	EPA 5030B/8260	500633		
60256365008	**MW-57R-201710**	EPA 5030B/8260	500795		
60256365009	**MW-56R-201710**	EPA 5030B/8260	500633		
60256365009	**MW-56R-201710**	EPA 5030B/8260	500837		
60256365010	**MW-175-201710**	EPA 5030B/8260	500633		
60256365011	**TMW-21-201710**	EPA 5030B/8260	500633		
60256365011	**TMW-21-201710**	EPA 5030B/8260	500837		
60256365012	**TMW-24-201710**	EPA 5030B/8260	500633		
60256365012	**TMW-24-201710**	EPA 5030B/8260	500837		
60256365013	**MW-185-201710**	EPA 5030B/8260	500633		
60256365014	**MW-176-201710**	EPA 5030B/8260	500633		
60256365015	**MW-46R-201710**	EPA 5030B/8260	500837		
60256365015	**MW-46R-201710**	EPA 5030B/8260	501009		
60256365016	**RW-69-201710**	EPA 5030B/8260	500837		
60256365017	**MW-58R-201710**	EPA 5030B/8260	500637		
60256365017	**MW-58R-201710**	EPA 5030B/8260	500837		
60256365018	**IW-73-201710**	EPA 5030B/8260	500637		
60256365021	**MW-40R-201710**	EPA 5030B/8260	500637		
60256365023	**MW-196-201710**	EPA 5030B/8260	500642		
60256365024	**MW-99-201710**	EPA 5030B/8260	500637		
60256365025	**MW-98-201710**	EPA 5030B/8260	500642		
60256365026	**MW-184-201710**	EPA 5030B/8260	500642		
60256365027	**TMW-19-201710**	EPA 5030B/8260	500642		
60256365028	**MW-186-201710**	EPA 5030B/8260	500642		
60256365029	**FD-04-201710**	EPA 5030B/8260	500642		
60256365030	**MW-187-201710**	EPA 5030B/8260	500642		
60256365031	**MW-188-201710**	EPA 5030B/8260	500642		
60256365032	**TMW-10-201710**	EPA 5030B/8260	500642		
60256365033	**TMW-22-201710**	EPA 5030B/8260	500642		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60256365

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60256365033	**TMW-22-201710**	EPA 5030B/8260	501472		
60256365034	**EB-02-201710**	EPA 5030B/8260	500642		
60256365035	**TB-02-201710**	EPA 5030B/8260	500642		
60256365036	**TB-03-201710**	EPA 5030B/8260	500642		
60256365019	**MW-82-201710**	EPA 5030B/8260	500793		
60256365020	**FD-03-201710**	EPA 5030B/8260	500793		
60256365022	**IW-77-201710**	EPA 5030B/8260	500793		
60256365016	**RW-69-201710**	SM 4500-S-2 D	500574		
60256365017	**MW-58R-201710**	SM 4500-S-2 D	500574		
60256365018	**IW-73-201710**	SM 4500-S-2 D	500574		
60256365032	**TMW-10-201710**	SM 4500-S-2 D	500574		
60256365016	**RW-69-201710**	EPA 300.0	501760		
60256365017	**MW-58R-201710**	EPA 300.0	501760		
60256365018	**IW-73-201710**	EPA 300.0	501760		
60256365032	**TMW-10-201710**	EPA 300.0	501675		
60256365032	**TMW-10-201710**	EPA 300.0	501760		
60256365016	**RW-69-201710**	EPA 353.2	500272		
60256365017	**MW-58R-201710**	EPA 353.2	500272		
60256365018	**IW-73-201710**	EPA 353.2	500272		
60256365032	**TMW-10-201710**	EPA 353.2	500371		
60256365016	**RW-69-201710**	SM 5310C	500485		
60256365017	**MW-58R-201710**	SM 5310C	500485		
60256365018	**IW-73-201710**	SM 5310C	500485		
60256365032	**TMW-10-201710**	SM 5310C	500485		

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Sample Condition Upon Receipt

WO# : 60256365

60256365

Client Name: Environ

Courier: FedEx ☐ UPS ☐ VIA ☑ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☑ Foam ☐ None ☐ Other ☐

Thermometer Used: CF 0.0 T-266 / CF +0.3 T-239 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): As-read 2.2/1.9 **Corr. Factor** CF 0.0 CF +0.3 **Corrected** 2.2/1.9

Date and initials of person examining contents: DV 10/25/17

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	NO2,NO3
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	OTHR= 40ml vial with Ascorbic Acid.
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	Receive with TB.
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	II= TB2
Containers requiring pH preservation in compliance? (HNO3, H2SO4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	☑Yes ☐No ☐N/A	III= TB3
Cyanide water sample checks: ☑ N/A Lead acetate strip turns dark? (Record only) Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No ☐Yes ☐No	
Trip Blank present:	☑Yes ☐No ☐N/A	
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Richard Mannz Digitally signed by: Richard Mannz DN: CN = Richard Mannz C = US O = Pace Analytical OU = Client Services Date: 2017.10.25 18:28:55 -05'00' Date: _____

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same as section L

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 4

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Environ	Report To: Tamara House-Knight	Attention: Tamara House-Knight
Address: ~~7600 College Blvd., Ste. 625~~ Overland Park, KS 66210	Copy To:	Company Name: Environ
		Address: 124 W. Capitol Avenue
Email To: -	Purchase Order No.: NA	Pace Quote Reference: Little Rock, AR 72201
Phone: ~~913-553-5926~~ Fax:	Project Name: Fort Smith, AR	Pace Project Manager: Colleen Clyne
Requested Due Date/TAT: STD	Project Number:	Pace Profile #: 7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	6010-Iron	Ferric Iron calc. (send field Ferrous)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60256365
1	MW-60R-201710	W	G			10/24/17	0925		3				X					X	X								001
2	TMW-11C-201710	W	G			10/24/17	1058		3				X					X	X								002
3	TMW-24-201710	W	G			10/24/17	1248		3				X					X	X								003
4	MW-18R-201710	W	G			10/24/17	1505		3				X					X	X								004
5	TMW-30-201710	W	G			10/24/17	1658		3				X					X	X								005
6	MW-68-201710	W	G			10/24/17	1708		3				X					X	X								006
7	FD-02-201710	W	G			10/24/17	1536		3				X					X	X								007
8	MW-57R-201710	W	G			10/24/17	1520		3				X					X	X								008
9	MW-51R-201710	W	G			10/24/17	1600		3				X					X	X								009
10	MW-17S-201710	W	G			10/24/17	1440		3				X					X	X								010
11	TMW-21-201710	W	G			10/24/17	1424		3				X					X	X								011
12	TMW-24-201710	W	G			10/24/17	1250		3				X					X	X								012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Victoria Siegler REH	1800	10/24/17		10/25/17	0230	2.2	Y	Y	Y
							1.9	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Siegler

SIGNATURE of SAMPLER: Victoria Siegler DATE Signed (MM/DD/YY): 10/24/17

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

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

CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 2 of 4

Section A Required Client Information: Same as Section C

Company:	Environ
Address:	~~7500 College Blvd., Ste. 925~~ ~~Overland Park, KS 66210~~
Email To:	-
Phone:	~~913-563-5926~~ Fax:
Requested Due Date/TAT:	STD

Section B Required Project Information:

Report To:	Tamara House-Knight
Copy To:	
Purchase Order No.:	NA
Project Name:	Fort Smith, AR
Project Number:	

Section C Invoice Information:

Attention:	Tamara House-Knight
Company Name:	Environ
Address:	124 W. Capitol Avenue
Pace Quote Reference:	Little Rock, AR 72201
Pace Project Manager:	Colleen Clyne
Pace Profile #:	7444, line 1

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

Valid Matrix Codes: DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

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

Preservatives: Unpreserved, H_2SO_4, HNO_3, HCl, NaOH + Zn Acetate, $Na_2S_2O_3$, Methanol, Other Ascorbic Acid

Requested Analysis Filtered (Y/N); Analysis Test: 8260 VOCs, Sulfide, TOC, Sulfate, Nitrate, nitrite, unpres, 6010-Iron, Ferric Iron calc. (send field Ferrous)

Pace Project No./ Lab I.D.: 60256365

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE	Collected DATE	Collected TIME	# OF CONTAINERS	Unpres.	H_2SO_4	HNO_3	HCl	NaOH+Zn Acetate	Other (Ascorbic Acid)	8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite	Notes	Lab I.D.
1	MW-18S-~~2710~~ 201710	W	G	10/24/17	1520	3				X			X					3D69H	013
2	MW-17W-201710	W	G	10/24/17	0935	3				X			X						014
3	MW-46R-201710	W	G	10/24/17	1043	3				X			X	~~X X X X~~					015
4	~~PA~~ RW-09-201710	W	G	10/24/17	0940	7	X	X	X	X	X		X	X	X	X	X	BP3U AG3S BP2N BP3Z	016
5	MW-58R-201710	W	G	10/24/17	1220	7	X	X	X	X	X		X	X	X	X	X		017
6	MW-73-201710	W	G	10/24/17	1125	7	X	X	X	X	X		X	X	X	X	X		018
7	MW-82-201710	W	G	10/24/17	1525	~~7~~ 3	~~X~~	~~X~~	~~X~~		X	X	X	~~—~~				30THR; 7 day hold	019
8	FD-03-201710	W	G	10/24/17	1525	7	~~X~~	~~X~~	~~X~~		X	X	X	~~—~~				7 day hold	020
9	MW-40R-201710	W	G	10/24/17	1300	3				X			X						021
10	MW-77-201710	W	G	10/24/17	1635	3						X	X					7 day hold	022
11	MW-19W-201710	W	G	10/24/17	0935	3				X			X						023
12	MW-19W-201710-MS	W	G	10/24/17	0935	3				X			X						~~024~~

ADDITIONAL COMMENTS

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Victoria Siegel REH	10/24/17	1800	[signature] PASI	10/25	~~0205~~	2.2	Y	Y	Y
					0230	1.9	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Siegler

SIGNATURE of SAMPLER: Victoria Siegler DATE Signed (MM/DD/YY): 10/24/17

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

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

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 3 of 4

Section A Required Client Information: Same as Section C

Company:	Environ
Address:	~~7500 College Blvd., Ste. 925~~
	Overland Park, ~~KS 66210~~
Email To:	
Phone: ~~913-553-5926~~	Fax:
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	Tamara House-Knight
Copy To:	
Purchase Order No.:	NA
Project Name:	Fort Smith, AR
Project Number:	

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Attention:	Tamara House-Knight
Company Name:	Environ
Address:	124 W. Capitol Avenue
Pace Quote Reference:	Little Rock, AR 72201
Pace Project Manager:	Colleen Clyne
Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

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

Requested Analysis Filtered (Y/N)

Pace Project No./ Lab I.D.: 60256365

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH + Zn Acetate	$Na_2S_2O_3$	Methanol	Other	8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	6010-Iron	Ferric Iron calc. (send field Ferrous)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	mw-196-201710-DS	W	G			10/24/17	0935		3				X					Y								336914 — 025
2	mw-99-201710	W	G			10/24/17	0948		3				X					Y								~~024~~ 026
3	mw-98-201710	W	G			10/24/17	1236		3				X					X								~~025~~ 027
4	mw-184-201710	W	G			10/24/17	1057		3				X					Y								~~026~~ 028
5	TMW-19-201710	W	G			10/24/17	0940		3				X					X								~~027~~ 029
6	mw-186-201710	W	G			10/24/17	1040		3				X					Y								~~028~~ 030
7	FD-04-201710	W	G			10/24/17	1040		3				X					Y								~~029~~ 031
8	mw-187-201710	W	G			10/24/17	1200		3				X					Y								~~030~~ 032
9	mw-188-201710	W	G			10/24/17	1305		3				X					Y								~~031~~ 033
10	mw-188-201710-MS	W	G			10/24/17	1305		3				X					X								- ~~032~~ 034
11	mw-188-201710-MSD	W	G			10/24/17	1305		3				X					X								- ~~033~~ 035
12	TMW-10-201710	W	G			10/24/17	1450		7	X	X	X	X	X				X	BP3U	A635 (20)	B P3N (20)	1BP3Z (40)				~~032~~ ~~034~~ 036

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Victoria Siegler RCH	10/24/17	1800	[signature] PASI	10/25/17	0230	2.2	Y	Y	Y
							1.9	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Siegler

SIGNATURE of SAMPLER: Victoria Siegler DATE Signed (MM/DD/YY): 10/24/17

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

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

CHAIN-OF-CUSTODY / Analytical Request Document

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

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Page: 4 of 4

Section A Required Client Information: Same as section C

Company:	Environ
Address:	~~7500 College Blvd., Ste. 925~~ ~~Overland Park, KS 66210~~
Email To:	-
Phone: ~~913-533-5920~~	Fax:
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	Tamara House-Knight
Copy To:	
Purchase Order No.:	NA
Project Name:	Fort Smith, AR
Project Number:	

Section C Invoice Information:

Attention:	Tamara House-Knight
Company Name:	Environ
Address:	124 W. Capitol Avenue
Pace Quote Reference:	Little Rock, AR 72201
Pace Project Manager:	Colleen Clyne
Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	8200 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	8010-Iron	Ferric Iron calc. (send field Ferrous)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TMW-22-201710	W	G			10/24/17	1050		3				X						X								
2	EB-02-201710	W	G			10/24/17	1725		3				X						X								
3	TB-02-201710	W	G			10/24/17	—		2				X						X								
4	TB-03-201710	W	G			10/24/17	—		2				X						X								
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											

60256365

SDG# 033 037 034 038 035 039 036 040

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Victoria Sieglen REH	10/24/17	1800		10/25/17	0230

SAMPLE CONDITIONS

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Sieglen

SIGNATURE of SAMPLER: Victoria Sieglen

DATE Signed (MM/DD/YY): 10/24/17

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

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

November 16, 2017

Nick Zurweller
Ramboll Environ
7500 College Blvd.
Ste. 295
Overland Park, KS 66210

RE: Project: FORT SMITH, AR
Pace Project No.: 60256510

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on October 26, 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.

RV1 - Revised report - "B" flags removed from trichloroethene for samples 026, 027, 032, and 036.

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

Sincerely,

Richard Mannz
richard.mannz@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: Tamara House-Knight, Ramboll Environ
M. Wilson

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 17-016-0
Illinois Certification #: 200030
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212018-1
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587
Missouri Certification: 10070

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: FORT SMITH, AR
Pace Project No.: 60256510

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60256510001	MW-62-201710	Water	10/25/17 15:42	10/26/17 09:00
60256510002	MW-96-201710	Water	10/25/17 11:00	10/26/17 09:00
60256510003	MW-97-201710	Water	10/25/17 13:14	10/26/17 09:00
60256510004	MW-183-201710	Water	10/25/17 09:51	10/26/17 09:00
60256510005	ITMW-2-201710	Water	10/25/17 14:15	10/26/17 09:00
60256510006	ITMW-1-201710	Water	10/25/17 15:14	10/26/17 09:00
60256510007	MW-55R-201710	Water	10/25/17 16:36	10/26/17 09:00
60256510008	IW-78-201710	Water	10/25/17 08:50	10/26/17 09:00
60256510009	ITMW-20-201710	Water	10/25/17 10:05	10/26/17 09:00
60256510010	ITMW-21-201710	Water	10/25/17 11:05	10/26/17 09:00
60256510011	ITMW-7-201710	Water	10/25/17 12:30	10/26/17 09:00
60256510012	MW-29-201710	Water	10/25/17 13:30	10/26/17 09:00
60256510013	ITMW-5-201710	Water	10/25/17 15:15	10/26/17 09:00
60256510014	MW-22-201710	Water	10/25/17 16:35	10/26/17 09:00
60256510015	MW-84-201710	Water	10/25/17 12:10	10/26/17 09:00
60256510016	MW-83-201710	Water	10/25/17 10:15	10/26/17 09:00
60256510017	MW-28-201710	Water	10/25/17 15:15	10/26/17 09:00
60256510018	MW-91-201710	Water	10/25/17 14:15	10/26/17 09:00
60256510019	MW-178-201710	Water	10/25/17 08:45	10/26/17 09:00
60256510020	FD-06-201710	Water	10/25/17 08:45	10/26/17 09:00
60256510021	MW-39R-201710	Water	10/25/17 09:30	10/26/17 09:00
60256510022	FD-05-201710	Water	10/25/17 10:07	10/26/17 09:00
60256510023	TMW-23-201710	Water	10/25/17 10:47	10/26/17 09:00
60256510024	MW-191-201710	Water	10/25/17 15:38	10/26/17 09:00
60256510025	MW-189-201710	Water	10/25/17 12:25	10/26/17 09:00
60256510026	MW-190-201710	Water	10/25/17 14:18	10/26/17 09:00
60256510027	MW-192-201710	Water	10/25/17 17:00	10/26/17 09:00
60256510028	TMW-27-201710	Water	10/25/17 15:35	10/26/17 09:00
60256510029	TMW-25-201710	Water	10/25/17 16:45	10/26/17 09:00
60256510030	ITMW-16-201710	Water	10/25/17 14:00	10/26/17 09:00
60256510031	ITMW-10-201710	Water	10/25/17 11:50	10/26/17 09:00
60256510032	MW-27-201710	Water	10/25/17 17:10	10/26/17 09:00
60256510033	MW-24-201710	Water	10/25/17 15:00	10/26/17 09:00
60256510034	ITMW-9-201710	Water	10/25/17 09:55	10/26/17 09:00
60256510035	MW-26-201710	Water	10/25/17 16:00	10/26/17 09:00
60256510036	TB-04-201710	Water	10/25/17 08:00	10/26/17 09:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60256510

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60256510001	MW-62-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510002	MW-96-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510003	MW-97-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510004	MW-183-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510005	ITMW-2-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510006	ITMW-1-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510007	MW-55R-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510008	IW-78-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510009	ITMW-20-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510010	ITMW-21-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510011	ITMW-7-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510012	MW-29-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510013	ITMW-5-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510014	MW-22-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510015	MW-84-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510016	MW-83-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510017	MW-28-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510018	MW-91-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510019	MW-178-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510020	FD-06-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510021	MW-39R-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510022	FD-05-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510023	TMW-23-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510024	MW-191-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510025	MW-189-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510026	MW-190-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510027	MW-192-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510028	TMW-27-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510029	TMW-25-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510030	ITMW-16-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510031	ITMW-10-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510032	MW-27-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510033	MW-24-201710	EPA 5030B/8260	PGH	38	PASI-K
60256510034	ITMW-9-201710	EPA 6010	TDS	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	2	PASI-K

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60256510

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256510035	**MW-26-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256510036	**TB-04-201710**	EPA 5030B/8260	PGH	38	PASI-K

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256510

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Ramboll Environ_AR
Date: November 16, 2017

General Information:
1 sample was analyzed for EPA 6010. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 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.

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

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

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

Additional Comments:

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256510

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: November 16, 2017

General Information:
36 samples were analyzed for EPA 5030B/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: 500793

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 500837

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 501040

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60256510012

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

- MS (Lab ID: 2051157)
  - Styrene
- MSD (Lab ID: 2051158)
  - Styrene

Additional Comments:

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256510

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: Ramboll Environ_AR
Date: November 16, 2017

General Information:
1 sample was analyzed for SM 4500-S-2 D. 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.

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.

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

Additional Comments:

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256510

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Ramboll Environ_AR
Date: November 16, 2017

General Information:
1 sample was analyzed for EPA 300.0. 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.

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

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

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

Additional Comments:

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256510

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Ramboll Environ_AR
Date: November 16, 2017

General Information:
1 sample was analyzed for EPA 353.2. 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.

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: 500492

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60256510034,60256590004

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

- MS (Lab ID: 2048688)
  - Nitrogen, NO2 plus NO3
  - Nitrogen, Nitrite
- MS (Lab ID: 2048690)
  - Nitrogen, Nitrate
  - Nitrogen, Nitrite

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

Additional Comments:

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256510

Method: **SM 5310C**
Description: 5310C TOC
Client: Ramboll Environ_AR
Date: November 16, 2017

General Information:
1 sample was analyzed for SM 5310C. 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.

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

QC Batch: 500954

B: Analyte was detected in the associated method blank.

- BLANK for HBN 500954 [WETA/478 (Lab ID: 2050852)
  - Total Organic Carbon

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.

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.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-62-201710 **Lab ID: 60256510001** Collected: 10/25/17 15:42 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 17:52	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 17:52	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 17:52	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 17:52	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 17:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 17:52	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 17:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 17:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 17:52	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 17:52	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 17:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 17:52	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 17:52	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 17:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 17:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 17:52	75-35-4	
cis-1,2-Dichloroethene	**0.17J**	ug/L	1.0	0.080	1		10/31/17 17:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 17:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 17:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 17:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 17:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 17:52	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 17:52	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 17:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 17:52	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 17:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 17:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 17:52	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 17:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 17:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 17:52	79-00-5	
Trichloroethene	**0.38J**	ug/L	1.0	0.17	1		10/31/17 17:52	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 17:52	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 17:52	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/31/17 17:52	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/31/17 17:52	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/31/17 17:52	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 17:52		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-96-201710 **Lab ID: 60256510002** Collected: 10/25/17 11:00 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 18:06	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 18:06	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 18:06	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 18:06	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 18:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 18:06	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 18:06	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 18:06	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 18:06	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 18:06	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 18:06	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 18:06	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 18:06	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 18:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 18:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 18:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/31/17 18:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 18:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 18:06	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 18:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 18:06	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 18:06	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 18:06	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 18:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 18:06	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 18:06	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 18:06	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 18:06	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 18:06	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 18:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 18:06	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/31/17 18:06	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 18:06	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 18:06	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/31/17 18:06	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/31/17 18:06	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/31/17 18:06	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 18:06		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-97-201710 **Lab ID: 60256510003** Collected: 10/25/17 13:14 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 18:20	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 18:20	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 18:20	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 18:20	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 18:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 18:20	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 18:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 18:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 18:20	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 18:20	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 18:20	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 18:20	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 18:20	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 18:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 18:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 18:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/31/17 18:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 18:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 18:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 18:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 18:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 18:20	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 18:20	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 18:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 18:20	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 18:20	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 18:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 18:20	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 18:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 18:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 18:20	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/31/17 18:20	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 18:20	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 18:20	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/31/17 18:20	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/31/17 18:20	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/31/17 18:20	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 18:20		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-183-201710 **Lab ID: 60256510004** Collected: 10/25/17 09:51 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 18:34	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 18:34	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 18:34	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 18:34	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 18:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 18:34	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 18:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 18:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 18:34	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 18:34	75-00-3	
Chloroform	**0.16J**	ug/L	1.0	0.14	1		10/31/17 18:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 18:34	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 18:34	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 18:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 18:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 18:34	75-35-4	
cis-1,2-Dichloroethene	**0.24J**	ug/L	1.0	0.080	1		10/31/17 18:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 18:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 18:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 18:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 18:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 18:34	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 18:34	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 18:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 18:34	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 18:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 18:34	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 18:34	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 18:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 18:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 18:34	79-00-5	
Trichloroethene	**2.8**	ug/L	1.0	0.17	1		10/31/17 18:34	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 18:34	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 18:34	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/31/17 18:34	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/31/17 18:34	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/31/17 18:34	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 18:34		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-2-201710 **Lab ID: 60256510005** Collected: 10/25/17 14:15 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 18:48	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 18:48	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 18:48	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 18:48	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 18:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 18:48	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 18:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 18:48	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 18:48	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 18:48	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 18:48	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 18:48	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 18:48	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 18:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 18:48	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 18:48	75-35-4	
cis-1,2-Dichloroethene	**0.29J**	ug/L	1.0	0.080	1		10/31/17 18:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 18:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 18:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 18:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 18:48	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 18:48	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 18:48	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 18:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 18:48	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 18:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 18:48	79-34-5	
Tetrachloroethene	**0.76J**	ug/L	1.0	0.10	1		10/31/17 18:48	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 18:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 18:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 18:48	79-00-5	
Trichloroethene	**0.34J**	ug/L	1.0	0.17	1		10/31/17 18:48	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 18:48	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 18:48	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/31/17 18:48	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/31/17 18:48	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/31/17 18:48	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 18:48		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-1-201710 **Lab ID: 60256510006** Collected: 10/25/17 15:14 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 19:02	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 19:02	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 19:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 19:02	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 19:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 19:02	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 19:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 19:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 19:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 19:02	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 19:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 19:02	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 19:02	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 19:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 19:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 19:02	75-35-4	
cis-1,2-Dichloroethene	**3.8**	ug/L	1.0	0.080	1		10/31/17 19:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 19:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 19:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 19:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 19:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 19:02	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 19:02	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 19:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 19:02	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 19:02	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 19:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 19:02	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 19:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 19:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 19:02	79-00-5	
Trichloroethene	**8.9**	ug/L	1.0	0.17	1		10/31/17 19:02	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 19:02	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 19:02	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/31/17 19:02	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/31/17 19:02	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/31/17 19:02	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 19:02		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-55R-201710 **Lab ID: 60256510007** Collected: 10/25/17 16:36 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 19:16	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 19:16	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 19:16	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 19:16	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 19:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 19:16	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 19:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 19:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 19:16	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 19:16	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 19:16	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 19:16	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 19:16	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 19:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 19:16	107-06-2	
1,1-Dichloroethene	**0.28J**	ug/L	1.0	0.20	1		10/31/17 19:16	75-35-4	
cis-1,2-Dichloroethene	**0.77J**	ug/L	1.0	0.080	1		10/31/17 19:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 19:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 19:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 19:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 19:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 19:16	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 19:16	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 19:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 19:16	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 19:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 19:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 19:16	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 19:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 19:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 19:16	79-00-5	
Trichloroethene	**10.9**	ug/L	1.0	0.17	1		10/31/17 19:16	79-01-6	
Vinyl chloride	**0.15J**	ug/L	1.0	0.13	1		10/31/17 19:16	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 19:16	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/31/17 19:16	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/31/17 19:16	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/31/17 19:16	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 19:16		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: IW-78-201710 **Lab ID: 60256510008** Collected: 10/25/17 08:50 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**9.1J**	ug/L	10.0	1.9	1		10/30/17 12:05	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 12:05	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 12:05	75-27-4	
Bromoform	**1.8**	ug/L	1.0	0.070	1		10/30/17 12:05	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 12:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 12:05	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 12:05	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 12:05	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 12:05	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 12:05	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 12:05	67-66-3	
Chloromethane	**6.2**	ug/L	1.0	0.080	1		10/30/17 12:05	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 12:05	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 12:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 12:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 12:05	75-35-4	
cis-1,2-Dichloroethene	**0.16J**	ug/L	1.0	0.080	1		10/30/17 12:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 12:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 12:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 12:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 12:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 12:05	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 12:05	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 12:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 12:05	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 12:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 12:05	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 12:05	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 12:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 12:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 12:05	79-00-5	
Trichloroethene	**7.0**	ug/L	1.0	0.17	1		10/30/17 12:05	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 12:05	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 12:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 12:05	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		10/30/17 12:05	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/30/17 12:05	2037-26-5	
Preservation pH	**5.0**		0.10	0.10	1		10/30/17 12:05		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-20-201710 **Lab ID: 60256510009** Collected: 10/25/17 10:05 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 19:30	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 19:30	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 19:30	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 19:30	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 19:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 19:30	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 19:30	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 19:30	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 19:30	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 19:30	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 19:30	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 19:30	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 19:30	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 19:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 19:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 19:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/31/17 19:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 19:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 19:30	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 19:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 19:30	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 19:30	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 19:30	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 19:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 19:30	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 19:30	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 19:30	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 19:30	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 19:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 19:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 19:30	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/31/17 19:30	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 19:30	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 19:30	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/31/17 19:30	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/31/17 19:30	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/31/17 19:30	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 19:30		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-21-201710 **Lab ID: 60256510010** Collected: 10/25/17 11:05 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 19:44	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 19:44	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 19:44	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 19:44	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 19:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 19:44	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 19:44	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 19:44	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 19:44	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 19:44	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 19:44	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 19:44	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 19:44	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 19:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 19:44	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 19:44	75-35-4	
cis-1,2-Dichloroethene	**0.25J**	ug/L	1.0	0.080	1		10/31/17 19:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 19:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 19:44	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 19:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 19:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 19:44	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 19:44	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 19:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 19:44	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 19:44	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 19:44	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 19:44	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 19:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 19:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 19:44	79-00-5	
Trichloroethene	**7.9**	ug/L	1.0	0.17	1		10/31/17 19:44	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 19:44	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 19:44	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/31/17 19:44	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/31/17 19:44	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/31/17 19:44	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 19:44		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-7-201710 **Lab ID: 60256510011** Collected: 10/25/17 12:30 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 21:50	67-64-1	
Benzene	**0.11J**	ug/L	1.0	0.060	1		10/31/17 21:50	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 21:50	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 21:50	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 21:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 21:50	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 21:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 21:50	56-23-5	
Chlorobenzene	**2.2**	ug/L	1.0	0.21	1		10/31/17 21:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 21:50	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 21:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 21:50	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 21:50	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 21:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 21:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 21:50	75-35-4	
cis-1,2-Dichloroethene	**7.5**	ug/L	1.0	0.080	1		10/31/17 21:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 21:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 21:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 21:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 21:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 21:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 21:50	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 21:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 21:50	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 21:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 21:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 21:50	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 21:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 21:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 21:50	79-00-5	
Trichloroethene	**23.4**	ug/L	1.0	0.17	1		10/31/17 21:50	79-01-6	
Vinyl chloride	**0.20J**	ug/L	1.0	0.13	1		10/31/17 21:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 21:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/31/17 21:50	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/31/17 21:50	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/31/17 21:50	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 21:50		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-29-201710 **Lab ID: 60256510012** Collected: 10/25/17 13:30 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 22:04	67-64-1	
Benzene	**0.11J**	ug/L	1.0	0.060	1		10/31/17 22:04	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 22:04	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 22:04	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 22:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 22:04	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 22:04	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 22:04	56-23-5	
Chlorobenzene	**4.5**	ug/L	1.0	0.21	1		10/31/17 22:04	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 22:04	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 22:04	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 22:04	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 22:04	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 22:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 22:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 22:04	75-35-4	
cis-1,2-Dichloroethene	**0.16J**	ug/L	1.0	0.080	1		10/31/17 22:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 22:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 22:04	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 22:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 22:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 22:04	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 22:04	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 22:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 22:04	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 22:04	100-42-5	M1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 22:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 22:04	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 22:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 22:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 22:04	79-00-5	
Trichloroethene	**0.19J**	ug/L	1.0	0.17	1		10/31/17 22:04	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 22:04	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 22:04	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/31/17 22:04	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/31/17 22:04	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/31/17 22:04	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 22:04		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-5-201710 **Lab ID: 60256510013** Collected: 10/25/17 15:15 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 19:34	67-64-1	
Benzene	**0.10J**	ug/L	1.0	0.060	1		10/30/17 19:34	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 19:34	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 19:34	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 19:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 19:34	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 19:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 19:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 19:34	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 19:34	75-00-3	
Chloroform	**0.50J**	ug/L	1.0	0.14	1		10/30/17 19:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 19:34	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 19:34	124-48-1	
1,1-Dichloroethane	**2.0**	ug/L	1.0	0.050	1		10/30/17 19:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 19:34	107-06-2	
1,1-Dichloroethene	**6.0**	ug/L	1.0	0.20	1		10/30/17 19:34	75-35-4	
cis-1,2-Dichloroethene	**38.2**	ug/L	1.0	0.080	1		10/30/17 19:34	156-59-2	
trans-1,2-Dichloroethene	**0.42J**	ug/L	1.0	0.20	1		10/30/17 19:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 19:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 19:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 19:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 19:34	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 19:34	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 19:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 19:34	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 19:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 19:34	79-34-5	
Tetrachloroethene	**1.4**	ug/L	1.0	0.10	1		10/30/17 19:34	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 19:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 19:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 19:34	79-00-5	
Trichloroethene	**1470**	ug/L	20.0	3.4	20		11/01/17 00:52	79-01-6	
Vinyl chloride	**1.6**	ug/L	1.0	0.13	1		10/30/17 19:34	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 19:34	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/30/17 19:34	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/30/17 19:34	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		10/30/17 19:34	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 19:34		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-22-201710 **Lab ID: 60256510014** Collected: 10/25/17 16:35 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 17:42	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 17:42	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 17:42	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 17:42	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 17:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 17:42	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 17:42	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 17:42	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 17:42	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 17:42	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 17:42	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 17:42	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 17:42	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 17:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 17:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 17:42	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 17:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 17:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 17:42	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 17:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 17:42	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 17:42	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 17:42	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 17:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 17:42	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 17:42	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 17:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 17:42	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 17:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 17:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 17:42	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 17:42	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 17:42	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 17:42	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/30/17 17:42	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/30/17 17:42	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/30/17 17:42	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 17:42		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-84-201710 **Lab ID: 60256510015** Collected: 10/25/17 12:10 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**16.0**	ug/L	10.0	1.9	1		10/30/17 12:19	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 12:19	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 12:19	75-27-4	
Bromoform	**8.4**	ug/L	1.0	0.070	1		10/30/17 12:19	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 12:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 12:19	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 12:19	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 12:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 12:19	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 12:19	75-00-3	
Chloroform	**0.20J**	ug/L	1.0	0.14	1		10/30/17 12:19	67-66-3	
Chloromethane	**3.2**	ug/L	1.0	0.080	1		10/30/17 12:19	74-87-3	
Dibromochloromethane	**0.38J**	ug/L	1.0	0.21	1		10/30/17 12:19	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 12:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 12:19	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 12:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 12:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 12:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 12:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 12:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 12:19	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 12:19	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 12:19	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 12:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 12:19	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 12:19	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 12:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 12:19	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 12:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 12:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 12:19	79-00-5	
Trichloroethene	**0.98J**	ug/L	1.0	0.17	1		10/30/17 12:19	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 12:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 12:19	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		10/30/17 12:19	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/30/17 12:19	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 12:19	2037-26-5	
Preservation pH	**5.0**		0.10	0.10	1		10/30/17 12:19		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-83-201710 **Lab ID: 60256510016** Collected: 10/25/17 10:15 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**11.5**	ug/L	10.0	1.9	1		10/30/17 12:33	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 12:33	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 12:33	75-27-4	
Bromoform	**1.2**	ug/L	1.0	0.070	1		10/30/17 12:33	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 12:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 12:33	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 12:33	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 12:33	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 12:33	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 12:33	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 12:33	67-66-3	
Chloromethane	**2.6**	ug/L	1.0	0.080	1		10/30/17 12:33	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 12:33	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 12:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 12:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 12:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 12:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 12:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 12:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 12:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 12:33	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 12:33	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 12:33	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 12:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 12:33	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 12:33	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 12:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 12:33	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 12:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 12:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 12:33	79-00-5	
Trichloroethene	**4.8**	ug/L	1.0	0.17	1		10/30/17 12:33	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 12:33	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 12:33	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/30/17 12:33	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		1		10/30/17 12:33	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 12:33	2037-26-5	
Preservation pH	**5.0**		0.10	0.10	1		10/30/17 12:33		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-28-201710 **Lab ID: 60256510017** Collected: 10/25/17 15:15 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 17:56	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 17:56	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 17:56	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 17:56	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 17:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 17:56	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 17:56	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 17:56	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 17:56	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 17:56	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 17:56	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 17:56	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 17:56	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 17:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 17:56	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 17:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 17:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 17:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 17:56	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 17:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 17:56	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 17:56	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 17:56	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 17:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 17:56	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 17:56	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 17:56	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 17:56	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 17:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 17:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 17:56	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 17:56	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 17:56	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 17:56	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/30/17 17:56	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/30/17 17:56	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 17:56	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 17:56		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-91-201710 **Lab ID: 60256510018** Collected: 10/25/17 14:15 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 19:48	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 19:48	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 19:48	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 19:48	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 19:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 19:48	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 19:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 19:48	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 19:48	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 19:48	75-00-3	
Chloroform	**0.19J**	ug/L	1.0	0.14	1		10/30/17 19:48	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 19:48	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 19:48	124-48-1	
1,1-Dichloroethane	**1.7**	ug/L	1.0	0.050	1		10/30/17 19:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 19:48	107-06-2	
1,1-Dichloroethene	**4.8**	ug/L	1.0	0.20	1		10/30/17 19:48	75-35-4	
cis-1,2-Dichloroethene	**36.4**	ug/L	1.0	0.080	1		10/30/17 19:48	156-59-2	
trans-1,2-Dichloroethene	**0.48J**	ug/L	1.0	0.20	1		10/30/17 19:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 19:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 19:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 19:48	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 19:48	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 19:48	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 19:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 19:48	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 19:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 19:48	79-34-5	
Tetrachloroethene	**3.2**	ug/L	1.0	0.10	1		10/30/17 19:48	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 19:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 19:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 19:48	79-00-5	
Trichloroethene	**534**	ug/L	10.0	1.7	10		11/01/17 01:06	79-01-6	
Vinyl chloride	**0.27J**	ug/L	1.0	0.13	1		10/30/17 19:48	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 19:48	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 19:48	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/30/17 19:48	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/30/17 19:48	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 19:48		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-178-201710 **Lab ID: 60256510019** Collected: 10/25/17 08:45 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 18:10	67-64-1	
Benzene	**0.14J**	ug/L	1.0	0.060	1		10/30/17 18:10	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 18:10	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 18:10	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 18:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 18:10	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 18:10	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 18:10	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 18:10	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 18:10	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 18:10	67-66-3	
Chloromethane	**0.12J**	ug/L	1.0	0.080	1		10/30/17 18:10	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 18:10	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 18:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 18:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 18:10	75-35-4	
cis-1,2-Dichloroethene	**0.97J**	ug/L	1.0	0.080	1		10/30/17 18:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 18:10	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 18:10	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 18:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 18:10	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 18:10	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 18:10	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 18:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 18:10	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 18:10	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 18:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 18:10	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 18:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 18:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 18:10	79-00-5	
Trichloroethene	**3.9**	ug/L	1.0	0.17	1		10/30/17 18:10	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 18:10	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 18:10	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/30/17 18:10	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/30/17 18:10	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/30/17 18:10	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 18:10		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: FD-06-201710 **Lab ID: 60256510020** Collected: 10/25/17 08:45 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.0J**	ug/L	10.0	1.9	1		10/30/17 18:38	67-64-1	
Benzene	**0.15J**	ug/L	1.0	0.060	1		10/30/17 18:38	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 18:38	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 18:38	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 18:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 18:38	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 18:38	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 18:38	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 18:38	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 18:38	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 18:38	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 18:38	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 18:38	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 18:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 18:38	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 18:38	75-35-4	
cis-1,2-Dichloroethene	**0.96J**	ug/L	1.0	0.080	1		10/30/17 18:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 18:38	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 18:38	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 18:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 18:38	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 18:38	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 18:38	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 18:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 18:38	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 18:38	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 18:38	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 18:38	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 18:38	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 18:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 18:38	79-00-5	
Trichloroethene	**3.6**	ug/L	1.0	0.17	1		10/30/17 18:38	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 18:38	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 18:38	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/30/17 18:38	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	80-120		1		10/30/17 18:38	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/30/17 18:38	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 18:38		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-39R-201710 **Lab ID: 60256510021** Collected: 10/25/17 09:30 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 18:24	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 18:24	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 18:24	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 18:24	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 18:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 18:24	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 18:24	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 18:24	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 18:24	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 18:24	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 18:24	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 18:24	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 18:24	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 18:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 18:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 18:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 18:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 18:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 18:24	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 18:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 18:24	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 18:24	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 18:24	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 18:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 18:24	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 18:24	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 18:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 18:24	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 18:24	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 18:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 18:24	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 18:24	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 18:24	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 18:24	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/30/17 18:24	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/30/17 18:24	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/30/17 18:24	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 18:24		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: FD-05-201710 **Lab ID: 60256510022** Collected: 10/25/17 10:07 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 18:52	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 18:52	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 18:52	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 18:52	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 18:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 18:52	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 18:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 18:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 18:52	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 18:52	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 18:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 18:52	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 18:52	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 18:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 18:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 18:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 18:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 18:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 18:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 18:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 18:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 18:52	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 18:52	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 18:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 18:52	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 18:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 18:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 18:52	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 18:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 18:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 18:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 18:52	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 18:52	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 18:52	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/30/17 18:52	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		10/30/17 18:52	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 18:52	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 18:52		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: TMW-23-201710 **Lab ID: 60256510023** Collected: 10/25/17 10:47 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 00:29	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 00:29	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 00:29	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 00:29	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 00:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 00:29	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 00:29	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 00:29	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 00:29	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:29	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 00:29	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 00:29	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 00:29	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 00:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 00:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 00:29	75-35-4	
cis-1,2-Dichloroethene	**0.89J**	ug/L	1.0	0.080	1		10/31/17 00:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 00:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 00:29	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 00:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 00:29	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 00:29	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 00:29	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 00:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 00:29	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 00:29	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:29	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 00:29	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 00:29	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 00:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 00:29	79-00-5	
Trichloroethene	**62.2**	ug/L	1.0	0.17	1		10/31/17 00:29	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 00:29	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 00:29	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/31/17 00:29	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/31/17 00:29	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/31/17 00:29	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 00:29		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-191-201710 **Lab ID: 60256510024** Collected: 10/25/17 15:38 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 22:23	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 22:23	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 22:23	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 22:23	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 22:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 22:23	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 22:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 22:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 22:23	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 22:23	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 22:23	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 22:23	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 22:23	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 22:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 22:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 22:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 22:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 22:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 22:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 22:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 22:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 22:23	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 22:23	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 22:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 22:23	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 22:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 22:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 22:23	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 22:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 22:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 22:23	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 22:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 22:23	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 22:23	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/30/17 22:23	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/30/17 22:23	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 22:23	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 22:23		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-189-201710 **Lab ID: 60256510025** Collected: 10/25/17 12:25 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 22:37	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 22:37	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 22:37	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 22:37	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 22:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 22:37	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 22:37	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 22:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 22:37	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 22:37	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 22:37	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 22:37	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 22:37	124-48-1	
1,1-Dichloroethane	**1.8**	ug/L	1.0	0.050	1		10/30/17 22:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 22:37	107-06-2	
1,1-Dichloroethene	**1.5**	ug/L	1.0	0.20	1		10/30/17 22:37	75-35-4	
cis-1,2-Dichloroethene	**9.5**	ug/L	1.0	0.080	1		10/30/17 22:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 22:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 22:37	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 22:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 22:37	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 22:37	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 22:37	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 22:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 22:37	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 22:37	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 22:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 22:37	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 22:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 22:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 22:37	79-00-5	
Trichloroethene	**195**	ug/L	5.0	0.85	5		11/01/17 01:20	79-01-6	
Vinyl chloride	**0.40J**	ug/L	1.0	0.13	1		10/30/17 22:37	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 22:37	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/30/17 22:37	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/30/17 22:37	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/30/17 22:37	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 22:37		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-190-201710 **Lab ID: 60256510026** Collected: 10/25/17 14:18 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.6J**	ug/L	10.0	1.9	1		10/30/17 22:51	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 22:51	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 22:51	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 22:51	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 22:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 22:51	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 22:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 22:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 22:51	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 22:51	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 22:51	67-66-3	
Chloromethane	**0.13J**	ug/L	1.0	0.080	1		10/30/17 22:51	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 22:51	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 22:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 22:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 22:51	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 22:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 22:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 22:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 22:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 22:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 22:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 22:51	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 22:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 22:51	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 22:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 22:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 22:51	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 22:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 22:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 22:51	79-00-5	
Trichloroethene	**0.94J**	ug/L	1.0	0.17	1		10/30/17 22:51	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 22:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 22:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/30/17 22:51	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/30/17 22:51	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/30/17 22:51	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 22:51		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-192-201710 **Lab ID: 60256510027** Collected: 10/25/17 17:00 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 23:05	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 23:05	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 23:05	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 23:05	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 23:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 23:05	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 23:05	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 23:05	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 23:05	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 23:05	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 23:05	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 23:05	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 23:05	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 23:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 23:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 23:05	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 23:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 23:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 23:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 23:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 23:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 23:05	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 23:05	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 23:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 23:05	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 23:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 23:05	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 23:05	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 23:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 23:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 23:05	79-00-5	
Trichloroethene	**0.25J**	ug/L	1.0	0.17	1		10/30/17 23:05	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 23:05	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 23:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 23:05	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/30/17 23:05	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 23:05	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 23:05		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: TMW-27-201710 **Lab ID: 60256510028** Collected: 10/25/17 15:35 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 23:19	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 23:19	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 23:19	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 23:19	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 23:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 23:19	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 23:19	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 23:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 23:19	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 23:19	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 23:19	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 23:19	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 23:19	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 23:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 23:19	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 23:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 23:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 23:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 23:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 23:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 23:19	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 23:19	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 23:19	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 23:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 23:19	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 23:19	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 23:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 23:19	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 23:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 23:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 23:19	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 23:19	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 23:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 23:19	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/30/17 23:19	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		1		10/30/17 23:19	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/30/17 23:19	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 23:19		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: TMW-25-201710 **Lab ID: 60256510029** Collected: 10/25/17 16:45 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 00:57	67-64-1	
Benzene	**0.10J**	ug/L	1.0	0.060	1		10/31/17 00:57	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 00:57	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 00:57	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 00:57	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 00:57	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 00:57	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 00:57	56-23-5	
Chlorobenzene	**2.3**	ug/L	1.0	0.21	1		10/31/17 00:57	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:57	75-00-3	
Chloroform	**0.28J**	ug/L	1.0	0.14	1		10/31/17 00:57	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 00:57	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 00:57	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 00:57	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 00:57	107-06-2	
1,1-Dichloroethene	**0.33J**	ug/L	1.0	0.20	1		10/31/17 00:57	75-35-4	
cis-1,2-Dichloroethene	**11.2**	ug/L	1.0	0.080	1		10/31/17 00:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 00:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 00:57	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 00:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 00:57	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 00:57	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 00:57	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 00:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 00:57	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 00:57	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:57	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 00:57	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 00:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 00:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 00:57	79-00-5	
Trichloroethene	**245**	ug/L	5.0	0.85	5		11/01/17 01:34	79-01-6	
Vinyl chloride	**0.41J**	ug/L	1.0	0.13	1		10/31/17 00:57	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 00:57	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/31/17 00:57	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/31/17 00:57	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/31/17 00:57	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 00:57		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-16-201710 **Lab ID: 60256510030** Collected: 10/25/17 14:00 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 23:33	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 23:33	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 23:33	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 23:33	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 23:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 23:33	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 23:33	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 23:33	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 23:33	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 23:33	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 23:33	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 23:33	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 23:33	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 23:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 23:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 23:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 23:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 23:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 23:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 23:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 23:33	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 23:33	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 23:33	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 23:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 23:33	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 23:33	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 23:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 23:33	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 23:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 23:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 23:33	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/30/17 23:33	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 23:33	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 23:33	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/30/17 23:33	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		1		10/30/17 23:33	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/30/17 23:33	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 23:33		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-10-201710 **Lab ID: 60256510031** Collected: 10/25/17 11:50 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 23:47	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 23:47	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 23:47	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 23:47	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 23:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 23:47	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 23:47	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 23:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 23:47	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 23:47	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 23:47	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 23:47	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 23:47	124-48-1	
1,1-Dichloroethane	**1.0**	ug/L	1.0	0.050	1		10/30/17 23:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 23:47	107-06-2	
1,1-Dichloroethene	**1.2**	ug/L	1.0	0.20	1		10/30/17 23:47	75-35-4	
cis-1,2-Dichloroethene	**13.3**	ug/L	1.0	0.080	1		10/30/17 23:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 23:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 23:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 23:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 23:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 23:47	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 23:47	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 23:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 23:47	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 23:47	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 23:47	79-34-5	
Tetrachloroethene	**0.29J**	ug/L	1.0	0.10	1		10/30/17 23:47	127-18-4	
Toluene	**0.28J**	ug/L	1.0	0.17	1		10/30/17 23:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 23:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 23:47	79-00-5	
Trichloroethene	**72.9**	ug/L	1.0	0.17	1		10/30/17 23:47	79-01-6	
Vinyl chloride	**0.82J**	ug/L	1.0	0.13	1		10/30/17 23:47	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 23:47	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 23:47	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/30/17 23:47	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		10/30/17 23:47	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 23:47		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-27-201710 **Lab ID: 60256510032** Collected: 10/25/17 17:10 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 00:01	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 00:01	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 00:01	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 00:01	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 00:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 00:01	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 00:01	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 00:01	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 00:01	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:01	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 00:01	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 00:01	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 00:01	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 00:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 00:01	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 00:01	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/31/17 00:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 00:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 00:01	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 00:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 00:01	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 00:01	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 00:01	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 00:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 00:01	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 00:01	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:01	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 00:01	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 00:01	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 00:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 00:01	79-00-5	
Trichloroethene	**0.41J**	ug/L	1.0	0.17	1		10/31/17 00:01	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 00:01	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 00:01	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/31/17 00:01	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/31/17 00:01	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/31/17 00:01	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 00:01		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-24-201710 **Lab ID: 60256510033** Collected: 10/25/17 15:00 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**30.4**	ug/L	10.0	1.9	1		10/30/17 13:29	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 13:29	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 13:29	75-27-4	
Bromoform	**15.0**	ug/L	1.0	0.070	1		10/30/17 13:29	75-25-2	
Bromomethane	**2.2J**	ug/L	5.0	0.16	1		10/30/17 13:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 13:29	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 13:29	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 13:29	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 13:29	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 13:29	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 13:29	67-66-3	
Chloromethane	**3.1**	ug/L	1.0	0.080	1		10/30/17 13:29	74-87-3	
Dibromochloromethane	**0.70J**	ug/L	1.0	0.21	1		10/30/17 13:29	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 13:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 13:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 13:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 13:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 13:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 13:29	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 13:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 13:29	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 13:29	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 13:29	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 13:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 13:29	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 13:29	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 13:29	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 13:29	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 13:29	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 13:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 13:29	79-00-5	
Trichloroethene	**20.9**	ug/L	1.0	0.17	1		10/30/17 13:29	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 13:29	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 13:29	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/30/17 13:29	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/30/17 13:29	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/30/17 13:29	2037-26-5	
Preservation pH	**3.0**		0.10	0.10	1		10/30/17 13:29		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-9-201710 **Lab ID: 60256510034** Collected: 10/25/17 09:55 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**37.2J**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:15	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 00:43	67-64-1	
Benzene	**0.65J**	ug/L	1.0	0.060	1		10/31/17 00:43	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 00:43	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 00:43	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 00:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 00:43	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 00:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 00:43	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 00:43	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:43	75-00-3	
Chloroform	**0.31J**	ug/L	1.0	0.14	1		10/31/17 00:43	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 00:43	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 00:43	124-48-1	
1,1-Dichloroethane	**4.6**	ug/L	1.0	0.050	1		10/31/17 00:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 00:43	107-06-2	
1,1-Dichloroethene	**7.4**	ug/L	1.0	0.20	1		10/31/17 00:43	75-35-4	
cis-1,2-Dichloroethene	**60.8**	ug/L	1.0	0.080	1		10/31/17 00:43	156-59-2	
trans-1,2-Dichloroethene	**0.74J**	ug/L	1.0	0.20	1		10/31/17 00:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 00:43	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 00:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 00:43	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 00:43	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 00:43	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 00:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 00:43	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 00:43	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:43	79-34-5	
Tetrachloroethene	**1.4**	ug/L	1.0	0.10	1		10/31/17 00:43	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 00:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 00:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 00:43	79-00-5	
Trichloroethene	**797**	ug/L	10.0	1.7	10		11/01/17 01:48	79-01-6	
Vinyl chloride	**1.7**	ug/L	1.0	0.13	1		10/31/17 00:43	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 00:43	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/31/17 00:43	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/31/17 00:43	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/31/17 00:43	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 00:43		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:12	18496-25-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: ITMW-9-201710 **Lab ID: 60256510034** Collected: 10/25/17 09:55 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**74.8**	mg/L	10.0	5.0	10		11/05/17 04:53	16887-00-6	
Sulfate	**33.5**	mg/L	10.0	5.0	10		11/05/17 04:53	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**3.4**	mg/L	0.10	0.050	1		10/27/17 09:23		
Nitrogen, Nitrite	**0.27**	mg/L	0.10	0.030	1		10/27/17 09:23		M1
Nitrogen, NO2 plus NO3	**3.7**	mg/L	0.10	0.050	1		10/27/17 09:23		M1
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**2.8**	mg/L	1.0	0.13	1		10/31/17 18:59	7440-44-0	B

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: MW-26-201710 **Lab ID: 60256510035** Collected: 10/25/17 16:00 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 00:15	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/31/17 00:15	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 00:15	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 00:15	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 00:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 00:15	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 00:15	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 00:15	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 00:15	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:15	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 00:15	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 00:15	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 00:15	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 00:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 00:15	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 00:15	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/31/17 00:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 00:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 00:15	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 00:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 00:15	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 00:15	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 00:15	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 00:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 00:15	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 00:15	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 00:15	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 00:15	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 00:15	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 00:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 00:15	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/31/17 00:15	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 00:15	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 00:15	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/31/17 00:15	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	80-120		1		10/31/17 00:15	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/31/17 00:15	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 00:15		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256510

Sample: TB-04-201710 **Lab ID: 60256510036** Collected: 10/25/17 08:00 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/30/17 22:09	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 22:09	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 22:09	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 22:09	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/30/17 22:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 22:09	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 22:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 22:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 22:09	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 22:09	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/30/17 22:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/30/17 22:09	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 22:09	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 22:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 22:09	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 22:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/30/17 22:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 22:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 22:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 22:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 22:09	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 22:09	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 22:09	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 22:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 22:09	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 22:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 22:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 22:09	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 22:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 22:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 22:09	79-00-5	
Trichloroethene	**0.19J**	ug/L	1.0	0.17	1		10/30/17 22:09	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 22:09	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 22:09	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		10/30/17 22:09	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/30/17 22:09	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/30/17 22:09	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/30/17 22:09		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 500794
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Associated Lab Samples: 60256510034

METHOD BLANK: 2050410 Matrix: Water
Associated Lab Samples: 60256510034

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	50.0	12.4	10/30/17 18:42	

LABORATORY CONTROL SAMPLE: 2050411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9760	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2050412 2050413

Parameter	Units	60256450001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	159	10000	10000	10100	9670	100	95	75-125	5	20	

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: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 500837 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256510013, 60256510014, 60256510017, 60256510018, 60256510019, 60256510020, 60256510021, 60256510022

METHOD BLANK: 2050615 Matrix: Water
Associated Lab Samples: 60256510013, 60256510014, 60256510017, 60256510018, 60256510019, 60256510020, 60256510021, 60256510022

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/30/17 15:50	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/30/17 15:50	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/30/17 15:50	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/30/17 15:50	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 15:50	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/30/17 15:50	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/30/17 15:50	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/30/17 15:50	
2-Hexanone	ug/L	ND	10.0	1.2	10/30/17 15:50	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/30/17 15:50	
Acetone	ug/L	ND	10.0	1.9	10/30/17 15:50	
Benzene	ug/L	ND	1.0	0.060	10/30/17 15:50	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/30/17 15:50	
Bromoform	ug/L	ND	1.0	0.070	10/30/17 15:50	
Bromomethane	ug/L	ND	5.0	0.16	10/30/17 15:50	
Carbon disulfide	ug/L	ND	5.0	0.12	10/30/17 15:50	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/30/17 15:50	
Chlorobenzene	ug/L	ND	1.0	0.21	10/30/17 15:50	
Chloroethane	ug/L	ND	1.0	0.15	10/30/17 15:50	
Chloroform	ug/L	ND	1.0	0.14	10/30/17 15:50	
Chloromethane	ug/L	ND	1.0	0.080	10/30/17 15:50	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/30/17 15:50	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/30/17 15:50	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/30/17 15:50	
Ethylbenzene	ug/L	ND	1.0	0.18	10/30/17 15:50	
Methylene chloride	ug/L	ND	1.0	0.15	10/30/17 15:50	
Styrene	ug/L	ND	1.0	0.12	10/30/17 15:50	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/30/17 15:50	
Toluene	ug/L	ND	1.0	0.17	10/30/17 15:50	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 15:50	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/30/17 15:50	
Trichloroethene	ug/L	ND	1.0	0.17	10/30/17 15:50	
Vinyl chloride	ug/L	ND	1.0	0.13	10/30/17 15:50	
Xylene (Total)	ug/L	ND	3.0	0.42	10/30/17 15:50	
1,2-Dichloroethane-d4 (S)	%	98	80-120		10/30/17 15:50	
4-Bromofluorobenzene (S)	%	96	80-120		10/30/17 15:50	
Toluene-d8 (S)	%	99	80-120		10/30/17 15:50	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

LABORATORY CONTROL SAMPLE: 2050616

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.8	104	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	19.8	99	74-124	
1,1,2-Trichloroethane	ug/L	20	20.6	103	81-118	
1,1-Dichloroethane	ug/L	20	21.4	107	82-122	
1,1-Dichloroethene	ug/L	20	20.6	103	78-123	
1,2-Dichloroethane	ug/L	20	21.3	106	78-117	
1,2-Dichloropropane	ug/L	20	22.1	110	81-118	
2-Butanone (MEK)	ug/L	100	104	104	72-117	
2-Hexanone	ug/L	100	98.9	99	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	104	104	77-124	
Acetone	ug/L	100	99.4	99	66-127	
Benzene	ug/L	20	21.5	107	82-115	
Bromodichloromethane	ug/L	20	21.3	107	83-123	
Bromoform	ug/L	20	20.7	103	79-126	
Bromomethane	ug/L	20	22.8	114	39-146	
Carbon disulfide	ug/L	20	19.5	98	75-121	
Carbon tetrachloride	ug/L	20	21.6	108	82-117	
Chlorobenzene	ug/L	20	20.1	101	89-114	
Chloroethane	ug/L	20	18.7	94	71-133	
Chloroform	ug/L	20	20.9	104	78-117	
Chloromethane	ug/L	20	16.3	81	19-181	
cis-1,2-Dichloroethene	ug/L	20	20.2	101	78-119	
cis-1,3-Dichloropropene	ug/L	20	21.6	108	81-116	
Dibromochloromethane	ug/L	20	20.2	101	81-122	
Ethylbenzene	ug/L	20	19.9	99	83-112	
Methylene chloride	ug/L	20	20.2	101	78-127	
Styrene	ug/L	20	20.8	104	88-117	
Tetrachloroethene	ug/L	20	19.9	100	80-121	
Toluene	ug/L	20	20.7	104	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.0	100	79-120	
trans-1,3-Dichloropropene	ug/L	20	20.3	102	81-119	
Trichloroethene	ug/L	20	19.3	97	78-118	
Vinyl chloride	ug/L	20	22.6	113	66-133	
Xylene (Total)	ug/L	60	62.7	105	83-114	
1,2-Dichloroethane-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			101	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 500838 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256510023, 60256510024, 60256510025, 60256510026, 60256510027, 60256510028, 60256510029, 60256510030, 60256510031, 60256510032, 60256510034, 60256510035, 60256510036

METHOD BLANK: 2050617 Matrix: Water
Associated Lab Samples: 60256510023, 60256510024, 60256510025, 60256510026, 60256510027, 60256510028, 60256510029, 60256510030, 60256510031, 60256510032, 60256510034, 60256510035, 60256510036

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/30/17 21:55	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/30/17 21:55	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/30/17 21:55	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/30/17 21:55	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 21:55	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/30/17 21:55	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/30/17 21:55	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/30/17 21:55	
2-Hexanone	ug/L	ND	10.0	1.2	10/30/17 21:55	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/30/17 21:55	
Acetone	ug/L	ND	10.0	1.9	10/30/17 21:55	
Benzene	ug/L	ND	1.0	0.060	10/30/17 21:55	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/30/17 21:55	
Bromoform	ug/L	ND	1.0	0.070	10/30/17 21:55	
Bromomethane	ug/L	ND	5.0	0.16	10/30/17 21:55	
Carbon disulfide	ug/L	ND	5.0	0.12	10/30/17 21:55	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/30/17 21:55	
Chlorobenzene	ug/L	ND	1.0	0.21	10/30/17 21:55	
Chloroethane	ug/L	ND	1.0	0.15	10/30/17 21:55	
Chloroform	ug/L	ND	1.0	0.14	10/30/17 21:55	
Chloromethane	ug/L	ND	1.0	0.080	10/30/17 21:55	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/30/17 21:55	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/30/17 21:55	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/30/17 21:55	
Ethylbenzene	ug/L	ND	1.0	0.18	10/30/17 21:55	
Methylene chloride	ug/L	ND	1.0	0.15	10/30/17 21:55	
Styrene	ug/L	ND	1.0	0.12	10/30/17 21:55	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/30/17 21:55	
Toluene	ug/L	ND	1.0	0.17	10/30/17 21:55	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 21:55	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/30/17 21:55	
Trichloroethene	ug/L	ND	1.0	0.17	10/30/17 21:55	
Vinyl chloride	ug/L	ND	1.0	0.13	10/30/17 21:55	
Xylene (Total)	ug/L	ND	3.0	0.42	10/30/17 21:55	
1,2-Dichloroethane-d4 (S)	%	98	80-120		10/30/17 21:55	
4-Bromofluorobenzene (S)	%	97	80-120		10/30/17 21:55	
Toluene-d8 (S)	%	99	80-120		10/30/17 21:55	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

LABORATORY CONTROL SAMPLE: 2050618

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.4	102	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	19.2	96	74-124	
1,1,2-Trichloroethane	ug/L	20	20.2	101	81-118	
1,1-Dichloroethane	ug/L	20	21.7	108	82-122	
1,1-Dichloroethene	ug/L	20	21.1	105	78-123	
1,2-Dichloroethane	ug/L	20	21.0	105	78-117	
1,2-Dichloropropane	ug/L	20	21.5	107	81-118	
2-Butanone (MEK)	ug/L	100	105	105	72-117	
2-Hexanone	ug/L	100	101	101	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	106	106	77-124	
Acetone	ug/L	100	99.8	100	66-127	
Benzene	ug/L	20	21.1	106	82-115	
Bromodichloromethane	ug/L	20	20.7	104	83-123	
Bromoform	ug/L	20	20.2	101	79-126	
Bromomethane	ug/L	20	26.9	134	39-146	
Carbon disulfide	ug/L	20	21.2	106	75-121	
Carbon tetrachloride	ug/L	20	22.7	113	82-117	
Chlorobenzene	ug/L	20	20.4	102	89-114	
Chloroethane	ug/L	20	20.8	104	71-133	
Chloroform	ug/L	20	20.8	104	78-117	
Chloromethane	ug/L	20	23.2	116	19-181	
cis-1,2-Dichloroethene	ug/L	20	19.6	98	78-119	
cis-1,3-Dichloropropene	ug/L	20	20.8	104	81-116	
Dibromochloromethane	ug/L	20	20.0	100	81-122	
Ethylbenzene	ug/L	20	20.4	102	83-112	
Methylene chloride	ug/L	20	21.6	108	78-127	
Styrene	ug/L	20	20.8	104	88-117	
Tetrachloroethene	ug/L	20	19.5	97	80-121	
Toluene	ug/L	20	20.6	103	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.7	104	79-120	
trans-1,3-Dichloropropene	ug/L	20	19.5	98	81-119	
Trichloroethene	ug/L	20	19.3	97	78-118	
Vinyl chloride	ug/L	20	23.2	116	66-133	
Xylene (Total)	ug/L	60	62.6	104	83-114	
1,2-Dichloroethane-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2050619 2050620

Parameter	Units	60256510028 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	20	20	20.3	20.8	101	104	49-167	2	11	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	16.4	16.9	82	85	75-118	3	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	18.4	18.6	92	93	76-116	1	13	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2050619 2050620

Parameter	Units	60256510028 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethane	ug/L	ND	20	20	20.2	20.9	101	104	82-127	3	15	
1,1-Dichloroethene	ug/L	ND	20	20	21.1	21.3	105	106	79-136	1	14	
1,2-Dichloroethane	ug/L	ND	20	20	18.7	18.7	93	94	58-133	0	14	
1,2-Dichloropropane	ug/L	ND	20	20	19.6	20.5	98	103	81-117	5	11	
2-Butanone (MEK)	ug/L	ND	100	100	88.3	92.5	88	93	64-114	5	21	
2-Hexanone	ug/L	ND	100	100	85.5	91.3	85	91	71-113	7	15	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	88.4	96.9	88	97	64-127	9	14	
Acetone	ug/L	ND	100	100	83.9	91.4	84	91	61-113	9	33	
Benzene	ug/L	ND	20	20	19.8	20.6	99	103	55-145	4	18	
Bromodichloromethane	ug/L	ND	20	20	19.0	19.6	95	98	81-120	3	11	
Bromoform	ug/L	ND	20	20	17.4	19.2	87	96	72-117	10	16	
Bromomethane	ug/L	ND	20	20	19.7	25.2	98	126	39-145	25	37	
Carbon disulfide	ug/L	ND	20	20	20.1	21.7	101	109	82-129	8	11	
Carbon tetrachloride	ug/L	ND	20	20	21.5	22.6	107	113	85-125	5	11	
Chlorobenzene	ug/L	ND	20	20	18.3	19.7	92	98	87-115	7	10	
Chloroethane	ug/L	ND	20	20	19.2	22.4	96	112	62-157	15	20	
Chloroform	ug/L	ND	20	20	18.9	19.7	95	99	79-117	4	12	
Chloromethane	ug/L	ND	20	20	18.2	22.4	91	112	22-194	21	59	
cis-1,2-Dichloroethene	ug/L	ND	20	20	19.0	19.2	95	96	70-134	2	12	
cis-1,3-Dichloropropene	ug/L	ND	20	20	18.6	19.1	93	96	70-117	3	12	
Dibromochloromethane	ug/L	ND	20	20	17.7	18.4	88	92	56-135	4	14	
Ethylbenzene	ug/L	ND	20	20	18.4	19.6	92	98	45-152	7	11	
Methylene chloride	ug/L	ND	20	20	18.3	20.7	91	103	77-123	12	13	
Styrene	ug/L	ND	20	20	18.2	19.8	91	99	64-134	8	11	
Tetrachloroethene	ug/L	ND	20	20	18.6	20.2	93	101	81-126	8	11	
Toluene	ug/L	ND	20	20	18.8	19.7	94	98	52-144	4	12	
trans-1,2-Dichloroethene	ug/L	ND	20	20	19.5	20.0	98	100	80-126	2	12	
trans-1,3-Dichloropropene	ug/L	ND	20	20	16.9	18.0	85	90	72-114	6	15	
Trichloroethene	ug/L	ND	20	20	18.7	19.8	93	98	70-131	5	16	
Vinyl chloride	ug/L	ND	20	20	23.1	24.8	116	124	64-153	7	23	
Xylene (Total)	ug/L	ND	60	60	56.4	60.5	94	101	54-146	7	12	
1,2-Dichloroethane-d4 (S)	%						100	98	80-120			
4-Bromofluorobenzene (S)	%						99	96	80-120			
Toluene-d8 (S)	%						99	99	80-120			
Preservation pH		1.0			1.0	1.0				0		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 501038 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256510001, 60256510002, 60256510003, 60256510004, 60256510005, 60256510006, 60256510007, 60256510009, 60256510010

METHOD BLANK: 2051151 Matrix: Water
Associated Lab Samples: 60256510001, 60256510002, 60256510003, 60256510004, 60256510005, 60256510006, 60256510007, 60256510009, 60256510010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/31/17 15:32	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/31/17 15:32	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/31/17 15:32	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/31/17 15:32	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/31/17 15:32	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/31/17 15:32	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/31/17 15:32	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/31/17 15:32	
2-Hexanone	ug/L	ND	10.0	1.2	10/31/17 15:32	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/31/17 15:32	
Acetone	ug/L	ND	10.0	1.9	10/31/17 15:32	
Benzene	ug/L	ND	1.0	0.060	10/31/17 15:32	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/31/17 15:32	
Bromoform	ug/L	ND	1.0	0.070	10/31/17 15:32	
Bromomethane	ug/L	ND	5.0	0.16	10/31/17 15:32	
Carbon disulfide	ug/L	ND	5.0	0.12	10/31/17 15:32	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/31/17 15:32	
Chlorobenzene	ug/L	ND	1.0	0.21	10/31/17 15:32	
Chloroethane	ug/L	ND	1.0	0.15	10/31/17 15:32	
Chloroform	ug/L	ND	1.0	0.14	10/31/17 15:32	
Chloromethane	ug/L	ND	1.0	0.080	10/31/17 15:32	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/31/17 15:32	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/31/17 15:32	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/31/17 15:32	
Ethylbenzene	ug/L	ND	1.0	0.18	10/31/17 15:32	
Methylene chloride	ug/L	ND	1.0	0.15	10/31/17 15:32	
Styrene	ug/L	ND	1.0	0.12	10/31/17 15:32	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/31/17 15:32	
Toluene	ug/L	ND	1.0	0.17	10/31/17 15:32	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/31/17 15:32	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/31/17 15:32	
Trichloroethene	ug/L	ND	1.0	0.17	10/31/17 15:32	
Vinyl chloride	ug/L	ND	1.0	0.13	10/31/17 15:32	
Xylene (Total)	ug/L	ND	3.0	0.42	10/31/17 15:32	
1,2-Dichloroethane-d4 (S)	%	98	80-120		10/31/17 15:32	
4-Bromofluorobenzene (S)	%	99	80-120		10/31/17 15:32	
Toluene-d8 (S)	%	98	80-120		10/31/17 15:32	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

LABORATORY CONTROL SAMPLE: 2051152

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.3	102	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	18.5	93	74-124	
1,1,2-Trichloroethane	ug/L	20	18.9	95	81-118	
1,1-Dichloroethane	ug/L	20	21.2	106	82-122	
1,1-Dichloroethene	ug/L	20	21.1	105	78-123	
1,2-Dichloroethane	ug/L	20	20.2	101	78-117	
1,2-Dichloropropane	ug/L	20	21.7	109	81-118	
2-Butanone (MEK)	ug/L	100	93.3	93	72-117	
2-Hexanone	ug/L	100	89.4	89	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	97.1	97	77-124	
Acetone	ug/L	100	100	100	66-127	
Benzene	ug/L	20	20.5	103	82-115	
Bromodichloromethane	ug/L	20	20.1	101	83-123	
Bromoform	ug/L	20	19.2	96	79-126	
Bromomethane	ug/L	20	20.0	100	39-146	
Carbon disulfide	ug/L	20	20.9	105	75-121	
Carbon tetrachloride	ug/L	20	21.4	107	82-117	
Chlorobenzene	ug/L	20	20.0	100	89-114	
Chloroethane	ug/L	20	21.8	109	71-133	
Chloroform	ug/L	20	20.2	101	78-117	
Chloromethane	ug/L	20	23.3	116	19-181	
cis-1,2-Dichloroethene	ug/L	20	19.7	99	78-119	
cis-1,3-Dichloropropene	ug/L	20	20.3	101	81-116	
Dibromochloromethane	ug/L	20	19.0	95	81-122	
Ethylbenzene	ug/L	20	19.8	99	83-112	
Methylene chloride	ug/L	20	20.6	103	78-127	
Styrene	ug/L	20	20.5	102	88-117	
Tetrachloroethene	ug/L	20	19.0	95	80-121	
Toluene	ug/L	20	20.0	100	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.0	100	79-120	
trans-1,3-Dichloropropene	ug/L	20	18.6	93	81-119	
Trichloroethene	ug/L	20	19.8	99	78-118	
Vinyl chloride	ug/L	20	24.5	122	66-133	
Xylene (Total)	ug/L	60	61.2	102	83-114	
1,2-Dichloroethane-d4 (S)	%			98	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2051153 2051154

Parameter	Units	60256370021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	20	20	21.3	20.8	107	104	49-167	3	11	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	16.6	17.5	83	87	75-118	5	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	17.9	18.6	89	93	76-116	4	13	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2051153 2051154

Parameter	Units	60256370021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethane	ug/L	ND	20	20	20.9	20.9	105	104	82-127	0	15	
1,1-Dichloroethene	ug/L	ND	20	20	21.5	21.2	107	105	79-136	2	14	
1,2-Dichloroethane	ug/L	ND	20	20	19.4	19.4	97	97	58-133	0	14	
1,2-Dichloropropane	ug/L	ND	20	20	20.2	20.8	101	104	81-117	3	11	
2-Butanone (MEK)	ug/L	ND	100	100	85.8	92.9	86	93	64-114	8	21	
2-Hexanone	ug/L	ND	100	100	85.0	93.5	85	94	71-113	10	15	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	91.5	99.2	92	99	64-127	8	14	
Acetone	ug/L	ND	100	100	93.1	90.8	93	91	61-113	2	33	
Benzene	ug/L	ND	20	20	20.7	20.6	102	102	55-145	0	18	
Bromodichloromethane	ug/L	ND	20	20	20.0	19.2	100	96	81-120	4	11	
Bromoform	ug/L	ND	20	20	17.1	19.3	85	97	72-117	13	16	
Bromomethane	ug/L	ND	20	20	22.0	23.7	110	119	39-145	7	37	
Carbon disulfide	ug/L	ND	20	20	21.0	21.2	105	106	82-129	1	11	
Carbon tetrachloride	ug/L	ND	20	20	22.4	22.3	112	112	85-125	0	11	
Chlorobenzene	ug/L	ND	20	20	19.2	19.8	96	99	87-115	3	10	
Chloroethane	ug/L	ND	20	20	21.2	21.3	106	106	62-157	1	20	
Chloroform	ug/L	ND	20	20	19.6	19.2	98	96	79-117	2	12	
Chloromethane	ug/L	ND	20	20	22.9	22.1	114	111	22-194	3	59	
cis-1,2-Dichloroethene	ug/L	43.2	20	20	62.0	60.3	94	86	70-134	3	12	
cis-1,3-Dichloropropene	ug/L	ND	20	20	19.1	19.8	95	99	70-117	4	12	
Dibromochloromethane	ug/L	ND	20	20	17.6	18.7	88	93	56-135	6	14	
Ethylbenzene	ug/L	ND	20	20	19.3	19.6	96	98	45-152	2	11	
Methylene chloride	ug/L	ND	20	20	19.7	19.7	99	98	77-123	0	13	
Styrene	ug/L	ND	20	20	19.8	20.1	99	100	64-134	2	11	
Tetrachloroethene	ug/L	2.7	20	20	22.4	22.5	98	99	81-126	1	11	
Toluene	ug/L	ND	20	20	19.6	20.0	98	100	52-144	2	12	
trans-1,2-Dichloroethene	ug/L	ND	20	20	20.1	21.0	97	102	80-126	4	12	
trans-1,3-Dichloropropene	ug/L	ND	20	20	17.5	18.1	87	91	72-114	4	15	
Trichloroethene	ug/L	18.4	20	20	37.3	37.4	94	95	70-131	0	16	
Vinyl chloride	ug/L	8.6	20	20	33.1	32.1	123	117	64-153	3	23	
Xylene (Total)	ug/L	ND	60	60	60.0	61.7	100	103	54-146	3	12	
1,2-Dichloroethane-d4 (S)	%						100	95	80-120			
4-Bromofluorobenzene (S)	%						98	99	80-120			
Toluene-d8 (S)	%						99	99	80-120			
Preservation pH		1.0			1.0	1.0				0		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 501040 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256510011, 60256510012, 60256510013, 60256510018, 60256510025, 60256510029, 60256510034

METHOD BLANK: 2051155 Matrix: Water
Associated Lab Samples: 60256510011, 60256510012, 60256510013, 60256510018, 60256510025, 60256510029, 60256510034

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/31/17 21:36	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/31/17 21:36	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/31/17 21:36	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/31/17 21:36	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/31/17 21:36	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/31/17 21:36	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/31/17 21:36	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/31/17 21:36	
2-Hexanone	ug/L	ND	10.0	1.2	10/31/17 21:36	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/31/17 21:36	
Acetone	ug/L	ND	10.0	1.9	10/31/17 21:36	
Benzene	ug/L	ND	1.0	0.060	10/31/17 21:36	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/31/17 21:36	
Bromoform	ug/L	ND	1.0	0.070	10/31/17 21:36	
Bromomethane	ug/L	ND	5.0	0.16	10/31/17 21:36	
Carbon disulfide	ug/L	ND	5.0	0.12	10/31/17 21:36	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/31/17 21:36	
Chlorobenzene	ug/L	ND	1.0	0.21	10/31/17 21:36	
Chloroethane	ug/L	ND	1.0	0.15	10/31/17 21:36	
Chloroform	ug/L	ND	1.0	0.14	10/31/17 21:36	
Chloromethane	ug/L	ND	1.0	0.080	10/31/17 21:36	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/31/17 21:36	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/31/17 21:36	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/31/17 21:36	
Ethylbenzene	ug/L	ND	1.0	0.18	10/31/17 21:36	
Methylene chloride	ug/L	ND	1.0	0.15	10/31/17 21:36	
Styrene	ug/L	ND	1.0	0.12	10/31/17 21:36	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/31/17 21:36	
Toluene	ug/L	ND	1.0	0.17	10/31/17 21:36	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/31/17 21:36	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/31/17 21:36	
Trichloroethene	ug/L	ND	1.0	0.17	10/31/17 21:36	
Vinyl chloride	ug/L	ND	1.0	0.13	10/31/17 21:36	
Xylene (Total)	ug/L	ND	3.0	0.42	10/31/17 21:36	
1,2-Dichloroethane-d4 (S)	%	99	80-120		10/31/17 21:36	
4-Bromofluorobenzene (S)	%	98	80-120		10/31/17 21:36	
Toluene-d8 (S)	%	99	80-120		10/31/17 21:36	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

LABORATORY CONTROL SAMPLE: 2051156

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.0	105	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	17.3	86	74-124	
1,1,2-Trichloroethane	ug/L	20	18.9	94	81-118	
1,1-Dichloroethane	ug/L	20	21.4	107	82-122	
1,1-Dichloroethene	ug/L	20	21.6	108	78-123	
1,2-Dichloroethane	ug/L	20	20.1	100	78-117	
1,2-Dichloropropane	ug/L	20	21.5	108	81-118	
2-Butanone (MEK)	ug/L	100	94.9	95	72-117	
2-Hexanone	ug/L	100	90.1	90	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	92.1	92	77-124	
Acetone	ug/L	100	98.3	98	66-127	
Benzene	ug/L	20	21.2	106	82-115	
Bromodichloromethane	ug/L	20	20.7	104	83-123	
Bromoform	ug/L	20	18.4	92	79-126	
Bromomethane	ug/L	20	25.9	130	39-146	
Carbon disulfide	ug/L	20	22.8	114	75-121	
Carbon tetrachloride	ug/L	20	22.3	112	82-117	
Chlorobenzene	ug/L	20	20.0	100	89-114	
Chloroethane	ug/L	20	21.3	107	71-133	
Chloroform	ug/L	20	20.5	102	78-117	
Chloromethane	ug/L	20	22.6	113	19-181	
cis-1,2-Dichloroethene	ug/L	20	20.3	101	78-119	
cis-1,3-Dichloropropene	ug/L	20	20.7	103	81-116	
Dibromochloromethane	ug/L	20	18.4	92	81-122	
Ethylbenzene	ug/L	20	20.2	101	83-112	
Methylene chloride	ug/L	20	20.7	103	78-127	
Styrene	ug/L	20	20.7	104	88-117	
Tetrachloroethene	ug/L	20	20.0	100	80-121	
Toluene	ug/L	20	20.4	102	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.2	101	79-120	
trans-1,3-Dichloropropene	ug/L	20	18.9	94	81-119	
Trichloroethene	ug/L	20	20.0	100	78-118	
Vinyl chloride	ug/L	20	25.0	125	66-133	
Xylene (Total)	ug/L	60	62.4	104	83-114	
1,2-Dichloroethane-d4 (S)	%			94	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2051157 2051158

Parameter	Units	60256510012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	20	20	21.6	20.7	108	104	49-167	4	11	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	17.9	17.1	90	85	75-118	5	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	18.6	18.0	93	90	76-116	3	13	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2051157 2051158

Parameter	Units	60256510012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethane	ug/L	ND	20	20	22.1	20.5	110	102	82-127	8	15	
1,1-Dichloroethene	ug/L	ND	20	20	22.7	21.3	114	107	79-136	6	14	
1,2-Dichloroethane	ug/L	ND	20	20	19.8	19.0	99	95	58-133	4	14	
1,2-Dichloropropane	ug/L	ND	20	20	21.2	20.6	106	103	81-117	3	11	
2-Butanone (MEK)	ug/L	ND	100	100	89.7	88.9	90	89	64-114	1	21	
2-Hexanone	ug/L	ND	100	100	85.4	82.9	85	83	71-113	3	15	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	93.0	91.7	93	92	64-127	1	14	
Acetone	ug/L	ND	100	100	93.9	88.2	94	88	61-113	6	33	
Benzene	ug/L	0.11J	20	20	21.6	20.6	108	103	55-145	5	18	
Bromodichloromethane	ug/L	ND	20	20	20.1	19.8	100	99	81-120	1	11	
Bromoform	ug/L	ND	20	20	18.4	18.1	92	91	72-117	2	16	
Bromomethane	ug/L	ND	20	20	23.8	24.2	119	121	39-145	2	37	
Carbon disulfide	ug/L	ND	20	20	22.3	21.0	111	105	82-129	6	11	
Carbon tetrachloride	ug/L	ND	20	20	23.1	22.1	116	110	85-125	5	11	
Chlorobenzene	ug/L	4.5	20	20	24.2	23.6	98	96	87-115	2	10	
Chloroethane	ug/L	ND	20	20	22.1	20.2	110	101	62-157	9	20	
Chloroform	ug/L	ND	20	20	20.2	19.2	101	96	79-117	5	12	
Chloromethane	ug/L	ND	20	20	23.4	22.0	117	110	22-194	6	59	
cis-1,2-Dichloroethene	ug/L	0.16J	20	20	20.2	18.9	100	94	70-134	7	12	
cis-1,3-Dichloropropene	ug/L	ND	20	20	19.5	19.7	98	98	70-117	1	12	
Dibromochloromethane	ug/L	ND	20	20	18.2	17.7	91	88	56-135	3	14	
Ethylbenzene	ug/L	ND	20	20	19.8	19.8	99	99	45-152	0	11	
Methylene chloride	ug/L	ND	20	20	20.7	20.3	103	101	77-123	2	13	
Styrene	ug/L	ND	20	20	0.53J	0.56J	3	3	64-134		11	M1
Tetrachloroethene	ug/L	ND	20	20	19.9	19.4	99	97	81-126	3	11	
Toluene	ug/L	ND	20	20	19.6	19.7	98	98	52-144	1	12	
trans-1,2-Dichloroethene	ug/L	ND	20	20	20.7	20.0	104	100	80-126	3	12	
trans-1,3-Dichloropropene	ug/L	ND	20	20	17.8	17.8	89	89	72-114	0	15	
Trichloroethene	ug/L	0.19J	20	20	19.8	19.0	98	94	70-131	4	16	
Vinyl chloride	ug/L	ND	20	20	26.0	23.9	130	119	64-153	9	23	
Xylene (Total)	ug/L	ND	60	60	61.2	59.6	102	99	54-146	3	12	
1,2-Dichloroethane-d4 (S)	%						99	101	80-120			
4-Bromofluorobenzene (S)	%						99	98	80-120			
Toluene-d8 (S)	%						96	99	80-120			
Preservation pH		1.0			1.0	1.0				0		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 500793 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 7 day
Associated Lab Samples: 60256510008, 60256510015, 60256510016, 60256510033

METHOD BLANK: 2050408 Matrix: Water
Associated Lab Samples: 60256510008, 60256510015, 60256510016, 60256510033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/30/17 10:12	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/30/17 10:12	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/30/17 10:12	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/30/17 10:12	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 10:12	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/30/17 10:12	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/30/17 10:12	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/30/17 10:12	
2-Hexanone	ug/L	ND	10.0	1.2	10/30/17 10:12	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/30/17 10:12	
Acetone	ug/L	ND	10.0	1.9	10/30/17 10:12	
Benzene	ug/L	ND	1.0	0.060	10/30/17 10:12	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/30/17 10:12	
Bromoform	ug/L	ND	1.0	0.070	10/30/17 10:12	
Bromomethane	ug/L	ND	5.0	0.16	10/30/17 10:12	
Carbon disulfide	ug/L	ND	5.0	0.12	10/30/17 10:12	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/30/17 10:12	
Chlorobenzene	ug/L	ND	1.0	0.21	10/30/17 10:12	
Chloroethane	ug/L	ND	1.0	0.15	10/30/17 10:12	
Chloroform	ug/L	ND	1.0	0.14	10/30/17 10:12	
Chloromethane	ug/L	ND	1.0	0.080	10/30/17 10:12	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/30/17 10:12	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/30/17 10:12	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/30/17 10:12	
Ethylbenzene	ug/L	ND	1.0	0.18	10/30/17 10:12	
Methylene chloride	ug/L	ND	1.0	0.15	10/30/17 10:12	
Styrene	ug/L	ND	1.0	0.12	10/30/17 10:12	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/30/17 10:12	
Toluene	ug/L	ND	1.0	0.17	10/30/17 10:12	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 10:12	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/30/17 10:12	
Trichloroethene	ug/L	ND	1.0	0.17	10/30/17 10:12	
Vinyl chloride	ug/L	ND	1.0	0.13	10/30/17 10:12	
Xylene (Total)	ug/L	ND	3.0	0.42	10/30/17 10:12	
1,2-Dichloroethane-d4 (S)	%	96	80-120		10/30/17 10:12	
4-Bromofluorobenzene (S)	%	96	80-120		10/30/17 10:12	
Toluene-d8 (S)	%	102	80-120		10/30/17 10:12	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

LABORATORY CONTROL SAMPLE: 2050409

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.1	105	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	18.0	90	74-124	
1,1,2-Trichloroethane	ug/L	20	18.6	93	81-118	
1,1-Dichloroethane	ug/L	20	21.4	107	82-122	
1,1-Dichloroethene	ug/L	20	21.1	105	78-123	
1,2-Dichloroethane	ug/L	20	20.5	103	78-117	
1,2-Dichloropropane	ug/L	20	21.8	109	81-118	
2-Butanone (MEK)	ug/L	100	96.5	97	72-117	
2-Hexanone	ug/L	100	90.7	91	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.0	96	77-124	
Acetone	ug/L	100	103	103	66-127	
Benzene	ug/L	20	21.4	107	82-115	
Bromodichloromethane	ug/L	20	21.3	106	83-123	
Bromoform	ug/L	20	19.5	97	79-126	
Bromomethane	ug/L	20	25.0	125	39-146	
Carbon disulfide	ug/L	20	20.7	103	75-121	
Carbon tetrachloride	ug/L	20	22.1	111	82-117	
Chlorobenzene	ug/L	20	20.1	100	89-114	
Chloroethane	ug/L	20	20.2	101	71-133	
Chloroform	ug/L	20	20.7	103	78-117	
Chloromethane	ug/L	20	20.7	103	19-181	
cis-1,2-Dichloroethene	ug/L	20	20.2	101	78-119	
cis-1,3-Dichloropropene	ug/L	20	21.7	108	81-116	
Dibromochloromethane	ug/L	20	19.4	97	81-122	
Ethylbenzene	ug/L	20	20.0	100	83-112	
Methylene chloride	ug/L	20	20.4	102	78-127	
Styrene	ug/L	20	21.3	107	88-117	
Tetrachloroethene	ug/L	20	20.3	101	80-121	
Toluene	ug/L	20	19.9	99	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.8	104	79-120	
trans-1,3-Dichloropropene	ug/L	20	18.5	93	81-119	
Trichloroethene	ug/L	20	19.8	99	78-118	
Vinyl chloride	ug/L	20	23.1	116	66-133	
Xylene (Total)	ug/L	60	63.5	106	83-114	
1,2-Dichloroethane-d4 (S)	%			95	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			98	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 500574
QC Batch Method: SM 4500-S-2 D
Analysis Method: SM 4500-S-2 D
Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 60256510034

METHOD BLANK: 2049045 Matrix: Water
Associated Lab Samples: 60256510034

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	ND	0.050	0.0048	10/28/17 14:04	

LABORATORY CONTROL SAMPLE: 2049046

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	.5	0.54	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2049047 2049048

Parameter	Units	60256365016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide, Total	mg/L	ND	.5	.5	0.44	0.44	87	88	75-125	0	20	

SAMPLE DUPLICATE: 2049049

Parameter	Units	60256365017 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 2049050

Parameter	Units	60256491006 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

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

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 501768 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60256510034

METHOD BLANK: 2054031 Matrix: Water
Associated Lab Samples: 60256510034

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.50	11/04/17 23:26	
Sulfate	mg/L	ND	1.0	0.50	11/04/17 23:26	

LABORATORY CONTROL SAMPLE: 2054032

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	102	90-110	
Sulfate	mg/L	5	5.3	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2054033 2054034

Parameter	Units	60256478001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	169	100	100	263	264	93	95	80-120	0	15	
Sulfate	mg/L	ND	100	100	110	110	97	97	80-120	0	15	

MATRIX SPIKE SAMPLE: 2054035

Parameter	Units	60256478002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	175	100	264	89	80-120	
Sulfate	mg/L	38.1	100	133	94	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 500492
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 60256510034

METHOD BLANK: 2048686 Matrix: Water
Associated Lab Samples: 60256510034

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.050	10/27/17 09:21	
Nitrogen, Nitrite	mg/L	ND	0.10	0.030	10/27/17 09:21	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.050	10/27/17 09:21	

LABORATORY CONTROL SAMPLE: 2048687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.2	117	70-130	
Nitrogen, Nitrite	mg/L	1	0.93	93	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	2.1	105	90-110	

MATRIX SPIKE SAMPLE: 2048688

Parameter	Units	60256510034 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	3.4	1	4.5	106	70-130	
Nitrogen, Nitrite	mg/L	0.27	1	0.66	39	90-110	M1
Nitrogen, NO2 plus NO3	mg/L	3.7	2	5.2	72	90-110	M1

MATRIX SPIKE SAMPLE: 2048690

Parameter	Units	60256590004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.0	1	2.6	157	70-130	M1
Nitrogen, Nitrite	mg/L	ND	1	0.39	37	90-110	M1
Nitrogen, NO2 plus NO3	mg/L	1.0	2	3.0	97	90-110	

SAMPLE DUPLICATE: 2048689

Parameter	Units	60256495003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	1.2	1.2	3	20	
Nitrogen, Nitrite	mg/L	ND	ND		20	
Nitrogen, NO2 plus NO3	mg/L	1.3	1.2	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256510

QC Batch: 500954 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon
Associated Lab Samples: 60256510034

METHOD BLANK: 2050852 Matrix: Water
Associated Lab Samples: 60256510034

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	0.37J	1.0	0.13	10/31/17 15:11	

LABORATORY CONTROL SAMPLE: 2050853

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.8	116	80-120	

MATRIX SPIKE SAMPLE: 2050854

Parameter	Units	60256361009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	1.1	5	5.5	88	80-120	

SAMPLE DUPLICATE: 2050855

Parameter	Units	60256361010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	1.7	1.7	1	25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60256510

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.

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-K	Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: 500793

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 500837

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60256510

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60256510034	ITMW-9-201710	EPA 3010	500794	EPA 6010	500920
60256510001	MW-62-201710	EPA 5030B/8260	501038		
60256510002	MW-96-201710	EPA 5030B/8260	501038		
60256510003	MW-97-201710	EPA 5030B/8260	501038		
60256510004	MW-183-201710	EPA 5030B/8260	501038		
60256510005	ITMW-2-201710	EPA 5030B/8260	501038		
60256510006	ITMW-1-201710	EPA 5030B/8260	501038		
60256510007	MW-55R-201710	EPA 5030B/8260	501038		
60256510009	ITMW-20-201710	EPA 5030B/8260	501038		
60256510010	ITMW-21-201710	EPA 5030B/8260	501038		
60256510011	ITMW-7-201710	EPA 5030B/8260	501040		
60256510012	MW-29-201710	EPA 5030B/8260	501040		
60256510013	ITMW-5-201710	EPA 5030B/8260	500837		
60256510013	ITMW-5-201710	EPA 5030B/8260	501040		
60256510014	MW-22-201710	EPA 5030B/8260	500837		
60256510017	MW-28-201710	EPA 5030B/8260	500837		
60256510018	MW-91-201710	EPA 5030B/8260	500837		
60256510018	MW-91-201710	EPA 5030B/8260	501040		
60256510019	MW-178-201710	EPA 5030B/8260	500837		
60256510020	FD-06-201710	EPA 5030B/8260	500837		
60256510021	MW-39R-201710	EPA 5030B/8260	500837		
60256510022	FD-05-201710	EPA 5030B/8260	500837		
60256510023	TMW-23-201710	EPA 5030B/8260	500838		
60256510024	MW-191-201710	EPA 5030B/8260	500838		
60256510025	MW-189-201710	EPA 5030B/8260	500838		
60256510025	MW-189-201710	EPA 5030B/8260	501040		
60256510026	MW-190-201710	EPA 5030B/8260	500838		
60256510027	MW-192-201710	EPA 5030B/8260	500838		
60256510028	TMW-27-201710	EPA 5030B/8260	500838		
60256510029	TMW-25-201710	EPA 5030B/8260	500838		
60256510029	TMW-25-201710	EPA 5030B/8260	501040		
60256510030	ITMW-16-201710	EPA 5030B/8260	500838		
60256510031	ITMW-10-201710	EPA 5030B/8260	500838		
60256510032	MW-27-201710	EPA 5030B/8260	500838		
60256510034	ITMW-9-201710	EPA 5030B/8260	500838		
60256510034	ITMW-9-201710	EPA 5030B/8260	501040		
60256510035	MW-26-201710	EPA 5030B/8260	500838		
60256510036	TB-04-201710	EPA 5030B/8260	500838		
60256510008	IW-78-201710	EPA 5030B/8260	500793		
60256510015	MW-84-201710	EPA 5030B/8260	500793		
60256510016	MW-83-201710	EPA 5030B/8260	500793		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60256510

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60256510033	**MW-24-201710**	EPA 5030B/8260	500793		
60256510034	**ITMW-9-201710**	SM 4500-S-2 D	500574		
60256510034	**ITMW-9-201710**	EPA 300.0	501768		
60256510034	**ITMW-9-201710**	EPA 353.2	500492		
60256510034	**ITMW-9-201710**	SM 5310C	500954		

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Sample Condition Upon Receipt

WO# : 60256510

60256510

Client Name: Environ

Courier: FedEx ☐ UPS ☐ VIA ☒ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☐

Custody Seal on Cooler/Box Present: Yes ☒ No ☐ Seals intact: Yes ☒ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☒ Foam ☐ None ☐ Other ☐

Thermometer Used: (CF 0.0) T-266 / (CF +0.3) T-239 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 2.6 **Corr. Factor** (CF 0.0 CF +0.3) **Corrected** 2.6

Date and initials of person examining contents: JB 10/26

Temperature should be above freezing to 6°C

Chain of Custody present:	☒Yes ☐No ☐N/A	
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	
Samples arrived within holding time:	☒Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☒Yes ☐No ☐N/A	NO_2/NO_3 Fe^{2+}
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	
Sufficient volume:	☒Yes ☐No ☐N/A	
Correct containers used:	☒Yes ☐No ☐N/A	
Pace containers used:	☒Yes ☐No ☐N/A	
Containers intact:	☒Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☒N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	
Sample labels match COC: Date / time / ID / analyses	☒Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☒No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	☒Yes ☐No ☐N/A	
Cyanide water sample checks: ☒ N/A Lead acetate strip turns dark? (Record only) Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No ☐Yes ☐No	
Trip Blank present:	☒Yes ☐No ☐N/A	
Headspace in VOA vials (>6mm):	☐Yes ☒No ☐N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☒N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☒N/A	

RHM

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Richard Mannz Digitally signed by: Richard Mannz DN: CN = Richard Mannz C = US O = Pace Analytical OU = Client Services Date: 2017.10.26 19:12:21 -05'00' Date: _____

CHAIN-OF-CUSTODY / Analytical Request Document

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

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Page: 1 of 2

Section A Required Client Information: Same as Section C

Company:	Environ
Address:	~~7500 College Blvd., Ste. 925~~ Overland Park, KS ~~66210~~
Email To:	
Phone: ~~913-553-5926~~	Fax:
Requested Due Date/TAT:	STD

Section B Required Project Information:

Report To:	Tamara House-Knight
Copy To:	
Purchase Order No.:	NA
Project Name:	Fort Smith, AR
Project Number:	

Section C Invoice Information:

Attention:	Tamara House-Knight
Company Name:	Environ
Address:	124 W. Capitol Avenue
Pace Quote Reference:	Little Rock, AR 72201
Pace Project Manager:	Colleen Clyne
Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE (10/25/17)	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other Ascorbic Acid	Requested Analysis Filtered (Y/N) Y/N	Analysis Test: 8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	6010-Iron	Ferric iron calc. (send field Ferrous)		Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60256510
1	MW-102-201710	W	G			10/24/17	1542		3				X					X						(3) DEHH		001
2	~~MW-98~~-2 MW-98-201710	W	G			10/25/17	1100		3				X					X								002
3	MW-97-201710	W	G			10/25/17	1314		3				X					X								003
4	MW-183-201710	W	G			10/25/17	0951		3				X					X								004
5	ITMW-2-201710	W	G			10/25/17	1415		3				X					X								005
6	ITMW-1-201710	W	G			10/25/17	1514		3				X					X								006
7	MW-55R-201710	W	G			10/25/17	1636		3				X					X								007
8	IW-78-201710	W	G			10/25/17	0850		3				X				X	X						(3) OTHER		Trip blank	008
9	ITMW-20-201710	W	G			10/25/17	1005		3				X				1	X						(3) DEHH			009
10	ITMW-21-201710	W	G			10/25/17	1105		3				X					X								010
11	ITMW-7-201710	W	G			10/25/17	1230		3				X					X								011
12	MW-29-201710	W	G			10/25/17	1330		3				X					X								012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Victoria Siegler / DEHH	10/25/17	1800		10/26	0900	2.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Siegler

SIGNATURE of SAMPLER: Victoria Siegler

DATE Signed (MM/DD/YY): 10/25/17

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

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

CHAIN-OF-CUSTODY / Analytical Request Document

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

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same as section C

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Environ	Report To:	Tamara House-Knight	Attention:	Tamara House-Knight
Address:	~~7500 College Blvd., Ste. 925~~ Overland Park, KS 66210	Copy To:		Company Name:	Environ
				Address:	124 W. Capitol Avenue
Email To:		Purchase Order No.:	NA	Pace Quote Reference:	Little Rock, AR 72201
Phone:	~~913-553-5928~~ Fax:	Project Name:	Fort Smith, AR	Pace Project Manager:	Colleen Clyne
Requested Due Date/TAT:	STD	Project Number:		Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER

☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other Ascorbic Acid	Analysis Test Y/N	8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	9010-Ion	Ferric iron calc. (send field Ferrous)			Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60256510
1	MW-24-201710-MS	W	G			10/25/17	1330		3				X						X							(3) DGAH		pH<2 015
2	MW-24-201710-MSD	W	G			10/25/17	1330		3				X						X									014
3	ITMW-5-201710	W	G		1515	10/25/17	~~1515~~ 1520		3				X						X									013
4	MW-22-201710	W	G			10/25/17	1035		3				X						X									016
5	MW-84-201710	W	G			10/25/17	1210		3								X		X							(3) OTHER		7 day hold 015
6	MW-83-201710	W	G			10/25/17	1015		3								X		X									7 day hold 016
7	MW-25-201710	W	G			10/25/17	1515		3				X						X							(3) DGAH		017
8	MW-9-201710	W	G			10/25/17	1415		3				X						X									018
9	MW-178-201710	W	G			10/25/17	0845		3				X						X									019
10	FD-06-201710	W	G			10/25/17	0845		3				X						X									020
11	MW-39R-201710	W	G			10/25/17	0930		3				X						X									021
12	FD-05-201710	W	G			10/25/17	1007		3				X						X									022

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Victoria Siegler/REH	10/25/17	1600		10/26	0900	2.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Siegler

SIGNATURE of SAMPLER: Victoria Siegler DATE Signed (MM/DD/YY): 10/25/17

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

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

CHAIN-OF-CUSTODY / Analytical Request Document

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

Pace Analytical
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Section A Required Client Information: Same as Section C

Company:	Environ
Address:	~~7600 College Blvd., Ste. 925~~ Overland Park, KS 66210
Email To:	-
Phone: ~~913-553-5926~~	Fax:
Requested Due Date/TAT:	STD

Section B Required Project Information:

Report To:	Tamara House-Knight
Copy To:	
Purchase Order No.:	NA
Project Name:	Fort Smith, AR
Project Number:	

Section C Invoice Information:

Attention:	Tamara House-Knight
Company Name:	Environ
Address:	124 W. Capitol Avenue
Pace Quote Reference:	Little Rock, AR 72201
Pace Project Manager:	Colleen Clyne
Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	6010-Iron	Ferric Iron calc. (send field Ferrous)		Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60256510
1	TMW-23-201710	W	G			10/25/17	1047		3				X				Y	X						(3)X64H		023
2	MW-191-201710	W	G			10/25/17	1538		3				X				Y	X								024
3	MW-189-201710	W	G			10/25/17	1225		3				X				Y	X								025
4	MW-190-201710	W	G			10/25/17	1418		3				X				Y	X								026
5	MW-192-201710	W	G			10/25/17	1700		3				X				Y	X								027
6	TMW-27-201710	W	G			10/25/17	1535		3				X				Y	X								028
7	TMW-27-201710-MS	W	G			10/25/17	1535		3				X				Y	X								
8	TMW-27-201710-MSD	W	G			10/25/17	1535		3				X				Y	X								
9	TMW-25-201710	W	G			10/25/17	1645		3				X				Y	X								029
10	TMW-16-201710	W	G			10/25/17	1400		3				X				Y	X								030
11	TMW-10-201710	W	G			10/25/17	1150		3				X				Y	X								031
12	MW-27-201710	W	G			10/25/17	1710		3				X				Y	X								032

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Victoria Siegler/REH	10/25/17	1800		10/26	0900	2.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Siegler

SIGNATURE of SAMPLER: Victoria Siegler DATE Signed (MM/DD/YY): 10/25/17

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

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

CHAIN-OF-CUSTODY / Analytical Request Document

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

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Page: 4 of 4

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Environ	Report To:	Tamara House-Knight	Attention:	Tamara House-Knight
Address:	7500 College Blvd., Ste. 925	Copy To:		Company Name:	Environ
	Overland Park, KS 66210			Address:	124 W. Capitol Avenue
Email To:	-	Purchase Order No.:	NA	Pace Quote Reference:	Little Rock, AR 72201
Phone:	913-553-5926 Fax:	Project Name:	Fort Smith, AR	Pace Project Manager:	Colleen Clyne
Requested Due Date/TAT:		Project Number:		Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
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ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH + Zn Acetate	$Na_2S_2O_3$	Methanol	Other Ascorbic Acid	Analysis Test Y/N	8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	6010-Iron	Ferric Iron calc. (send field Ferrous)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-24-20171O	W	G			9/25/17	1500		3								4		X							(2)OTHER (3)DG4H		
2	TMW-9-20171O	W	G		0955	9/25/17	0955 VS		7	X	X	X		X												(2)DG4H		BP3N A635 BP3Z BP3N 033 034
3	MW-26-20171O	W	G			9/25/17	1600		3				X						X									035
4	TB-04-20171O	W	G			9/25/17	0800		2				X						X							(2)DG4H TB		036
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Victoria Stegler/REI	10/25/17	1800		10/26	0911	2.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Stegler

SIGNATURE of SAMPLER: Victoria Stg

DATE Signed (MM/DD/YY): 10/25/17

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

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

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

November 16, 2017

Nick Zurweller
Ramboll Environ
7500 College Blvd.
Ste. 295
Overland Park, KS 66210

RE: Project: FORT SMITH, AR
Pace Project No.: 60256529

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on October 26, 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.

RV-1 Revised report - sample ID changed from UP to VP.

RV-2 Revised report - "B" flag removed from trichloroethene for samples 001 and 004.

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

Sincerely,

Richard Mannz
richard.mannz@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: Tamara House-Knight, Ramboll Environ
M. Wilson

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60256529

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 17-016-0
Illinois Certification #: 200030
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212018-1
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587
Missouri Certification: 10070

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SAMPLE SUMMARY

Project: FORT SMITH, AR
Pace Project No.: 60256529

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60256529001	**VP-07-201710**	Water	10/25/17 08:30	10/26/17 09:00
60256529002	**VP-08-201710**	Water	10/25/17 08:45	10/26/17 09:00
60256529003	**VP-10-201710**	Water	10/25/17 09:30	10/26/17 09:00
60256529004	**VP-12-201710**	Water	10/25/17 12:20	10/26/17 09:00
60256529005	**VP-14-201710**	Water	10/25/17 12:40	10/26/17 09:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60256529

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60256529001	**VP-07-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256529002	**VP-08-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256529003	**VP-10-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256529004	**VP-12-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256529005	**VP-14-201710**	EPA 5030B/8260	PGH	38	PASI-K

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256529

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: November 16, 2017

General Information:
5 samples were analyzed for EPA 5030B/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.

Additional Comments:

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256529

Sample: VP-07-201710 **Lab ID: 60256529001** Collected: 10/25/17 08:30 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**36.2**	ug/L	10.0	1.9	1		10/31/17 01:39	67-64-1	
Benzene	**1.1**	ug/L	1.0	0.060	1		10/31/17 01:39	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 01:39	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 01:39	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 01:39	74-83-9	
2-Butanone (MEK)	**4.5J**	ug/L	10.0	0.59	1		10/31/17 01:39	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 01:39	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 01:39	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 01:39	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 01:39	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 01:39	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 01:39	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 01:39	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 01:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 01:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 01:39	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/31/17 01:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 01:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 01:39	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 01:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 01:39	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 01:39	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 01:39	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 01:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	**1.0J**	ug/L	10.0	0.42	1		10/31/17 01:39	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 01:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 01:39	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 01:39	127-18-4	
Toluene	**0.25J**	ug/L	1.0	0.17	1		10/31/17 01:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 01:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 01:39	79-00-5	
Trichloroethene	**0.71J**	ug/L	1.0	0.17	1		10/31/17 01:39	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 01:39	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 01:39	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/31/17 01:39	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-120		1		10/31/17 01:39	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/31/17 01:39	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 01:39		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256529

Sample: VP-08-201710 **Lab ID: 60256529002** Collected: 10/25/17 08:45 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**75.1**	ug/L	10.0	1.9	1		10/31/17 01:53	67-64-1	
Benzene	**0.73J**	ug/L	1.0	0.060	1		10/31/17 01:53	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 01:53	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 01:53	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 01:53	74-83-9	
2-Butanone (MEK)	**11.8**	ug/L	10.0	0.59	1		10/31/17 01:53	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 01:53	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 01:53	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 01:53	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 01:53	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 01:53	67-66-3	
Chloromethane	**0.66J**	ug/L	1.0	0.080	1		10/31/17 01:53	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 01:53	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 01:53	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 01:53	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 01:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/31/17 01:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 01:53	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 01:53	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 01:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 01:53	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 01:53	100-41-4	
2-Hexanone	**3.0J**	ug/L	10.0	1.2	1		10/31/17 01:53	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 01:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	**0.62J**	ug/L	10.0	0.42	1		10/31/17 01:53	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 01:53	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 01:53	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 01:53	127-18-4	
Toluene	**0.28J**	ug/L	1.0	0.17	1		10/31/17 01:53	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 01:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 01:53	79-00-5	
Trichloroethene	**2.9**	ug/L	1.0	0.17	1		10/31/17 01:53	79-01-6	
Vinyl chloride	**0.18J**	ug/L	1.0	0.13	1		10/31/17 01:53	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 01:53	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/31/17 01:53	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/31/17 01:53	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		10/31/17 01:53	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 01:53		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256529

Sample: VP-10-201710 **Lab ID: 60256529003** Collected: 10/25/17 09:30 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 01:11	67-64-1	
Benzene	**0.21J**	ug/L	1.0	0.060	1		10/31/17 01:11	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 01:11	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 01:11	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 01:11	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 01:11	78-93-3	
Carbon disulfide	**0.56J**	ug/L	5.0	0.12	1		10/31/17 01:11	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 01:11	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 01:11	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 01:11	75-00-3	
Chloroform	**0.61J**	ug/L	1.0	0.14	1		10/31/17 01:11	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 01:11	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 01:11	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 01:11	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 01:11	107-06-2	
1,1-Dichloroethene	**1.6**	ug/L	1.0	0.20	1		10/31/17 01:11	75-35-4	
cis-1,2-Dichloroethene	**12.7**	ug/L	1.0	0.080	1		10/31/17 01:11	156-59-2	
trans-1,2-Dichloroethene	**0.27J**	ug/L	1.0	0.20	1		10/31/17 01:11	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 01:11	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 01:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 01:11	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 01:11	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 01:11	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 01:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 01:11	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 01:11	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 01:11	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 01:11	127-18-4	
Toluene	**0.42J**	ug/L	1.0	0.17	1		10/31/17 01:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 01:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 01:11	79-00-5	
Trichloroethene	**211**	ug/L	5.0	0.85	5		11/01/17 00:24	79-01-6	
Vinyl chloride	**0.42J**	ug/L	1.0	0.13	1		10/31/17 01:11	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 01:11	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/31/17 01:11	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	80-120		1		10/31/17 01:11	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/31/17 01:11	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 01:11		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256529

Sample: VP-12-201710 **Lab ID: 60256529004** Collected: 10/25/17 12:20 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.2J**	ug/L	10.0	1.9	1		10/31/17 02:07	67-64-1	
Benzene	**0.15J**	ug/L	1.0	0.060	1		10/31/17 02:07	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 02:07	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 02:07	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 02:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 02:07	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 02:07	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 02:07	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 02:07	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 02:07	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/31/17 02:07	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 02:07	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 02:07	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 02:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 02:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 02:07	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/31/17 02:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/31/17 02:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 02:07	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 02:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 02:07	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 02:07	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 02:07	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 02:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 02:07	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 02:07	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 02:07	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 02:07	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 02:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 02:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 02:07	79-00-5	
Trichloroethene	**0.22J**	ug/L	1.0	0.17	1		10/31/17 02:07	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 02:07	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 02:07	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/31/17 02:07	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		10/31/17 02:07	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/31/17 02:07	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 02:07		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256529

Sample: VP-14-201710 **Lab ID: 60256529005** Collected: 10/25/17 12:40 Received: 10/26/17 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/31/17 01:25	67-64-1	
Benzene	**0.18J**	ug/L	1.0	0.060	1		10/31/17 01:25	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/31/17 01:25	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/31/17 01:25	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/31/17 01:25	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/31/17 01:25	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/31/17 01:25	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/31/17 01:25	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/31/17 01:25	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/31/17 01:25	75-00-3	
Chloroform	**0.44J**	ug/L	1.0	0.14	1		10/31/17 01:25	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/31/17 01:25	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/17 01:25	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/31/17 01:25	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/31/17 01:25	107-06-2	
1,1-Dichloroethene	**0.93J**	ug/L	1.0	0.20	1		10/31/17 01:25	75-35-4	
cis-1,2-Dichloroethene	**3.3**	ug/L	1.0	0.080	1		10/31/17 01:25	156-59-2	
trans-1,2-Dichloroethene	**0.27J**	ug/L	1.0	0.20	1		10/31/17 01:25	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/31/17 01:25	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/31/17 01:25	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/31/17 01:25	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/31/17 01:25	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/31/17 01:25	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/31/17 01:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/31/17 01:25	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/31/17 01:25	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/31/17 01:25	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/31/17 01:25	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/31/17 01:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/31/17 01:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/31/17 01:25	79-00-5	
Trichloroethene	**69.0**	ug/L	1.0	0.17	1		10/31/17 01:25	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/31/17 01:25	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/31/17 01:25	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		1		10/31/17 01:25	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/31/17 01:25	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		10/31/17 01:25	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/31/17 01:25		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256529

QC Batch: 500838 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256529001, 60256529002, 60256529003, 60256529004, 60256529005

METHOD BLANK: 2050617 Matrix: Water
Associated Lab Samples: 60256529001, 60256529002, 60256529003, 60256529004, 60256529005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/30/17 21:55	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/30/17 21:55	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/30/17 21:55	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/30/17 21:55	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 21:55	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/30/17 21:55	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/30/17 21:55	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/30/17 21:55	
2-Hexanone	ug/L	ND	10.0	1.2	10/30/17 21:55	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/30/17 21:55	
Acetone	ug/L	ND	10.0	1.9	10/30/17 21:55	
Benzene	ug/L	ND	1.0	0.060	10/30/17 21:55	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/30/17 21:55	
Bromoform	ug/L	ND	1.0	0.070	10/30/17 21:55	
Bromomethane	ug/L	ND	5.0	0.16	10/30/17 21:55	
Carbon disulfide	ug/L	ND	5.0	0.12	10/30/17 21:55	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/30/17 21:55	
Chlorobenzene	ug/L	ND	1.0	0.21	10/30/17 21:55	
Chloroethane	ug/L	ND	1.0	0.15	10/30/17 21:55	
Chloroform	ug/L	ND	1.0	0.14	10/30/17 21:55	
Chloromethane	ug/L	ND	1.0	0.080	10/30/17 21:55	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/30/17 21:55	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/30/17 21:55	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/30/17 21:55	
Ethylbenzene	ug/L	ND	1.0	0.18	10/30/17 21:55	
Methylene chloride	ug/L	ND	1.0	0.15	10/30/17 21:55	
Styrene	ug/L	ND	1.0	0.12	10/30/17 21:55	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/30/17 21:55	
Toluene	ug/L	ND	1.0	0.17	10/30/17 21:55	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 21:55	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/30/17 21:55	
Trichloroethene	ug/L	ND	1.0	0.17	10/30/17 21:55	
Vinyl chloride	ug/L	ND	1.0	0.13	10/30/17 21:55	
Xylene (Total)	ug/L	ND	3.0	0.42	10/30/17 21:55	
1,2-Dichloroethane-d4 (S)	%	98	80-120		10/30/17 21:55	
4-Bromofluorobenzene (S)	%	97	80-120		10/30/17 21:55	
Toluene-d8 (S)	%	99	80-120		10/30/17 21:55	

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256529

LABORATORY CONTROL SAMPLE: 2050618

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.4	102	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	19.2	96	74-124	
1,1,2-Trichloroethane	ug/L	20	20.2	101	81-118	
1,1-Dichloroethane	ug/L	20	21.7	108	82-122	
1,1-Dichloroethene	ug/L	20	21.1	105	78-123	
1,2-Dichloroethane	ug/L	20	21.0	105	78-117	
1,2-Dichloropropane	ug/L	20	21.5	107	81-118	
2-Butanone (MEK)	ug/L	100	105	105	72-117	
2-Hexanone	ug/L	100	101	101	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	106	106	77-124	
Acetone	ug/L	100	99.8	100	66-127	
Benzene	ug/L	20	21.1	106	82-115	
Bromodichloromethane	ug/L	20	20.7	104	83-123	
Bromoform	ug/L	20	20.2	101	79-126	
Bromomethane	ug/L	20	26.9	134	39-146	
Carbon disulfide	ug/L	20	21.2	106	75-121	
Carbon tetrachloride	ug/L	20	22.7	113	82-117	
Chlorobenzene	ug/L	20	20.4	102	89-114	
Chloroethane	ug/L	20	20.8	104	71-133	
Chloroform	ug/L	20	20.8	104	78-117	
Chloromethane	ug/L	20	23.2	116	19-181	
cis-1,2-Dichloroethene	ug/L	20	19.6	98	78-119	
cis-1,3-Dichloropropene	ug/L	20	20.8	104	81-116	
Dibromochloromethane	ug/L	20	20.0	100	81-122	
Ethylbenzene	ug/L	20	20.4	102	83-112	
Methylene chloride	ug/L	20	21.6	108	78-127	
Styrene	ug/L	20	20.8	104	88-117	
Tetrachloroethene	ug/L	20	19.5	97	80-121	
Toluene	ug/L	20	20.6	103	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.7	104	79-120	
trans-1,3-Dichloropropene	ug/L	20	19.5	98	81-119	
Trichloroethene	ug/L	20	19.3	97	78-118	
Vinyl chloride	ug/L	20	23.2	116	66-133	
Xylene (Total)	ug/L	60	62.6	104	83-114	
1,2-Dichloroethane-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2050619 2050620

Parameter	Units	60256510028 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	20	20	20.3	20.8	101	104	49-167	2	11	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	16.4	16.9	82	85	75-118	3	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	18.4	18.6	92	93	76-116	1	13	

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256529

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2050619 2050620

Parameter	Units	60256510028 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethane	ug/L	ND	20	20	20.2	20.9	101	104	82-127	3	15	
1,1-Dichloroethene	ug/L	ND	20	20	21.1	21.3	105	106	79-136	1	14	
1,2-Dichloroethane	ug/L	ND	20	20	18.7	18.7	93	94	58-133	0	14	
1,2-Dichloropropane	ug/L	ND	20	20	19.6	20.5	98	103	81-117	5	11	
2-Butanone (MEK)	ug/L	ND	100	100	88.3	92.5	88	93	64-114	5	21	
2-Hexanone	ug/L	ND	100	100	85.5	91.3	85	91	71-113	7	15	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	88.4	96.9	88	97	64-127	9	14	
Acetone	ug/L	ND	100	100	83.9	91.4	84	91	61-113	9	33	
Benzene	ug/L	ND	20	20	19.8	20.6	99	103	55-145	4	18	
Bromodichloromethane	ug/L	ND	20	20	19.0	19.6	95	98	81-120	3	11	
Bromoform	ug/L	ND	20	20	17.4	19.2	87	96	72-117	10	16	
Bromomethane	ug/L	ND	20	20	19.7	25.2	98	126	39-145	25	37	
Carbon disulfide	ug/L	ND	20	20	20.1	21.7	101	109	82-129	8	11	
Carbon tetrachloride	ug/L	ND	20	20	21.5	22.6	107	113	85-125	5	11	
Chlorobenzene	ug/L	ND	20	20	18.3	19.7	92	98	87-115	7	10	
Chloroethane	ug/L	ND	20	20	19.2	22.4	96	112	62-157	15	20	
Chloroform	ug/L	ND	20	20	18.9	19.7	95	99	79-117	4	12	
Chloromethane	ug/L	ND	20	20	18.2	22.4	91	112	22-194	21	59	
cis-1,2-Dichloroethene	ug/L	ND	20	20	19.0	19.2	95	96	70-134	2	12	
cis-1,3-Dichloropropene	ug/L	ND	20	20	18.6	19.1	93	96	70-117	3	12	
Dibromochloromethane	ug/L	ND	20	20	17.7	18.4	88	92	56-135	4	14	
Ethylbenzene	ug/L	ND	20	20	18.4	19.6	92	98	45-152	7	11	
Methylene chloride	ug/L	ND	20	20	18.3	20.7	91	103	77-123	12	13	
Styrene	ug/L	ND	20	20	18.2	19.8	91	99	64-134	8	11	
Tetrachloroethene	ug/L	ND	20	20	18.6	20.2	93	101	81-126	8	11	
Toluene	ug/L	ND	20	20	18.8	19.7	94	98	52-144	4	12	
trans-1,2-Dichloroethene	ug/L	ND	20	20	19.5	20.0	98	100	80-126	2	12	
trans-1,3-Dichloropropene	ug/L	ND	20	20	16.9	18.0	85	90	72-114	6	15	
Trichloroethene	ug/L	ND	20	20	18.7	19.8	93	98	70-131	5	16	
Vinyl chloride	ug/L	ND	20	20	23.1	24.8	116	124	64-153	7	23	
Xylene (Total)	ug/L	ND	60	60	56.4	60.5	94	101	54-146	7	12	
1,2-Dichloroethane-d4 (S)	%						100	98	80-120			
4-Bromofluorobenzene (S)	%						99	96	80-120			
Toluene-d8 (S)	%						99	99	80-120			
Preservation pH		1.0			1.0	1.0				0		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256529

QC Batch: 501040
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256529003

METHOD BLANK: 2051155 Matrix: Water
Associated Lab Samples: 60256529003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichloroethene	ug/L	ND	1.0	0.17	10/31/17 21:36	
1,2-Dichloroethane-d4 (S)	%	99	80-120		10/31/17 21:36	
4-Bromofluorobenzene (S)	%	98	80-120		10/31/17 21:36	
Toluene-d8 (S)	%	99	80-120		10/31/17 21:36	

LABORATORY CONTROL SAMPLE: 2051156

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/L	20	20.0	100	78-118	
1,2-Dichloroethane-d4 (S)	%			94	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2051157 2051158

Parameter	Units	60256510012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Trichloroethene	ug/L	0.19J	20	20	19.8	19.0	98	94	70-131	4	16	
1,2-Dichloroethane-d4 (S)	%						99	101	80-120			
4-Bromofluorobenzene (S)	%						99	98	80-120			
Toluene-d8 (S)	%						96	99	80-120			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60256529

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.

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-K Pace Analytical Services - Kansas City

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60256529

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60256529001	**VP-07-201710**	EPA 5030B/8260	500838		
60256529002	**VP-08-201710**	EPA 5030B/8260	500838		
60256529003	**VP-10-201710**	EPA 5030B/8260	500838		
60256529003	**VP-10-201710**	EPA 5030B/8260	501040		
60256529004	**VP-12-201710**	EPA 5030B/8260	500838		
60256529005	**VP-14-201710**	EPA 5030B/8260	500838		

Pace Analytical
www.pacelabs.com

Sample Condition Upon Receipt

WO# : 60256529

60256529

Client Name: Environ

Courier: FedEx ☐ UPS ☐ VIA ☒ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☐

Custody Seal on Cooler/Box Present: Yes ☒ No ☐ Seals intact: Yes ☒ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☒ Foam ☐ None ☐ Other ☐

Thermometer Used: CF 0.0 T-266 / CF +0.3 T-239 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 2.6 **Corr. Factor** CF 0.0 CF +0.3 **Corrected** 2.6

Date and initials of person examining contents: JB 10/26

Temperature should be above freezing to 6°C

Chain of Custody present:	☒Yes ☐No ☐N/A	
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	
Samples arrived within holding time:	☒Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☒No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	
Sufficient volume:	☒Yes ☐No ☐N/A	
Correct containers used:	☒Yes ☐No ☐N/A	
Pace containers used:	☒Yes ☐No ☐N/A	
Containers intact:	☒Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☒N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	
Sample labels match COC: Date / time / ID / analyses	☒Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☒No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	☐Yes ☐No ☒N/A	
Cyanide water sample checks: ☒N/A Lead acetate strip turns dark? (Record only) Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No ☐Yes ☐No	
Trip Blank present:	☐Yes ☒No ☐N/A	
Headspace in VOA vials (>6mm):	☐Yes ☒No ☐N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☒N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☒N/A	

RHM

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Richard Mannz Digitally signed by: Richard Mannz DN: CN = Richard Mannz C = US O = Pace Analytical OU = Client Services Date: 2017.10.26 19:48:29 -05'00' Date: _____

CHAIN-OF-CUSTODY / Analytical Request Document

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

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Same as Section C

Page: 1 of 1

Section A Required Client Information:

Company:	Environ
Address:	7500 College Blvd., Ste. 925 Overland Park, KS 66210
Email To:	
Phone: 913-553-5926	Fax:
Requested Due Date/TAT:	STD

Section B Required Project Information:

Report To:	Tamara House-Knight
Copy To:	
Purchase Order No.:	NA
Project Name:	Fort Smith, AR
Project Number:	

Section C Invoice Information:

Attention:	Tamara House-Knight
Company Name:	Environ
Address:	124 W. Capitol Avenue Little Rock, AR 72201
Pace Quote Reference:	
Pace Project Manager:	Colleen Clyne
Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: 8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	6010-iron	Ferric iron calc. (send field Ferrous)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60256529
1	VP-07-201710	W	G			10/25/17	0830		3				X					X							(3) DLGH	001
2	VP-08-201710	W	G			10/25/17	0845		3				X					X								002
3	VP-10-201710	W	G			10/25/17	0930		3				X					X								003
4	VP-12-201710	W	G			10/25/17	1220		3				X					X								004
5	VP-14-201710	W	G			10/25/17	1240		2				X					X							(2) DLGH	005
6																										
7																										
8																										
9																										
10																										
11																										
12																										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Victoria Siegler IREH	10/25/17	1800		10/26/17	~~0820~~ 0900	2.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Siegler

SIGNATURE of SAMPLER: Victoria Siegler

DATE Signed (MM/DD/YY): 10/25/17

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

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

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

November 10, 2017

Nick Zurweller
Ramboll Environ
7500 College Blvd.
Ste. 295
Overland Park, KS 66210

RE: Project: FORT SMITH, AR
Pace Project No.: 60256590

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on October 27, 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,

Richard Mannz
richard.mannz@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: Tamara House-Knight, Ramboll Environ
M. Wilson

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 17-016-0
Illinois Certification #: 200030
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212018-1
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587
Missouri Certification: 10070

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(913)599-5665

SAMPLE SUMMARY

Project: FORT SMITH, AR
Pace Project No.: 60256590

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60256590001	**MW-89-201710**	Water	10/26/17 08:42	10/27/17 03:05
60256590002	**MW-38-201710**	Water	10/26/17 10:49	10/27/17 03:05
60256590003	**MW-93-201710**	Water	10/26/17 09:10	10/27/17 03:05
60256590004	**MW-95-201710**	Water	10/26/17 10:20	10/27/17 03:05
60256590005	**MW-25-201710**	Water	10/26/17 09:10	10/27/17 03:05
60256590006	**ITMW-18-201710**	Water	10/26/17 09:45	10/27/17 03:05
60256590007	**FD-08-201710**	Water	10/26/17 09:10	10/27/17 03:05
60256590008	**EB-03-201710**	Water	10/26/17 12:00	10/27/17 03:05
60256590009	**EB-04-201710**	Water	10/26/17 12:13	10/27/17 03:05
60256590010	**MW-179-201710**	Water	10/26/17 08:15	10/27/17 03:05
60256590011	**MW-87-201710**	Water	10/26/17 09:32	10/27/17 03:05
60256590012	**MW-19-201710**	Water	10/26/17 09:10	10/27/17 03:05
60256590013	**EB-05-201710**	Water	10/26/17 12:30	10/27/17 03:05
60256590014	**MW-86-201710**	Water	10/26/17 11:20	10/27/17 03:05
60256590015	**FD-07-201710**	Water	10/26/17 10:41	10/27/17 03:05

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60256590

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60256590001	**MW-89-201710**	EPA 6010	TDS	1	PASI-K
		EPA 5030B/8260	PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	1	PASI-K
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256590002	**MW-38-201710**	EPA 6010	TDS	1	PASI-K
		EPA 5030B/8260	EAG, PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	1	PASI-K
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256590003	**MW-93-201710**	EPA 5030B/8260	EAG, PGH	38	PASI-K
60256590004	**MW-95-201710**	EPA 6010	TDS	1	PASI-K
		EPA 5030B/8260	EAG, PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	1	PASI-K
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256590005	**MW-25-201710**	EPA 6010	TDS	1	PASI-K
		EPA 5030B/8260	EAG, PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	1	PASI-K
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256590006	**ITMW-18-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256590007	**FD-08-201710**	EPA 5030B/8260	EAG, PGH	38	PASI-K
60256590008	**EB-03-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256590009	**EB-04-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256590010	**MW-179-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256590011	**MW-87-201710**	EPA 6010	TDS	1	PASI-K
		EPA 5030B/8260	EAG, PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	1	PASI-K
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256590012	**MW-19-201710**	EPA 5030B/8260	PGH	38	PASI-K

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60256590

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60256590013	**EB-05-201710**	EPA 5030B/8260	PGH	38	PASI-K
60256590014	**MW-86-201710**	EPA 6010	TDS	1	PASI-K
		EPA 5030B/8260	EAG, PGH	38	PASI-K
		SM 4500-S-2 D	HMM	1	PASI-K
		EPA 300.0	OL	1	PASI-K
		EPA 353.2	JMC1	3	PASI-K
		SM 5310C	LDF	1	PASI-K
60256590015	**FD-07-201710**	EPA 5030B/8260	PGH	38	PASI-K

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256590

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Ramboll Environ_AR
Date: November 10, 2017

General Information:
6 samples were analyzed for EPA 6010. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 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.

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256590

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: November 10, 2017

General Information:
15 samples were analyzed for EPA 5030B/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: 501472

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: 2052654)
  - Bromoform

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

QC Batch: 500793

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 501042

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 501218

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: 501472

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256590

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: November 10, 2017

Additional Comments:

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256590

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: Ramboll Environ_AR
Date: November 10, 2017

General Information:
6 samples were analyzed for SM 4500-S-2 D. 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.

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.

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

Additional Comments:

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256590

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Ramboll Environ_AR
Date: November 10, 2017

General Information:
6 samples were analyzed for EPA 300.0. 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.

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256590

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Ramboll Environ_AR
Date: November 10, 2017

General Information:
6 samples were analyzed for EPA 353.2. 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.

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: 500492

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60256510034,60256590004

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

- MS (Lab ID: 2048688)
  - Nitrogen, NO2 plus NO3
  - Nitrogen, Nitrite
- MS (Lab ID: 2048690)
  - Nitrogen, Nitrate
  - Nitrogen, Nitrite

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

Additional Comments:

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60256590

Method: **SM 5310C**
Description: 5310C TOC
Client: Ramboll Environ_AR
Date: November 10, 2017

General Information:
6 samples were analyzed for SM 5310C. 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.

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

QC Batch: 500954

B: Analyte was detected in the associated method blank.

- BLANK for HBN 500954 [WETA/478 (Lab ID: 2050852)
  - Total Organic Carbon

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.

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.

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-89-201710 **Lab ID: 60256590001** Collected: 10/26/17 08:42 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**239**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:18	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		11/01/17 07:54	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		11/01/17 07:54	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/01/17 07:54	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/01/17 07:54	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		11/01/17 07:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/01/17 07:54	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		11/01/17 07:54	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/01/17 07:54	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/01/17 07:54	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/01/17 07:54	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		11/01/17 07:54	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/01/17 07:54	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/01/17 07:54	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		11/01/17 07:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/01/17 07:54	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 07:54	75-35-4	
cis-1,2-Dichloroethene	**0.48J**	ug/L	1.0	0.080	1		11/01/17 07:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 07:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/01/17 07:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/01/17 07:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/01/17 07:54	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/01/17 07:54	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/01/17 07:54	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		11/01/17 07:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/01/17 07:54	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/17 07:54	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/17 07:54	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		11/01/17 07:54	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		11/01/17 07:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/17 07:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		11/01/17 07:54	79-00-5	
Trichloroethene	**11.3**	ug/L	1.0	0.17	1		11/01/17 07:54	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/01/17 07:54	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/01/17 07:54	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		11/01/17 07:54	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		11/01/17 07:54	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		11/01/17 07:54	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/01/17 07:54		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:18	18496-25-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-89-201710 **Lab ID: 60256590001** Collected: 10/26/17 08:42 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**4.2**	mg/L	1.0	0.50	1		11/08/17 13:49	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**104**	mg/L	5.0	2.5	50		10/27/17 09:44		
Nitrogen, Nitrite	ND	mg/L	5.0	1.5	50		10/27/17 09:44		
Nitrogen, NO2 plus NO3	**105**	mg/L	5.0	2.5	50		10/27/17 09:44		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.8**	mg/L	1.0	0.13	1		10/31/17 19:49	7440-44-0	B

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-38-201710 **Lab ID: 60256590002** Collected: 10/26/17 10:49 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**4370**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:20	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		11/02/17 14:34	67-64-1	
Benzene	**0.18J**	ug/L	1.0	0.060	1		11/02/17 14:34	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/02/17 14:34	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/02/17 14:34	75-25-2	L1
Bromomethane	ND	ug/L	5.0	0.16	1		11/02/17 14:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/02/17 14:34	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		11/02/17 14:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/02/17 14:34	56-23-5	
Chlorobenzene	**0.36J**	ug/L	1.0	0.21	1		11/02/17 14:34	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/02/17 14:34	75-00-3	
Chloroform	**0.29J**	ug/L	1.0	0.14	1		11/02/17 14:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/02/17 14:34	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/02/17 14:34	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		11/02/17 14:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/02/17 14:34	107-06-2	
1,1-Dichloroethene	**16.8**	ug/L	1.0	0.20	1		11/02/17 14:34	75-35-4	
cis-1,2-Dichloroethene	**823**	ug/L	50.0	4.0	50		11/01/17 18:27	156-59-2	
trans-1,2-Dichloroethene	**6.1**	ug/L	1.0	0.20	1		11/02/17 14:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/02/17 14:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/02/17 14:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/02/17 14:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/02/17 14:34	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/02/17 14:34	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		11/02/17 14:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/02/17 14:34	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/02/17 14:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/02/17 14:34	79-34-5	
Tetrachloroethene	**0.50J**	ug/L	1.0	0.10	1		11/02/17 14:34	127-18-4	
Toluene	**0.27J**	ug/L	1.0	0.17	1		11/02/17 14:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/02/17 14:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		11/02/17 14:34	79-00-5	
Trichloroethene	**2240**	ug/L	50.0	8.5	50		11/01/17 18:27	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/02/17 14:34	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/02/17 14:34	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-120		1		11/02/17 14:34	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	80-120		1		11/02/17 14:34	17060-07-0	
Toluene-d8 (S)	103	%	80-120		1		11/02/17 14:34	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/02/17 14:34		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:18	18496-25-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-38-201710 **Lab ID: 60256590002** Collected: 10/26/17 10:49 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**28.2**	mg/L	2.0	1.0	2		11/08/17 14:32	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.050	1		10/27/17 09:36		
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/27/17 09:36		
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.050	1		10/27/17 09:36		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.7**	mg/L	1.0	0.13	1		10/31/17 20:02	7440-44-0	B

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-93-201710 **Lab ID: 60256590003** Collected: 10/26/17 09:10 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		11/02/17 15:03	67-64-1	
Benzene	**0.14J**	ug/L	1.0	0.060	1		11/02/17 15:03	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/02/17 15:03	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/02/17 15:03	75-25-2	L1
Bromomethane	ND	ug/L	5.0	0.16	1		11/02/17 15:03	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/02/17 15:03	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		11/02/17 15:03	75-15-0	
Carbon tetrachloride	**0.36J**	ug/L	1.0	0.18	1		11/02/17 15:03	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/02/17 15:03	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/02/17 15:03	75-00-3	
Chloroform	**4.1**	ug/L	1.0	0.14	1		11/02/17 15:03	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/02/17 15:03	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/02/17 15:03	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		11/02/17 15:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/02/17 15:03	107-06-2	
1,1-Dichloroethene	**26.0**	ug/L	1.0	0.20	1		11/02/17 15:03	75-35-4	
cis-1,2-Dichloroethene	**111**	ug/L	1.0	0.080	1		11/02/17 15:03	156-59-2	
trans-1,2-Dichloroethene	**5.3**	ug/L	1.0	0.20	1		11/02/17 15:03	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/02/17 15:03	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/02/17 15:03	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/02/17 15:03	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/02/17 15:03	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/02/17 15:03	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		11/02/17 15:03	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/02/17 15:03	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/02/17 15:03	100-42-5	
1,1,2,2-Tetrachloroethane	**0.30J**	ug/L	1.0	0.15	1		11/02/17 15:03	79-34-5	
Tetrachloroethene	**7.3**	ug/L	1.0	0.10	1		11/02/17 15:03	127-18-4	
Toluene	**0.20J**	ug/L	1.0	0.17	1		11/02/17 15:03	108-88-3	
1,1,1-Trichloroethane	**0.23J**	ug/L	1.0	0.11	1		11/02/17 15:03	71-55-6	
1,1,2-Trichloroethane	**1.1**	ug/L	1.0	0.20	1		11/02/17 15:03	79-00-5	
Trichloroethene	**16600**	ug/L	200	34.0	200		11/01/17 18:41	79-01-6	
Vinyl chloride	**9.1**	ug/L	1.0	0.13	1		11/02/17 15:03	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/02/17 15:03	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	92	%	80-120		1		11/02/17 15:03	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	80-120		1		11/02/17 15:03	17060-07-0	
Toluene-d8 (S)	103	%	80-120		1		11/02/17 15:03	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/02/17 15:03		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-95-201710 **Lab ID: 60256590004** Collected: 10/26/17 10:20 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**72.6**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:28	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		11/02/17 15:17	67-64-1	
Benzene	**0.11J**	ug/L	1.0	0.060	1		11/02/17 15:17	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/02/17 15:17	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/02/17 15:17	75-25-2	L1
Bromomethane	**0.55J**	ug/L	5.0	0.16	1		11/02/17 15:17	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/02/17 15:17	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		11/02/17 15:17	75-15-0	
Carbon tetrachloride	**0.43J**	ug/L	1.0	0.18	1		11/02/17 15:17	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/02/17 15:17	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/02/17 15:17	75-00-3	
Chloroform	**5.4**	ug/L	1.0	0.14	1		11/02/17 15:17	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/02/17 15:17	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/02/17 15:17	124-48-1	
1,1-Dichloroethane	**0.45J**	ug/L	1.0	0.050	1		11/02/17 15:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/02/17 15:17	107-06-2	
1,1-Dichloroethene	**47.3**	ug/L	1.0	0.20	1		11/02/17 15:17	75-35-4	
cis-1,2-Dichloroethene	**198**	ug/L	1.0	0.080	1		11/02/17 15:17	156-59-2	
trans-1,2-Dichloroethene	**4.2**	ug/L	1.0	0.20	1		11/02/17 15:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/02/17 15:17	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/02/17 15:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/02/17 15:17	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/02/17 15:17	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/02/17 15:17	591-78-6	
Methylene chloride	**1.2**	ug/L	1.0	0.15	1		11/02/17 15:17	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/02/17 15:17	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/02/17 15:17	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/02/17 15:17	79-34-5	
Tetrachloroethene	**8.9**	ug/L	1.0	0.10	1		11/02/17 15:17	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		11/02/17 15:17	108-88-3	
1,1,1-Trichloroethane	**0.74J**	ug/L	1.0	0.11	1		11/02/17 15:17	71-55-6	
1,1,2-Trichloroethane	**1.9**	ug/L	1.0	0.20	1		11/02/17 15:17	79-00-5	
Trichloroethene	**23900**	ug/L	200	34.0	200		11/01/17 18:55	79-01-6	
Vinyl chloride	**51.2**	ug/L	1.0	0.13	1		11/02/17 15:17	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/02/17 15:17	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-120		1		11/02/17 15:17	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	80-120		1		11/02/17 15:17	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		11/02/17 15:17	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/02/17 15:17		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:18	18496-25-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-95-201710 **Lab ID: 60256590004** Collected: 10/26/17 10:20 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**3.0**	mg/L	1.0	0.50	1		11/08/17 15:01	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**1.0**	mg/L	0.10	0.050	1		10/27/17 09:34		M1
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/27/17 09:34		M1
Nitrogen, NO2 plus NO3	**1.0**	mg/L	0.10	0.050	1		10/27/17 09:34		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.35J**	mg/L	1.0	0.13	1		10/31/17 20:15	7440-44-0	B

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-25-201710 **Lab ID: 60256590005** Collected: 10/26/17 09:10 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**4810**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:30	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**116**	ug/L	10.0	1.9	1		11/02/17 15:59	67-64-1	
Benzene	**0.43J**	ug/L	1.0	0.060	1		11/02/17 15:59	71-43-2	
Bromodichloromethane	**2.5**	ug/L	1.0	0.19	1		11/02/17 15:59	75-27-4	
Bromoform	**0.97J**	ug/L	1.0	0.070	1		11/02/17 15:59	75-25-2	L1
Bromomethane	**0.75J**	ug/L	5.0	0.16	1		11/02/17 15:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/02/17 15:59	78-93-3	
Carbon disulfide	**3.7J**	ug/L	5.0	0.12	1		11/02/17 15:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/02/17 15:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/02/17 15:59	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/02/17 15:59	75-00-3	
Chloroform	**49.6**	ug/L	1.0	0.14	1		11/02/17 15:59	67-66-3	
Chloromethane	**5.2**	ug/L	1.0	0.080	1		11/02/17 15:59	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/02/17 15:59	124-48-1	
1,1-Dichloroethane	**7.2**	ug/L	1.0	0.050	1		11/02/17 15:59	75-34-3	
1,2-Dichloroethane	**0.29J**	ug/L	1.0	0.12	1		11/02/17 15:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	1000	200	1000		11/01/17 19:09	75-35-4	
cis-1,2-Dichloroethene	**22900**	ug/L	1000	80.0	1000		11/01/17 19:09	156-59-2	
trans-1,2-Dichloroethene	**436J**	ug/L	1000	200	1000		11/01/17 19:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/02/17 15:59	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/02/17 15:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/02/17 15:59	10061-02-6	
Ethylbenzene	**0.19J**	ug/L	1.0	0.18	1		11/02/17 15:59	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/02/17 15:59	591-78-6	
Methylene chloride	**19.1**	ug/L	1.0	0.15	1		11/02/17 15:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	**1.1J**	ug/L	10.0	0.42	1		11/02/17 15:59	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/02/17 15:59	100-42-5	
1,1,2,2-Tetrachloroethane	**184**	ug/L	1.0	0.15	1		11/02/17 15:59	79-34-5	
Tetrachloroethene	**63.4**	ug/L	1.0	0.10	1		11/02/17 15:59	127-18-4	
Toluene	**9.5**	ug/L	1.0	0.17	1		11/02/17 15:59	108-88-3	
1,1,1-Trichloroethane	**27.3**	ug/L	1.0	0.11	1		11/02/17 15:59	71-55-6	
1,1,2-Trichloroethane	**4.5**	ug/L	1.0	0.20	1		11/02/17 15:59	79-00-5	
Trichloroethene	**97400**	ug/L	1000	170	1000		11/01/17 19:09	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/02/17 15:59	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/02/17 15:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	92	%	80-120		1		11/02/17 15:59	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	80-120		1		11/02/17 15:59	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		11/02/17 15:59	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/02/17 15:59		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:18	18496-25-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-25-201710 **Lab ID: 60256590005** Collected: 10/26/17 09:10 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**652**	mg/L	50.0	25.0	50		11/08/17 15:44	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.10	0.050	1		10/27/17 09:33		
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/27/17 09:33		
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	0.050	1		10/27/17 09:33		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**2.4**	mg/L	1.0	0.13	1		10/31/17 20:28	7440-44-0	B

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: ITMW-18-201710 **Lab ID: 60256590006** Collected: 10/26/17 09:45 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**25.3**	ug/L	10.0	1.9	1		10/30/17 12:47	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 12:47	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 12:47	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 12:47	75-25-2	
Bromomethane	**20.7**	ug/L	5.0	0.16	1		10/30/17 12:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 12:47	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 12:47	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 12:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 12:47	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 12:47	75-00-3	
Chloroform	**1.0**	ug/L	1.0	0.14	1		10/30/17 12:47	67-66-3	
Chloromethane	**8.4**	ug/L	1.0	0.080	1		10/30/17 12:47	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 12:47	124-48-1	
1,1-Dichloroethane	**0.73J**	ug/L	1.0	0.050	1		10/30/17 12:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 12:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 12:47	75-35-4	
cis-1,2-Dichloroethene	**0.47J**	ug/L	1.0	0.080	1		10/30/17 12:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 12:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 12:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 12:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 12:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 12:47	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 12:47	591-78-6	
Methylene chloride	**1.1**	ug/L	1.0	0.15	1		10/30/17 12:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 12:47	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 12:47	100-42-5	
1,1,2,2-Tetrachloroethane	**0.35J**	ug/L	1.0	0.15	1		10/30/17 12:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 12:47	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 12:47	108-88-3	
1,1,1-Trichloroethane	**0.18J**	ug/L	1.0	0.11	1		10/30/17 12:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 12:47	79-00-5	
Trichloroethene	**15.0**	ug/L	1.0	0.17	1		10/30/17 12:47	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 12:47	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 12:47	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/30/17 12:47	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		10/30/17 12:47	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		10/30/17 12:47	2037-26-5	
Preservation pH	**3.0**		0.10	0.10	1		10/30/17 12:47		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: FD-08-201710 **Lab ID: 60256590007** Collected: 10/26/17 09:10 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**122**	ug/L	10.0	1.9	1		11/02/17 16:13	67-64-1	
Benzene	**0.45J**	ug/L	1.0	0.060	1		11/02/17 16:13	71-43-2	
Bromodichloromethane	**2.5**	ug/L	1.0	0.19	1		11/02/17 16:13	75-27-4	
Bromoform	**0.70J**	ug/L	1.0	0.070	1		11/02/17 16:13	75-25-2	L1
Bromomethane	**1.1J**	ug/L	5.0	0.16	1		11/02/17 16:13	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/02/17 16:13	78-93-3	
Carbon disulfide	**3.9J**	ug/L	5.0	0.12	1		11/02/17 16:13	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/02/17 16:13	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/02/17 16:13	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/02/17 16:13	75-00-3	
Chloroform	**49.8**	ug/L	1.0	0.14	1		11/02/17 16:13	67-66-3	
Chloromethane	**4.9**	ug/L	1.0	0.080	1		11/02/17 16:13	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/02/17 16:13	124-48-1	
1,1-Dichloroethane	**7.5**	ug/L	1.0	0.050	1		11/02/17 16:13	75-34-3	
1,2-Dichloroethane	**0.33J**	ug/L	1.0	0.12	1		11/02/17 16:13	107-06-2	
1,1-Dichloroethene	ND	ug/L	1000	200	1000		11/01/17 18:12	75-35-4	
cis-1,2-Dichloroethene	**20900**	ug/L	1000	80.0	1000		11/01/17 18:12	156-59-2	
trans-1,2-Dichloroethene	**494J**	ug/L	1000	200	1000		11/01/17 18:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/02/17 16:13	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/02/17 16:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/02/17 16:13	10061-02-6	
Ethylbenzene	**0.20J**	ug/L	1.0	0.18	1		11/02/17 16:13	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/02/17 16:13	591-78-6	
Methylene chloride	**19.0**	ug/L	1.0	0.15	1		11/02/17 16:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	**1.2J**	ug/L	10.0	0.42	1		11/02/17 16:13	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/02/17 16:13	100-42-5	
1,1,2,2-Tetrachloroethane	**196**	ug/L	1.0	0.15	1		11/02/17 16:13	79-34-5	
Tetrachloroethene	**63.8**	ug/L	1.0	0.10	1		11/02/17 16:13	127-18-4	
Toluene	**9.2**	ug/L	1.0	0.17	1		11/02/17 16:13	108-88-3	
1,1,1-Trichloroethane	**27.5**	ug/L	1.0	0.11	1		11/02/17 16:13	71-55-6	
1,1,2-Trichloroethane	**4.3**	ug/L	1.0	0.20	1		11/02/17 16:13	79-00-5	
Trichloroethene	**95900**	ug/L	1000	170	1000		11/01/17 18:12	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/02/17 16:13	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/02/17 16:13	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	92	%	80-120		1		11/02/17 16:13	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	80-120		1		11/02/17 16:13	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		11/02/17 16:13	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/02/17 16:13		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: EB-03-201710 **Lab ID: 60256590008** Collected: 10/26/17 12:00 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		11/01/17 17:16	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		11/01/17 17:16	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/01/17 17:16	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/01/17 17:16	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		11/01/17 17:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/01/17 17:16	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		11/01/17 17:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/01/17 17:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/01/17 17:16	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/01/17 17:16	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		11/01/17 17:16	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/01/17 17:16	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/01/17 17:16	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		11/01/17 17:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/01/17 17:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 17:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		11/01/17 17:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 17:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/01/17 17:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/01/17 17:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/01/17 17:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/01/17 17:16	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/01/17 17:16	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		11/01/17 17:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/01/17 17:16	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/17 17:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/17 17:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		11/01/17 17:16	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		11/01/17 17:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/17 17:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		11/01/17 17:16	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		11/01/17 17:16	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/01/17 17:16	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/01/17 17:16	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	105	%	80-120		1		11/01/17 17:16	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		11/01/17 17:16	17060-07-0	
Toluene-d8 (S)	95	%	80-120		1		11/01/17 17:16	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/01/17 17:16		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: EB-04-201710 **Lab ID: 60256590009** Collected: 10/26/17 12:13 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		11/01/17 17:30	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		11/01/17 17:30	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/01/17 17:30	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/01/17 17:30	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		11/01/17 17:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/01/17 17:30	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		11/01/17 17:30	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/01/17 17:30	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/01/17 17:30	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/01/17 17:30	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		11/01/17 17:30	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/01/17 17:30	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/01/17 17:30	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		11/01/17 17:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/01/17 17:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 17:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		11/01/17 17:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 17:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/01/17 17:30	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/01/17 17:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/01/17 17:30	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/01/17 17:30	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/01/17 17:30	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		11/01/17 17:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/01/17 17:30	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/17 17:30	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/17 17:30	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		11/01/17 17:30	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		11/01/17 17:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/17 17:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		11/01/17 17:30	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		11/01/17 17:30	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/01/17 17:30	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/01/17 17:30	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		11/01/17 17:30	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	80-120		1		11/01/17 17:30	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		11/01/17 17:30	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/01/17 17:30		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-179-201710 **Lab ID: 60256590010** Collected: 10/26/17 08:15 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.2J**	ug/L	10.0	1.9	1		11/01/17 17:58	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		11/01/17 17:58	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/01/17 17:58	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/01/17 17:58	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		11/01/17 17:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/01/17 17:58	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		11/01/17 17:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/01/17 17:58	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/01/17 17:58	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/01/17 17:58	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		11/01/17 17:58	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/01/17 17:58	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/01/17 17:58	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		11/01/17 17:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/01/17 17:58	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 17:58	75-35-4	
cis-1,2-Dichloroethene	**0.35J**	ug/L	1.0	0.080	1		11/01/17 17:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 17:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/01/17 17:58	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/01/17 17:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/01/17 17:58	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/01/17 17:58	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/01/17 17:58	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		11/01/17 17:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/01/17 17:58	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/17 17:58	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/17 17:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		11/01/17 17:58	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		11/01/17 17:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/17 17:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		11/01/17 17:58	79-00-5	
Trichloroethene	**10.7**	ug/L	1.0	0.17	1		11/01/17 17:58	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/01/17 17:58	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/01/17 17:58	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		11/01/17 17:58	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		11/01/17 17:58	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		11/01/17 17:58	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/01/17 17:58		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-87-201710 **Lab ID: 60256590011** Collected: 10/26/17 09:32 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**122**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:33	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		11/02/17 14:06	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		11/02/17 14:06	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/02/17 14:06	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/02/17 14:06	75-25-2	L1
Bromomethane	ND	ug/L	5.0	0.16	1		11/02/17 14:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/02/17 14:06	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		11/02/17 14:06	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/02/17 14:06	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/02/17 14:06	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/02/17 14:06	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		11/02/17 14:06	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/02/17 14:06	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/02/17 14:06	124-48-1	
1,1-Dichloroethane	**1.6**	ug/L	1.0	0.050	1		11/02/17 14:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/02/17 14:06	107-06-2	
1,1-Dichloroethene	**5.7**	ug/L	1.0	0.20	1		11/02/17 14:06	75-35-4	
cis-1,2-Dichloroethene	**36.4**	ug/L	1.0	0.080	1		11/02/17 14:06	156-59-2	
trans-1,2-Dichloroethene	**0.89J**	ug/L	1.0	0.20	1		11/02/17 14:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/02/17 14:06	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/02/17 14:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/02/17 14:06	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/02/17 14:06	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/02/17 14:06	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		11/02/17 14:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/02/17 14:06	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/02/17 14:06	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/02/17 14:06	79-34-5	
Tetrachloroethene	**6.1**	ug/L	1.0	0.10	1		11/02/17 14:06	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		11/02/17 14:06	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/02/17 14:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		11/02/17 14:06	79-00-5	
Trichloroethene	**486**	ug/L	20.0	3.4	20		11/01/17 19:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/02/17 14:06	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/02/17 14:06	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-120		1		11/02/17 14:06	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	80-120		1		11/02/17 14:06	17060-07-0	
Toluene-d8 (S)	103	%	80-120		1		11/02/17 14:06	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/02/17 14:06		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:18	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-87-201710 **Lab ID: 60256590011** Collected: 10/26/17 09:32 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**12.4**	mg/L	1.0	0.50	1		11/08/17 15:59	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**2.8**	mg/L	0.10	0.050	1		10/27/17 09:34		
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/27/17 09:34		
Nitrogen, NO2 plus NO3	**2.8**	mg/L	0.10	0.050	1		10/27/17 09:34		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.65J**	mg/L	1.0	0.13	1		10/31/17 20:40	7440-44-0	B

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-19-201710 **Lab ID: 60256590012** Collected: 10/26/17 09:10 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**15.0**	ug/L	10.0	1.9	1		10/30/17 13:01	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 13:01	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 13:01	75-27-4	
Bromoform	**0.80J**	ug/L	1.0	0.070	1		10/30/17 13:01	75-25-2	
Bromomethane	**0.45J**	ug/L	5.0	0.16	1		10/30/17 13:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 13:01	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 13:01	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 13:01	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 13:01	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 13:01	75-00-3	
Chloroform	**0.71J**	ug/L	1.0	0.14	1		10/30/17 13:01	67-66-3	
Chloromethane	**0.79J**	ug/L	1.0	0.080	1		10/30/17 13:01	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 13:01	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/30/17 13:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 13:01	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 13:01	75-35-4	
cis-1,2-Dichloroethene	**0.52J**	ug/L	1.0	0.080	1		10/30/17 13:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 13:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 13:01	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 13:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 13:01	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 13:01	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 13:01	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/30/17 13:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 13:01	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 13:01	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/30/17 13:01	79-34-5	
Tetrachloroethene	**0.27J**	ug/L	1.0	0.10	1		10/30/17 13:01	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 13:01	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/30/17 13:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 13:01	79-00-5	
Trichloroethene	**165**	ug/L	1.0	0.17	1		10/30/17 13:01	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 13:01	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 13:01	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/30/17 13:01	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		10/30/17 13:01	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/30/17 13:01	2037-26-5	
Preservation pH	**6.0**		0.10	0.10	1		10/30/17 13:01		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: EB-05-201710 **Lab ID: 60256590013** Collected: 10/26/17 12:30 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		11/01/17 17:44	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		11/01/17 17:44	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		11/01/17 17:44	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		11/01/17 17:44	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		11/01/17 17:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		11/01/17 17:44	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		11/01/17 17:44	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		11/01/17 17:44	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/01/17 17:44	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/01/17 17:44	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		11/01/17 17:44	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		11/01/17 17:44	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		11/01/17 17:44	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		11/01/17 17:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/01/17 17:44	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 17:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		11/01/17 17:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		11/01/17 17:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/01/17 17:44	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/01/17 17:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/01/17 17:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		11/01/17 17:44	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/01/17 17:44	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		11/01/17 17:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/01/17 17:44	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/01/17 17:44	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		11/01/17 17:44	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		11/01/17 17:44	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		11/01/17 17:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		11/01/17 17:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		11/01/17 17:44	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		11/01/17 17:44	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		11/01/17 17:44	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/01/17 17:44	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		11/01/17 17:44	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-120		1		11/01/17 17:44	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		11/01/17 17:44	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/01/17 17:44		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-86-201710 **Lab ID: 60256590014** Collected: 10/26/17 11:20 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron	**848**	ug/L	50.0	12.4	1	10/30/17 11:47	10/30/17 19:35	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**32.7**	ug/L	10.0	1.9	1		11/02/17 16:27	67-64-1	
Benzene	**0.35J**	ug/L	1.0	0.060	1		11/02/17 16:27	71-43-2	
Bromodichloromethane	**3.3**	ug/L	1.0	0.19	1		11/02/17 16:27	75-27-4	
Bromoform	**7.1**	ug/L	1.0	0.070	1		11/02/17 16:27	75-25-2	L1
Bromomethane	**0.50J**	ug/L	5.0	0.16	1		11/02/17 16:27	74-83-9	
2-Butanone (MEK)	**3.9J**	ug/L	10.0	0.59	1		11/02/17 16:27	78-93-3	
Carbon disulfide	**5.3**	ug/L	5.0	0.12	1		11/02/17 16:27	75-15-0	
Carbon tetrachloride	**1.2**	ug/L	1.0	0.18	1		11/02/17 16:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		11/02/17 16:27	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		11/02/17 16:27	75-00-3	
Chloroform	**27.1**	ug/L	1.0	0.14	1		11/02/17 16:27	67-66-3	
Chloromethane	**2.7**	ug/L	1.0	0.080	1		11/02/17 16:27	74-87-3	
Dibromochloromethane	**0.84J**	ug/L	1.0	0.21	1		11/02/17 16:27	124-48-1	
1,1-Dichloroethane	**4.4**	ug/L	1.0	0.050	1		11/02/17 16:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		11/02/17 16:27	107-06-2	
1,1-Dichloroethene	**58.0**	ug/L	1.0	0.20	1		11/02/17 16:27	75-35-4	
cis-1,2-Dichloroethene	**2210**	ug/L	1000	80.0	1000		11/01/17 19:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1000	200	1000		11/01/17 19:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		11/02/17 16:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		11/02/17 16:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		11/02/17 16:27	10061-02-6	
Ethylbenzene	**0.19J**	ug/L	1.0	0.18	1		11/02/17 16:27	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		11/02/17 16:27	591-78-6	
Methylene chloride	**5.4**	ug/L	1.0	0.15	1		11/02/17 16:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		11/02/17 16:27	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		11/02/17 16:27	100-42-5	
1,1,2,2-Tetrachloroethane	**116**	ug/L	1.0	0.15	1		11/02/17 16:27	79-34-5	
Tetrachloroethene	**49.7**	ug/L	1.0	0.10	1		11/02/17 16:27	127-18-4	
Toluene	**3.8**	ug/L	1.0	0.17	1		11/02/17 16:27	108-88-3	
1,1,1-Trichloroethane	**135**	ug/L	1.0	0.11	1		11/02/17 16:27	71-55-6	
1,1,2-Trichloroethane	**3.2**	ug/L	1.0	0.20	1		11/02/17 16:27	79-00-5	
Trichloroethene	**61300**	ug/L	1000	170	1000		11/01/17 19:37	79-01-6	
Vinyl chloride	ND	ug/L	1000	130	1000		11/01/17 19:37	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		11/02/17 16:27	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-120		1		11/02/17 16:27	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	80-120		1		11/02/17 16:27	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		11/02/17 16:27	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		11/02/17 16:27		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	ND	mg/L	0.050	0.0048	1		10/28/17 14:18	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: MW-86-201710 **Lab ID: 60256590014** Collected: 10/26/17 11:20 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1660**	mg/L	200	100	200		11/08/17 16:13	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.44**	mg/L	0.10	0.050	1		10/27/17 09:37		
Nitrogen, Nitrite	ND	mg/L	0.10	0.030	1		10/27/17 09:37		
Nitrogen, NO2 plus NO3	**0.44**	mg/L	0.10	0.050	1		10/27/17 09:37		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**3.7**	mg/L	1.0	0.13	1		10/31/17 20:53	7440-44-0	B

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60256590

Sample: FD-07-201710 **Lab ID: 60256590015** Collected: 10/26/17 10:41 Received: 10/27/17 03:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**20.2**	ug/L	10.0	1.9	1		10/30/17 13:15	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/30/17 13:15	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/30/17 13:15	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/30/17 13:15	75-25-2	
Bromomethane	**23.9**	ug/L	5.0	0.16	1		10/30/17 13:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/30/17 13:15	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/30/17 13:15	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/30/17 13:15	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/30/17 13:15	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/30/17 13:15	75-00-3	
Chloroform	**0.96J**	ug/L	1.0	0.14	1		10/30/17 13:15	67-66-3	
Chloromethane	**7.0**	ug/L	1.0	0.080	1		10/30/17 13:15	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/30/17 13:15	124-48-1	
1,1-Dichloroethane	**0.74J**	ug/L	1.0	0.050	1		10/30/17 13:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/30/17 13:15	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 13:15	75-35-4	
cis-1,2-Dichloroethene	**0.50J**	ug/L	1.0	0.080	1		10/30/17 13:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/30/17 13:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/30/17 13:15	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/30/17 13:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/30/17 13:15	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/30/17 13:15	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/30/17 13:15	591-78-6	
Methylene chloride	**0.93J**	ug/L	1.0	0.15	1		10/30/17 13:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/30/17 13:15	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/30/17 13:15	100-42-5	
1,1,2,2-Tetrachloroethane	**0.31J**	ug/L	1.0	0.15	1		10/30/17 13:15	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/30/17 13:15	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/30/17 13:15	108-88-3	
1,1,1-Trichloroethane	**0.19J**	ug/L	1.0	0.11	1		10/30/17 13:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/30/17 13:15	79-00-5	
Trichloroethene	**16.0**	ug/L	1.0	0.17	1		10/30/17 13:15	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/30/17 13:15	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/30/17 13:15	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/30/17 13:15	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		10/30/17 13:15	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/30/17 13:15	2037-26-5	
Preservation pH	**2.0**		0.10	0.10	1		10/30/17 13:15		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

QC Batch: 500794 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

METHOD BLANK: 2050410 Matrix: Water
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	50.0	12.4	10/30/17 18:42	

LABORATORY CONTROL SAMPLE: 2050411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9760	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2050412 2050413

Parameter	Units	60256450001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	159	10000	10000	10100	9670	100	95	75-125	5	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

QC Batch: 501042
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256590001

METHOD BLANK: 2051160
Matrix: Water
Associated Lab Samples: 60256590001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/01/17 03:13	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/01/17 03:13	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	11/01/17 03:13	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	11/01/17 03:13	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	11/01/17 03:13	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	11/01/17 03:13	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	11/01/17 03:13	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	11/01/17 03:13	
2-Hexanone	ug/L	ND	10.0	1.2	11/01/17 03:13	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	11/01/17 03:13	
Acetone	ug/L	ND	10.0	1.9	11/01/17 03:13	
Benzene	ug/L	ND	1.0	0.060	11/01/17 03:13	
Bromodichloromethane	ug/L	ND	1.0	0.19	11/01/17 03:13	
Bromoform	ug/L	ND	1.0	0.070	11/01/17 03:13	
Bromomethane	ug/L	ND	5.0	0.16	11/01/17 03:13	
Carbon disulfide	ug/L	ND	5.0	0.12	11/01/17 03:13	
Carbon tetrachloride	ug/L	ND	1.0	0.18	11/01/17 03:13	
Chlorobenzene	ug/L	ND	1.0	0.21	11/01/17 03:13	
Chloroethane	ug/L	ND	1.0	0.15	11/01/17 03:13	
Chloroform	ug/L	ND	1.0	0.14	11/01/17 03:13	
Chloromethane	ug/L	0.12J	1.0	0.080	11/01/17 03:13	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	11/01/17 03:13	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	11/01/17 03:13	
Dibromochloromethane	ug/L	ND	1.0	0.21	11/01/17 03:13	
Ethylbenzene	ug/L	ND	1.0	0.18	11/01/17 03:13	
Methylene chloride	ug/L	ND	1.0	0.15	11/01/17 03:13	
Styrene	ug/L	ND	1.0	0.12	11/01/17 03:13	
Tetrachloroethene	ug/L	ND	1.0	0.10	11/01/17 03:13	
Toluene	ug/L	ND	1.0	0.17	11/01/17 03:13	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	11/01/17 03:13	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	11/01/17 03:13	
Trichloroethene	ug/L	ND	1.0	0.17	11/01/17 03:13	
Vinyl chloride	ug/L	ND	1.0	0.13	11/01/17 03:13	
Xylene (Total)	ug/L	ND	3.0	0.42	11/01/17 03:13	
1,2-Dichloroethane-d4 (S)	%	101	80-120		11/01/17 03:13	
4-Bromofluorobenzene (S)	%	99	80-120		11/01/17 03:13	
Toluene-d8 (S)	%	101	80-120		11/01/17 03:13	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

LABORATORY CONTROL SAMPLE: 2051161

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.5	103	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	18.0	90	74-124	
1,1,2-Trichloroethane	ug/L	20	19.0	95	81-118	
1,1-Dichloroethane	ug/L	20	22.1	110	82-122	
1,1-Dichloroethene	ug/L	20	21.4	107	78-123	
1,2-Dichloroethane	ug/L	20	21.1	106	78-117	
1,2-Dichloropropane	ug/L	20	22.3	111	81-118	
2-Butanone (MEK)	ug/L	100	101	101	72-117	
2-Hexanone	ug/L	100	96.9	97	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	104	104	77-124	
Acetone	ug/L	100	102	102	66-127	
Benzene	ug/L	20	21.2	106	82-115	
Bromodichloromethane	ug/L	20	20.7	104	83-123	
Bromoform	ug/L	20	20.0	100	79-126	
Bromomethane	ug/L	20	25.0	125	39-146	
Carbon disulfide	ug/L	20	21.0	105	75-121	
Carbon tetrachloride	ug/L	20	22.1	110	82-117	
Chlorobenzene	ug/L	20	19.7	99	89-114	
Chloroethane	ug/L	20	21.4	107	71-133	
Chloroform	ug/L	20	20.3	101	78-117	
Chloromethane	ug/L	20	23.7	119	19-181	
cis-1,2-Dichloroethene	ug/L	20	20.1	100	78-119	
cis-1,3-Dichloropropene	ug/L	20	20.2	101	81-116	
Dibromochloromethane	ug/L	20	18.9	94	81-122	
Ethylbenzene	ug/L	20	19.5	97	83-112	
Methylene chloride	ug/L	20	21.0	105	78-127	
Styrene	ug/L	20	20.5	102	88-117	
Tetrachloroethene	ug/L	20	18.9	94	80-121	
Toluene	ug/L	20	19.8	99	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.5	103	79-120	
trans-1,3-Dichloropropene	ug/L	20	18.8	94	81-119	
Trichloroethene	ug/L	20	19.0	95	78-118	
Vinyl chloride	ug/L	20	25.0	125	66-133	
Xylene (Total)	ug/L	60	62.2	104	83-114	
1,2-Dichloroethane-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			98	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

QC Batch: 501218 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256590002, 60256590003, 60256590004, 60256590005, 60256590007, 60256590008, 60256590009, 60256590010, 60256590011, 60256590013, 60256590014

METHOD BLANK: 2051808 Matrix: Water
Associated Lab Samples: 60256590002, 60256590003, 60256590004, 60256590005, 60256590007, 60256590008, 60256590009, 60256590010, 60256590011, 60256590013, 60256590014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/01/17 15:24	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/01/17 15:24	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	11/01/17 15:24	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	11/01/17 15:24	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	11/01/17 15:24	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	11/01/17 15:24	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	11/01/17 15:24	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	11/01/17 15:24	
2-Hexanone	ug/L	ND	10.0	1.2	11/01/17 15:24	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	11/01/17 15:24	
Acetone	ug/L	ND	10.0	1.9	11/01/17 15:24	
Benzene	ug/L	ND	1.0	0.060	11/01/17 15:24	
Bromodichloromethane	ug/L	ND	1.0	0.19	11/01/17 15:24	
Bromoform	ug/L	ND	1.0	0.070	11/01/17 15:24	
Bromomethane	ug/L	ND	5.0	0.16	11/01/17 15:24	
Carbon disulfide	ug/L	ND	5.0	0.12	11/01/17 15:24	
Carbon tetrachloride	ug/L	ND	1.0	0.18	11/01/17 15:24	
Chlorobenzene	ug/L	ND	1.0	0.21	11/01/17 15:24	
Chloroethane	ug/L	ND	1.0	0.15	11/01/17 15:24	
Chloroform	ug/L	0.27J	1.0	0.14	11/01/17 15:24	
Chloromethane	ug/L	ND	1.0	0.080	11/01/17 15:24	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	11/01/17 15:24	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	11/01/17 15:24	
Dibromochloromethane	ug/L	ND	1.0	0.21	11/01/17 15:24	
Ethylbenzene	ug/L	ND	1.0	0.18	11/01/17 15:24	
Methylene chloride	ug/L	ND	1.0	0.15	11/01/17 15:24	
Styrene	ug/L	ND	1.0	0.12	11/01/17 15:24	
Tetrachloroethene	ug/L	ND	1.0	0.10	11/01/17 15:24	
Toluene	ug/L	ND	1.0	0.17	11/01/17 15:24	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	11/01/17 15:24	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	11/01/17 15:24	
Trichloroethene	ug/L	ND	1.0	0.17	11/01/17 15:24	
Vinyl chloride	ug/L	ND	1.0	0.13	11/01/17 15:24	
Xylene (Total)	ug/L	ND	3.0	0.42	11/01/17 15:24	
1,2-Dichloroethane-d4 (S)	%	100	80-120		11/01/17 15:24	
4-Bromofluorobenzene (S)	%	100	80-120		11/01/17 15:24	
Toluene-d8 (S)	%	100	80-120		11/01/17 15:24	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

LABORATORY CONTROL SAMPLE: 2051809

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.5	108	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	16.9	84	74-124	
1,1,2-Trichloroethane	ug/L	20	19.1	95	81-118	
1,1-Dichloroethane	ug/L	20	22.5	113	82-122	
1,1-Dichloroethene	ug/L	20	22.0	110	78-123	
1,2-Dichloroethane	ug/L	20	21.2	106	78-117	
1,2-Dichloropropane	ug/L	20	23.0	115	81-118	
2-Butanone (MEK)	ug/L	100	108	108	72-117	
2-Hexanone	ug/L	100	102	102	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	115	115	77-124	
Acetone	ug/L	100	112	112	66-127	
Benzene	ug/L	20	21.0	105	82-115	
Bromodichloromethane	ug/L	20	21.4	107	83-123	
Bromoform	ug/L	20	17.5	88	79-126	
Bromomethane	ug/L	20	21.4	107	39-146	
Carbon disulfide	ug/L	20	22.1	110	75-121	
Carbon tetrachloride	ug/L	20	22.1	110	82-117	
Chlorobenzene	ug/L	20	19.4	97	89-114	
Chloroethane	ug/L	20	20.6	103	71-133	
Chloroform	ug/L	20	21.1	105	78-117	
Chloromethane	ug/L	20	21.6	108	19-181	
cis-1,2-Dichloroethene	ug/L	20	20.4	102	78-119	
cis-1,3-Dichloropropene	ug/L	20	21.6	108	81-116	
Dibromochloromethane	ug/L	20	18.4	92	81-122	
Ethylbenzene	ug/L	20	19.4	97	83-112	
Methylene chloride	ug/L	20	22.4	112	78-127	
Styrene	ug/L	20	19.7	99	88-117	
Tetrachloroethene	ug/L	20	18.1	91	80-121	
Toluene	ug/L	20	19.6	98	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.6	103	79-120	
trans-1,3-Dichloropropene	ug/L	20	18.8	94	81-119	
Trichloroethene	ug/L	20	19.9	99	78-118	
Vinyl chloride	ug/L	20	23.2	116	66-133	
Xylene (Total)	ug/L	60	59.7	99	83-114	
1,2-Dichloroethane-d4 (S)	%			106	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			97	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

QC Batch: 501472 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60256590002, 60256590003, 60256590004, 60256590005, 60256590007, 60256590011, 60256590014

METHOD BLANK: 2052653 Matrix: Water
Associated Lab Samples: 60256590002, 60256590003, 60256590004, 60256590005, 60256590007, 60256590011, 60256590014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	11/02/17 11:07	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	11/02/17 11:07	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	11/02/17 11:07	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	11/02/17 11:07	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	11/02/17 11:07	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	11/02/17 11:07	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	11/02/17 11:07	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	11/02/17 11:07	
2-Hexanone	ug/L	ND	10.0	1.2	11/02/17 11:07	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	11/02/17 11:07	
Acetone	ug/L	ND	10.0	1.9	11/02/17 11:07	
Benzene	ug/L	ND	1.0	0.060	11/02/17 11:07	
Bromodichloromethane	ug/L	ND	1.0	0.19	11/02/17 11:07	
Bromoform	ug/L	ND	1.0	0.070	11/02/17 11:07	
Bromomethane	ug/L	ND	5.0	0.16	11/02/17 11:07	
Carbon disulfide	ug/L	ND	5.0	0.12	11/02/17 11:07	
Carbon tetrachloride	ug/L	ND	1.0	0.18	11/02/17 11:07	
Chlorobenzene	ug/L	ND	1.0	0.21	11/02/17 11:07	
Chloroethane	ug/L	ND	1.0	0.15	11/02/17 11:07	
Chloroform	ug/L	ND	1.0	0.14	11/02/17 11:07	
Chloromethane	ug/L	ND	1.0	0.080	11/02/17 11:07	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	11/02/17 11:07	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	11/02/17 11:07	
Dibromochloromethane	ug/L	ND	1.0	0.21	11/02/17 11:07	
Ethylbenzene	ug/L	ND	1.0	0.18	11/02/17 11:07	
Methylene chloride	ug/L	ND	1.0	0.15	11/02/17 11:07	
Styrene	ug/L	ND	1.0	0.12	11/02/17 11:07	
Tetrachloroethene	ug/L	ND	1.0	0.10	11/02/17 11:07	
Toluene	ug/L	ND	1.0	0.17	11/02/17 11:07	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	11/02/17 11:07	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	11/02/17 11:07	
Vinyl chloride	ug/L	ND	1.0	0.13	11/02/17 11:07	
Xylene (Total)	ug/L	ND	3.0	0.42	11/02/17 11:07	
1,2-Dichloroethane-d4 (S)	%	105	80-120		11/02/17 11:07	
4-Bromofluorobenzene (S)	%	96	80-120		11/02/17 11:07	
Toluene-d8 (S)	%	105	80-120		11/02/17 11:07	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

LABORATORY CONTROL SAMPLE: 2052654

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	22.6	113	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	16.2	81	74-124	
1,1,2-Trichloroethane	ug/L	20	19.3	96	81-118	
1,1-Dichloroethane	ug/L	20	18.0	90	82-122	
1,1-Dichloroethene	ug/L	20	23.1	116	78-123	
1,2-Dichloroethane	ug/L	20	20.3	101	78-117	
1,2-Dichloropropane	ug/L	20	17.4	87	81-118	
2-Butanone (MEK)	ug/L	100	74.6	75	72-117	
2-Hexanone	ug/L	100	80.7	81	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	76.7	77	77-124	
Acetone	ug/L	100	93.2	93	66-127	
Benzene	ug/L	20	17.3	87	82-115	
Bromodichloromethane	ug/L	20	21.6	108	83-123	
Bromoform	ug/L	20	26.9	135	79-126	L1
Bromomethane	ug/L	20	19.3	96	39-146	
Carbon disulfide	ug/L	20	23.3	117	75-121	
Carbon tetrachloride	ug/L	20	21.9	109	82-117	
Chlorobenzene	ug/L	20	20.3	101	89-114	
Chloroethane	ug/L	20	22.6	113	71-133	
Chloroform	ug/L	20	19.1	96	78-117	
Chloromethane	ug/L	20	17.4	87	19-181	
cis-1,2-Dichloroethene	ug/L	20	18.9	94	78-119	
cis-1,3-Dichloropropene	ug/L	20	18.6	93	81-116	
Dibromochloromethane	ug/L	20	23.2	116	81-122	
Ethylbenzene	ug/L	20	19.1	95	83-112	
Methylene chloride	ug/L	20	19.6	98	78-127	
Styrene	ug/L	20	20.5	103	88-117	
Tetrachloroethene	ug/L	20	24.0	120	80-121	
Toluene	ug/L	20	19.0	95	78-113	
trans-1,2-Dichloroethene	ug/L	20	17.3	87	79-120	
trans-1,3-Dichloropropene	ug/L	20	19.6	98	81-119	
Vinyl chloride	ug/L	20	21.7	108	66-133	
Xylene (Total)	ug/L	60	59.4	99	83-114	
1,2-Dichloroethane-d4 (S)	%			108	80-120	
4-Bromofluorobenzene (S)	%			87	80-120	
Toluene-d8 (S)	%			104	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

QC Batch: 500793 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 7 day
Associated Lab Samples: 60256590006, 60256590012, 60256590015

METHOD BLANK: 2050408 Matrix: Water
Associated Lab Samples: 60256590006, 60256590012, 60256590015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/30/17 10:12	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/30/17 10:12	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/30/17 10:12	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/30/17 10:12	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 10:12	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/30/17 10:12	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/30/17 10:12	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/30/17 10:12	
2-Hexanone	ug/L	ND	10.0	1.2	10/30/17 10:12	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/30/17 10:12	
Acetone	ug/L	ND	10.0	1.9	10/30/17 10:12	
Benzene	ug/L	ND	1.0	0.060	10/30/17 10:12	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/30/17 10:12	
Bromoform	ug/L	ND	1.0	0.070	10/30/17 10:12	
Bromomethane	ug/L	ND	5.0	0.16	10/30/17 10:12	
Carbon disulfide	ug/L	ND	5.0	0.12	10/30/17 10:12	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/30/17 10:12	
Chlorobenzene	ug/L	ND	1.0	0.21	10/30/17 10:12	
Chloroethane	ug/L	ND	1.0	0.15	10/30/17 10:12	
Chloroform	ug/L	ND	1.0	0.14	10/30/17 10:12	
Chloromethane	ug/L	ND	1.0	0.080	10/30/17 10:12	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/30/17 10:12	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/30/17 10:12	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/30/17 10:12	
Ethylbenzene	ug/L	ND	1.0	0.18	10/30/17 10:12	
Methylene chloride	ug/L	ND	1.0	0.15	10/30/17 10:12	
Styrene	ug/L	ND	1.0	0.12	10/30/17 10:12	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/30/17 10:12	
Toluene	ug/L	ND	1.0	0.17	10/30/17 10:12	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/30/17 10:12	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/30/17 10:12	
Trichloroethene	ug/L	ND	1.0	0.17	10/30/17 10:12	
Vinyl chloride	ug/L	ND	1.0	0.13	10/30/17 10:12	
Xylene (Total)	ug/L	ND	3.0	0.42	10/30/17 10:12	
1,2-Dichloroethane-d4 (S)	%	96	80-120		10/30/17 10:12	
4-Bromofluorobenzene (S)	%	96	80-120		10/30/17 10:12	
Toluene-d8 (S)	%	102	80-120		10/30/17 10:12	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

LABORATORY CONTROL SAMPLE: 2050409

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.1	105	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	18.0	90	74-124	
1,1,2-Trichloroethane	ug/L	20	18.6	93	81-118	
1,1-Dichloroethane	ug/L	20	21.4	107	82-122	
1,1-Dichloroethene	ug/L	20	21.1	105	78-123	
1,2-Dichloroethane	ug/L	20	20.5	103	78-117	
1,2-Dichloropropane	ug/L	20	21.8	109	81-118	
2-Butanone (MEK)	ug/L	100	96.5	97	72-117	
2-Hexanone	ug/L	100	90.7	91	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.0	96	77-124	
Acetone	ug/L	100	103	103	66-127	
Benzene	ug/L	20	21.4	107	82-115	
Bromodichloromethane	ug/L	20	21.3	106	83-123	
Bromoform	ug/L	20	19.5	97	79-126	
Bromomethane	ug/L	20	25.0	125	39-146	
Carbon disulfide	ug/L	20	20.7	103	75-121	
Carbon tetrachloride	ug/L	20	22.1	111	82-117	
Chlorobenzene	ug/L	20	20.1	100	89-114	
Chloroethane	ug/L	20	20.2	101	71-133	
Chloroform	ug/L	20	20.7	103	78-117	
Chloromethane	ug/L	20	20.7	103	19-181	
cis-1,2-Dichloroethene	ug/L	20	20.2	101	78-119	
cis-1,3-Dichloropropene	ug/L	20	21.7	108	81-116	
Dibromochloromethane	ug/L	20	19.4	97	81-122	
Ethylbenzene	ug/L	20	20.0	100	83-112	
Methylene chloride	ug/L	20	20.4	102	78-127	
Styrene	ug/L	20	21.3	107	88-117	
Tetrachloroethene	ug/L	20	20.3	101	80-121	
Toluene	ug/L	20	19.9	99	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.8	104	79-120	
trans-1,3-Dichloropropene	ug/L	20	18.5	93	81-119	
Trichloroethene	ug/L	20	19.8	99	78-118	
Vinyl chloride	ug/L	20	23.1	116	66-133	
Xylene (Total)	ug/L	60	63.5	106	83-114	
1,2-Dichloroethane-d4 (S)	%			95	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			98	80-120	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

QC Batch: 500717 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

METHOD BLANK: 2049956 Matrix: Water
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	ND	0.050	0.0048	10/28/17 14:17	

LABORATORY CONTROL SAMPLE: 2049957

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	.5	0.53	107	80-120	

MATRIX SPIKE SAMPLE: 2049958

Parameter	Units	60256628002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	ND	.5	0.59	119	75-125	

SAMPLE DUPLICATE: 2049959

Parameter	Units	60256590001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 2049960

Parameter	Units	60256590005 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	ND		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

QC Batch: 502277 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

METHOD BLANK: 2055754 Matrix: Water
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	0.50	11/08/17 12:51	

LABORATORY CONTROL SAMPLE: 2055755

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2055756 2055757

Parameter	Units	60256590001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	4.2	5	5	9.2	9.3	101	103	80-120	1	15	

MATRIX SPIKE SAMPLE: 2055758

Parameter	Units	60256590002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	28.2	10	38.5	103	80-120	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

QC Batch: 500492 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

METHOD BLANK: 2048686 Matrix: Water
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.050	10/27/17 09:21	
Nitrogen, Nitrite	mg/L	ND	0.10	0.030	10/27/17 09:21	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	0.050	10/27/17 09:21	

LABORATORY CONTROL SAMPLE: 2048687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.2	117	70-130	
Nitrogen, Nitrite	mg/L	1	0.93	93	90-110	
Nitrogen, NO2 plus NO3	mg/L	2	2.1	105	90-110	

MATRIX SPIKE SAMPLE: 2048688

Parameter	Units	60256510034 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	3.4	1	4.5	106	70-130	
Nitrogen, Nitrite	mg/L	0.27	1	0.66	39	90-110	M1
Nitrogen, NO2 plus NO3	mg/L	3.7	2	5.2	72	90-110	M1

MATRIX SPIKE SAMPLE: 2048690

Parameter	Units	60256590004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.0	1	2.6	157	70-130	M1
Nitrogen, Nitrite	mg/L	ND	1	0.39	37	90-110	M1
Nitrogen, NO2 plus NO3	mg/L	1.0	2	3.0	97	90-110	

SAMPLE DUPLICATE: 2048689

Parameter	Units	60256495003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	1.2	1.2	3	20	
Nitrogen, Nitrite	mg/L	ND	ND		20	
Nitrogen, NO2 plus NO3	mg/L	1.3	1.2	3	20	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60256590

QC Batch: 500954 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

METHOD BLANK: 2050852 Matrix: Water
Associated Lab Samples: 60256590001, 60256590002, 60256590004, 60256590005, 60256590011, 60256590014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	0.37J	1.0	0.13	10/31/17 15:11	

LABORATORY CONTROL SAMPLE: 2050853

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	5.8	116	80-120	

MATRIX SPIKE SAMPLE: 2050854

Parameter	Units	60256361009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	1.1	5	5.5	88	80-120	

SAMPLE DUPLICATE: 2050855

Parameter	Units	60256361010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	1.7	1.7	1	25	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60256590

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.

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-K	Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: 500793

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 501042

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 501218

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 501472

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60256590

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60256590001	MW-89-201710	EPA 3010	500794	EPA 6010	500920
60256590002	MW-38-201710	EPA 3010	500794	EPA 6010	500920
60256590004	MW-95-201710	EPA 3010	500794	EPA 6010	500920
60256590005	MW-25-201710	EPA 3010	500794	EPA 6010	500920
60256590011	MW-87-201710	EPA 3010	500794	EPA 6010	500920
60256590014	MW-86-201710	EPA 3010	500794	EPA 6010	500920
60256590001	MW-89-201710	EPA 5030B/8260	501042		
60256590002	MW-38-201710	EPA 5030B/8260	501218		
60256590002	MW-38-201710	EPA 5030B/8260	501472		
60256590003	MW-93-201710	EPA 5030B/8260	501218		
60256590003	MW-93-201710	EPA 5030B/8260	501472		
60256590004	MW-95-201710	EPA 5030B/8260	501218		
60256590004	MW-95-201710	EPA 5030B/8260	501472		
60256590005	MW-25-201710	EPA 5030B/8260	501218		
60256590005	MW-25-201710	EPA 5030B/8260	501472		
60256590007	FD-08-201710	EPA 5030B/8260	501218		
60256590007	FD-08-201710	EPA 5030B/8260	501472		
60256590008	EB-03-201710	EPA 5030B/8260	501218		
60256590009	EB-04-201710	EPA 5030B/8260	501218		
60256590010	MW-179-201710	EPA 5030B/8260	501218		
60256590011	MW-87-201710	EPA 5030B/8260	501218		
60256590011	MW-87-201710	EPA 5030B/8260	501472		
60256590013	EB-05-201710	EPA 5030B/8260	501218		
60256590014	MW-86-201710	EPA 5030B/8260	501218		
60256590014	MW-86-201710	EPA 5030B/8260	501472		
60256590006	ITMW-18-201710	EPA 5030B/8260	500793		
60256590012	MW-19-201710	EPA 5030B/8260	500793		
60256590015	FD-07-201710	EPA 5030B/8260	500793		
60256590001	MW-89-201710	SM 4500-S-2 D	500717		
60256590002	MW-38-201710	SM 4500-S-2 D	500717		
60256590004	MW-95-201710	SM 4500-S-2 D	500717		
60256590005	MW-25-201710	SM 4500-S-2 D	500717		
60256590011	MW-87-201710	SM 4500-S-2 D	500717		
60256590014	MW-86-201710	SM 4500-S-2 D	500717		
60256590001	MW-89-201710	EPA 300.0	502277		
60256590002	MW-38-201710	EPA 300.0	502277		
60256590004	MW-95-201710	EPA 300.0	502277		
60256590005	MW-25-201710	EPA 300.0	502277		
60256590011	MW-87-201710	EPA 300.0	502277		
60256590014	MW-86-201710	EPA 300.0	502277		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60256590

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60256590001	**MW-89-201710**	EPA 353.2	500492		
60256590002	**MW-38-201710**	EPA 353.2	500492		
60256590004	**MW-95-201710**	EPA 353.2	500492		
60256590005	**MW-25-201710**	EPA 353.2	500492		
60256590011	**MW-87-201710**	EPA 353.2	500492		
60256590014	**MW-86-201710**	EPA 353.2	500492		
60256590001	**MW-89-201710**	SM 5310C	500954		
60256590002	**MW-38-201710**	SM 5310C	500954		
60256590004	**MW-95-201710**	SM 5310C	500954		
60256590005	**MW-25-201710**	SM 5310C	500954		
60256590011	**MW-87-201710**	SM 5310C	500954		
60256590014	**MW-86-201710**	SM 5310C	500954		

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Sample Condition Upon Receipt

WO# : 60256590

60256590

RHM

Client Name: Environ

Courier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☐

Custody Seal on Cooler/Box Present: Yes ☐ No ☐ Seals intact: Yes ☐ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☐ Other ☐

Thermometer Used: CF 0.0 T-266 / CF +0.3 T-239 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 2-4 **Corr. Factor** CF 0.0 CF +0.3 **Corrected** 2-4

Date and initials of person examining contents: PM 10/27/17

Temperature should be above freezing to 6°C

Chain of Custody present:	☐Yes ☐No ☐N/A	
Chain of Custody relinquished:	☐Yes ☐No ☐N/A	RHM 10/27/17
Samples arrived within holding time:	☐Yes ☐No ☐N/A	~~Did not receive TB~~ PM 10/27
Short Hold Time analyses (<72hr): 8260s	☐Yes ☐No ☐N/A	~~FD-07-201710~~
Rush Turn Around Time requested:	☐Yes ☐No ☐N/A	
Sufficient volume:	☐Yes ☐No ☐N/A	
Correct containers used:	☐Yes ☐No ☐N/A	Received 8260 volume for
Pace containers used:	☐Yes ☐No ☐N/A	ITMW-18 and missing all other
Containers intact:	☐Yes ☐No ☐N/A	volume.
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☐N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☐N/A	
Sample labels match COC: Date / time / ID / analyses	☐Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☐No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	☐Yes ☐No ☐N/A	
Cyanide water sample checks: ☐ N/A Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☐N/A	PM 10/27
Headspace in VOA vials (>6mm):	☐Yes ☐No ☐N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☐N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☐N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: COC in error ITMW-18 only needs 8260 VOC RHM

Project Manager Review: Richard Mannz Digitally signed by: Richard Mannz DN: CN = Richard Mannz C = US O = Pace Analytical OU = Client Services Date: 2017.10.27 16:10:15 -05'00' Date: _____

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 2

Same as Section

Section A Required Client Information:

Company:	Environ
Address:	~~7500 College Blvd., Ste. 925~~
	~~Overland Park, KS 66210~~
Email To:	
Phone:	~~913-553-5926~~ Fax:
Requested Due Date/TAT:	STD

Section B Required Project Information:

Report To:	Tamara House-Knight
Copy To:	
Purchase Order No.:	NA
Project Name:	Fort Smith, AR
Project Number:	

Section C Invoice Information:

Attention:	Tamara House-Knight
Company Name:	Environ
Address:	124 W. Capitol Avenue
Pace Quote Reference:	Little Rock, AR 72201
Pace Project Manager:	Colleen Clyne
Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

Valid Matrix Codes — MATRIX / CODE: DRINKING WATER DW, WATER WT, WASTE WATER WW, PRODUCT P, SOIL/SOLID SL, OIL OL, WIPE WP, AIR AR, OTHER OT, TISSUE TS

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE (10/26/17)	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH (+Zn Acetate)	$Na_2S_2O_3$	Methanol	Other (Ascorbic Acid)	Analysis Test Y/N	8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	6010-Iron	Ferric Iron calc. (send field Ferrous)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-89-201710	W	G			10/26/17	0842		7	X	X	X	X	X					X	X	X	X	X	X	3D69H	BP3U	AG3S BP3U BP3Z 001
2	MW-38-201710	W	G		1049	10/26/17	0945		7	X	X	X	X	X					X	X	X	X	X	X			002
3	MW-93-201710	W	G			10/26/17	0910		3				X						X								003
4	MW-95-201710	W	G			10/26/17	1020		7	X	X	X	X	X					X	X	X	X	X	X			004
5	MW-25-201710	W	G			10/26/17	0910		7	X	X	X	X	X					X	X	X	X	X	X			005
6	~~MW-87-201710~~ US	~~W~~	~~G~~			~~10/26/17~~																					P 10/27/17 ~~006~~
7	MW-18-201710	W	G			10/26/17	0945		7	X	X	X		X			X		X	X	X	X	X	X	30HR		7 day hold 006
8	FD-08-201710	W	G			10/26/17	0910		3				X						X								7 day hold US 007
9	FD-07-201710	W	G			10/26/17	1041		3								X		X								7 day hold 015
10	EB-03-201710	W	G			10/26/17	1200		3				X						X								008
11	EB-04-201710	W	G			10/26/17	1213		3				X						X								009
12	MW-179-201710	W	G			10/26/17	0815		3				X						Y								010

Pace Project No.: 60256590

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Victoria Siegler / REH	10/26/17	1330	[signature] PASI	10/27	0305	2.4	Y	Y	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Siegler

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10/26/17

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

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

CHAIN-OF-CUSTODY / Analytical Request Document

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Pace Analytical™ www.pacelabs.com

Same as Section C

Page: 2 of 2

Section A Required Client Information:

Company:	Environ
Address:	~~7500 College Blvd., Ste. 925~~
	~~Overland Park, KS 66210~~
Email To:	
Phone:	~~913-553-5926~~ Fax:
Requested Due Date/TAT:	STD

Section B Required Project Information:

Report To:	Tamara House-Knight
Copy To:	
Purchase Order No.:	NA
Project Name:	Fort Smith, AR
Project Number:	

Section C Invoice Information:

Attention:	Tamara House-Knight
Company Name:	Environ
Address:	124 W. Capitol Avenue
Pace Quote Reference:	Little Rock, AR 72201
Pace Project Manager:	Colleen Clyne
Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH + Zn Acetate	$Na_2S_2O_3$	Methanol	Other Ascorbic Acid	8260 VOCs	Sulfide	TOC	Sulfate	Nitrate, nitrite, unpres	6010-Iron	Ferric Iron calc. (send field Ferrous)				Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 6025 6590
1	MW-87-201710	W	G			10/26/17	0932		7	X	X	X	X	X				✓	✓	✓	✓	✓	✓		3D69H		BB3U		AG3S20 BP3N20 BP3Z... 011
2	MW-19-201710	W	G			10/26/17	0910		3								X	X							→ 30THR				7 day hold 012
3	EB-05-201710	W	G			10/26/17	1230		3				X					X							↓				013
4	MW-80-201710	W	G			10/26/17	1120		7	X	X	X	X	X				X	X	X	X	X	X		↓		↓		↓ ↓ ↓ 014
5	FD																												
6																													
7																													
8																													
9																													
10																													
11																													
12																													

JS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Victoria Siegle / REH	10/26/17	1330	[signature] PASI	10/27	0305	2.4	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Victoria Sieglen

SIGNATURE of SAMPLER: Victoria Siegle

DATE Signed (MM/DD/YY): 10/26/17

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

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

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Client:	Tamara R. House-Knight Ramboll Environ 124 W. Capitol Avenue Suite 1605 Little Rock, AR 72201	**Phone:** **Fax:**	501-907-9437

Identifier: 060OJ **Date Rec:** 10/24/2017 **Report Date:** 11/01/2017

Client Project #: 34375005 **Client Project Name:** Whirlpool Fort Smith

Purchase Order #:

Analysis Requested: CENSUS

Reviewed By:

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Ramboll Environ**
Project: Whirlpool Fort Smith

MI Project Number: **060OJ**
Date Received: 10/24/2017

Sample Information

Client Sample ID:		**TMW-11-201710**	**MW-50-201710**	**MW-61R-201710**	**TMW-10-201710**	**RW-69-201710**
Sample Date:		10/23/2017	10/23/2017	10/23/2017	10/24/2017	10/24/2017
Units:		cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Analyst/Reviewer:		JS	JS	JS	JS	JS
Dechlorinating Bacteria						
Dehalococcoides	*DHC*	**1.00E+02**	<1.00E+00	<1.10E+00	**5.55E+02**	**7.00E-01**
tceA Reductase	TCE	**3.96E+02**	<1.00E+00	<1.10E+00	**5.37E+02**	<5.00E-01
BAV1 Vinyl Chloride Reductase	BVC	<1.00E+00	<1.00E+00	<1.10E+00	<6.00E-01	<5.00E-01
Vinyl Chloride Reductase	VCR	**2.63E+02**	<1.00E+00	<1.10E+00	**7.86E+02**	**1.00E-01 (J)**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Ramboll Environ**
Project: Whirlpool Fort Smith

MI Project Number: **060OJ**
Date Received: 10/24/2017

Sample Information

Client Sample ID:		**IW-73-201710**	**MW-58R-201710**	**ITMW-9-201710**	**MW-95-201710**	**MW-87-201710**
Sample Date:		10/24/2017	10/24/2017	10/25/2017	10/26/2017	10/26/2017
Units:		cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Analyst/Reviewer:		JS	JS	JS	JS	JS
Dechlorinating Bacteria						
Dehalococcoides	*DHC*	**2.30E+00**	<5.00E-01	<7.00E-01	<5.00E-01	<5.00E-01
tceA Reductase	TCE	<1.00E+00	<5.00E-01	<7.00E-01	<5.00E-01	<5.00E-01
BAV1 Vinyl Chloride Reductase	BVC	<1.00E+00	<5.00E-01	<7.00E-01	<5.00E-01	<5.00E-01
Vinyl Chloride Reductase	VCR	<1.00E+00	<5.00E-01	<7.00E-01	<5.00E-01	<5.00E-01

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Ramboll Environ**
Project: Whirlpool Fort Smith

MI Project Number: **060OJ**
Date Received: 10/24/2017

Sample Information

Client Sample ID:		**MW-89-201710**	**MW-25-201710**	**MW-38-201710**	**MW-86-201710**
Sample Date:		10/26/2017	10/26/2017	10/26/2017	10/26/2017
Units:		cells/mL	cells/mL	cells/mL	cells/mL
Analyst/Reviewer:		JS	JS	JS	JS
Dechlorinating Bacteria					
Dehalococcoides	*DHC*	<5.00E-01	<8.00E-01	**4.79E+01**	<5.00E-01
tceA Reductase	TCE	<5.00E-01	<8.00E-01	<5.00E-01	<5.00E-01
BAV1 Vinyl Chloride Reductase	BVC	<5.00E-01	<8.00E-01	**1.92E+02**	<5.00E-01
Vinyl Chloride Reductase	VCR	<5.00E-01	<8.00E-01	<5.00E-01	<5.00E-01

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

Quality Assurance/Quality Control Data

Samples Received **10/24/2017**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	10/24/2017	11/01/2017	3 °C	88%	non-detect	non-detect
BVC	10/24/2017	11/01/2017	3 °C	103%	non-detect	non-detect
TCE	10/24/2017	11/01/2017	3 °C	102%	non-detect	non-detect
VCR	10/24/2017	11/01/2017	3 °C	102%	non-detect	non-detect

Samples Received **10/25/2017**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	10/25/2017	11/01/2017	1 °C	101%	non-detect	non-detect
BVC	10/25/2017	11/01/2017	1 °C	107%	non-detect	non-detect
TCE	10/25/2017	11/01/2017	1 °C	103%	non-detect	non-detect
VCR	10/25/2017	11/01/2017	1 °C	108%	non-detect	non-detect

Samples Received **10/27/2017**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	10/27/2017	11/01/2017	0 °C	100%	non-detect	non-detect
BVC	10/27/2017	11/01/2017	0 °C	111%	non-detect	non-detect
TCE	10/27/2017	11/01/2017	0 °C	106%	non-detect	non-detect
VCR	10/27/2017	11/01/2017	0 °C	109%	non-detect	non-detect
DHC	10/27/2017	11/01/2017	3 °C	100%	non-detect	non-detect
BVC	10/27/2017	11/01/2017	3 °C	111%	non-detect	non-detect
TCE	10/27/2017	11/01/2017	3 °C	106%	non-detect	non-detect
VCR	10/27/2017	11/01/2017	3 °C	109%	non-detect	non-detect

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

LABORATORY REPORT

November 10, 2017

Tamara House-Knight
Ramboll Environ US Corporation
124 W. Capitol Avenue, Suite 1605
Little Rock, AR 72201

RE: Ft Smith Ark / 34375005

Dear Tamara:

Enclosed are the results of the sample submitted to our laboratory on October 27, 2017. For your reference, this analysis has been assigned our service request number P1705345.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Sue Anderson at 4:31 pm, Nov 10, 2017
For Kelly Horiuchi
Laboratory Director

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

Client: Ramboll Environ US Corporation
Project: Ft Smith Ark / 34375005

Service Request No: P1705345

CASE NARRATIVE

The sample was received intact under chain of custody on October 27, 2017 and was stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the sample at the time of sample receipt.

Volatile Organic Compound Analysis

The sample was analyzed in SIM mode for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The response for the third internal standard in sample P1705345-001 was outside control criteria; however, since this compound is not associated with the target analytes included in this report the results were not affected. No corrective action was appropriate.

The surrogate bromofluorobenzene was outside control criteria in the sample; however, the results were not affected as this compound is not associated with the target analytes included in this report. No corrective action was appropriate.

The container was cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2016036
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1177034
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-004
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-17-8
Utah DOH (NELAP)	http://health.utah.gov/lab/environmental-lab-certification/	CA016272017-8
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: Ramboll Environ US Corporation Service Request: P1705345
Project ID: Ft Smith Ark / 34375005

Date Received: 10/27/2017
Time Received: 09:40

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC SIM
VP-09-201710	P1705345-001	Air	10/25/2017	17:05	AS01247	-2.51	3.45	X

Air - Chain of Custody Record & Analytical Service Request

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10-Day-Standard

ALS Project No. 1705345

Company Name & Address (Reporting Information)
Ramboll Environ
1807 Park 270 Dr. Suite 450
St. Louis, MO 63146

Project Name: Ft Smith Ark
Project Number: 34375005
P.O. # / Billing Information: 34375005

Project Manager: Tamara House-Knight
Phone: 501-907-9437
Fax:
Email Address for Result Reporting: THouseKnight@ramboll.com
Sampler (Print & Sign): Nick Zurweller

ALS Contact:

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	Analysis Method: TO-15 SIM		Comments e.g. Actual Preservative or specific instructions
VP-09-201710	AS01247	10/25/17	1705	AS01247	FCA00916	-30	-6	6L			

Report Tier Levels - please select
Tier I - Results (Default in not specified) X
Tier II (Results + QC Summaries) ____
Tier III (Results + QC & Calibration Summaries) ____
Tier IV (Date Validation Package) 10% Surcharge ____

EDD required YES / No
Type: ____ Units: ____

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	10/26/17	1345			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
				10-27-17	0940

Cooler / Blank Temperature ____ °C

ALS Environmental

Sample Acceptance Check Form

Client: Ramboll Environ US Corporation Work order: P1705345

Project: Ft Smith Ark / 34375005

Sample(s) received on: 10/27/17 Date opened: 10/27/17 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1705345-001.01	6.0 L Silonite Can					

Explain any discrepancies: (include lab sample ID numbers): _____

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **VP-09-201710** ALS Project ID: P1705345
Client Project ID: **Ft Smith Ark / 34375005** ALS Sample ID: P1705345-001

Test Code: EPA TO-15 SIM Date Collected: 10/25/17
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 10/27/17
Analyst: Cory Lewis Date Analyzed: 11/1/17 & 11/10/17
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.025 Liter(s)
Container ID: AS01247

Initial Pressure (psig): -2.51 Final Pressure (psig): 3.45

Container Dilution Factor: 1.49

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	**0.46**	0.037	**0.18**	0.015	
75-35-4	1,1-Dichloroethene	**0.19**	0.037	**0.047**	0.0094	
156-60-5	trans-1,2-Dichloroethene	**0.59**	0.037	**0.15**	0.0094	
75-34-3	1,1-Dichloroethane	**0.31**	0.037	**0.078**	0.0092	
156-59-2	cis-1,2-Dichloroethene	**0.16**	0.037	**0.039**	0.0094	
107-06-2	1,2-Dichloroethane	**0.28**	0.037	**0.070**	0.0092	
71-55-6	1,1,1-Trichloroethane	ND	0.037	ND	0.0068	
79-01-6	Trichloroethene	**400**	1.5	**74**	0.28	**D**
127-18-4	Tetrachloroethene	**0.28**	0.037	**0.041**	0.0055	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
D = The reported result is from a dilution.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **Method Blank** ALS Project ID: P1705345
Client Project ID: **Ft Smith Ark / 34375005** ALS Sample ID: P171101-MB

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Cory Lewis Date Analyzed: 11/1/17
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.025	ND	0.0098	
75-35-4	1,1-Dichloroethene	ND	0.025	ND	0.0063	
156-60-5	trans-1,2-Dichloroethene	ND	0.025	ND	0.0063	
75-34-3	1,1-Dichloroethane	ND	0.025	ND	0.0062	
156-59-2	cis-1,2-Dichloroethene	ND	0.025	ND	0.0063	
107-06-2	1,2-Dichloroethane	ND	0.025	ND	0.0062	
71-55-6	1,1,1-Trichloroethane	ND	0.025	ND	0.0046	
79-01-6	Trichloroethene	ND	0.025	ND	0.0047	
127-18-4	Tetrachloroethene	ND	0.025	ND	0.0037	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Ramboll Environ US Corporation**
Client Sample ID: **Method Blank** ALS Project ID: P1705345
Client Project ID: **Ft Smith Ark / 34375005** ALS Sample ID: P171110-MB

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Cory Lewis Date Analyzed: 11/10/17
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.025	ND	0.0098	
75-35-4	1,1-Dichloroethene	ND	0.025	ND	0.0063	
156-60-5	trans-1,2-Dichloroethene	ND	0.025	ND	0.0063	
75-34-3	1,1-Dichloroethane	ND	0.025	ND	0.0062	
156-59-2	cis-1,2-Dichloroethene	ND	0.025	ND	0.0063	
107-06-2	1,2-Dichloroethane	ND	0.025	ND	0.0062	
71-55-6	1,1,1-Trichloroethane	ND	0.025	ND	0.0046	
79-01-6	Trichloroethene	ND	0.025	ND	0.0047	
127-18-4	Tetrachloroethene	ND	0.025	ND	0.0037	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **Ramboll Environ US Corporation**
Client Project ID: **Ft Smith Ark / 34375005** ALS Project ID: P1705345

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date(s) Collected: 10/25/17
Analyst: Cory Lewis Date(s) Received: 10/27/17
Sample Type: 6.0 L Summa Canister(s) Date(s) Analyzed: 11/1 - 11/10/17
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 % Recovered	Toluene-d8 % Recovered	Bromofluorobenzene % Recovered	Acceptance Limits	Data Qualifier
Method Blank	P171101-MB	**112**	**102**	**85**	70-130	
Method Blank	P171110-MB	**96**	**99**	**107**	70-130	
Lab Control Sample	P171101-LCS	**113**	**101**	**89**	70-130	
Lab Control Sample	P171110-LCS	**99**	**97**	**110**	70-130	
VP-09-201710	P1705345-001	**95**	**105**	**61**	70-130	**S**

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.
S = Surrogate recovery not within specified limits.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Ramboll Environ US Corporation**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1705345
Client Project ID: **Ft Smith Ark / 34375005** ALS Sample ID: P171101-LCS

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Cory Lewis Date Analyzed: 11/1/17
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-01-4	Vinyl Chloride	4.22	**4.63**	**110**	58-117	
75-35-4	1,1-Dichloroethene	4.27	**4.23**	**99**	74-107	
156-60-5	trans-1,2-Dichloroethene	4.27	**4.20**	**98**	72-107	
75-34-3	1,1-Dichloroethane	4.24	**4.40**	**104**	70-110	
156-59-2	cis-1,2-Dichloroethene	4.24	**4.07**	**96**	73-108	
107-06-2	1,2-Dichloroethane	4.24	**4.34**	**102**	67-111	
71-55-6	1,1,1-Trichloroethane	4.24	**4.03**	**95**	70-108	
79-01-6	Trichloroethene	4.25	**3.67**	**86**	66-101	
127-18-4	Tetrachloroethene	4.24	**3.54**	**83**	66-105	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Ramboll Environ US Corporation**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1705345
Client Project ID: **Ft Smith Ark / 34375005** ALS Sample ID: P171110-LCS

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Cory Lewis Date Analyzed: 11/10/17
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-01-4	Vinyl Chloride	4.22	**3.59**	**85**	58-117	
75-35-4	1,1-Dichloroethene	4.27	**3.72**	**87**	74-107	
156-60-5	trans-1,2-Dichloroethene	4.27	**3.63**	**85**	72-107	
75-34-3	1,1-Dichloroethane	4.24	**3.53**	**83**	70-110	
156-59-2	cis-1,2-Dichloroethene	4.24	**3.54**	**83**	73-108	
107-06-2	1,2-Dichloroethane	4.24	**3.41**	**80**	67-111	
71-55-6	1,1,1-Trichloroethane	4.24	**3.43**	**81**	70-108	
79-01-6	Trichloroethene	4.25	**3.49**	**82**	66-101	
127-18-4	Tetrachloroethene	4.24	**3.49**	**82**	66-105	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Pace Analytical Energy Services LLC
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November 6, 2017

Victoria Sieglen
Ramboll Environmental
7500 College Blvd.
Suite 925
Overland Park, KS 66210

RE: **FORT SMITH, AR / 3437500S**

Pace Workorder: 24430

Dear Victoria Sieglen:

Enclosed are the analytical results for sample(s) received by the laboratory on Friday, October 27, 2017. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Ruth Welsh 11/06/2017
Ruth.Welsh@pacelabs.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.
Please email PAESfeedback@pacelabs.com.

Total Number of Pages 40

CERTIFICATE OF ANALYSIS

Pace Analytical Energy Services LLC
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LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water
Accreditor:	West Virginia Department of Environmental Protection, Division of Water and Waste Management
Accreditation ID:	395
Scope:	Non-Potable Water
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	State of Virginia
Accreditation ID:	460201
Scope:	Non-Potable Water
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, PAES is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).

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SAMPLE SUMMARY

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID	Sample ID	Matrix	Date Collected	Date Received
244300001	MW-87-201710	Bubble Strip	10/26/2017 09:32	10/27/2017 08:00
244300002	MW-38-201710	Bubble Strip	10/26/2017 10:49	10/27/2017 08:00
244300003	MW-89-201710	Bubble Strip	10/26/2017 08:42	10/27/2017 08:00
244300004	MW-25-201710	Bubble Strip	10/26/2017 09:10	10/27/2017 08:00
244300005	ITMW-9-201710	Bubble Strip	10/25/2017 09:05	10/27/2017 08:00
244300006	TMW-10-201710	Bubble Strip	10/24/2017 14:50	10/27/2017 08:00
244300007	IW-73-201710	Bubble Strip	10/24/2017 11:25	10/27/2017 08:00
244300008	MW-61R-201710	Bubble Strip	10/23/2017 16:52	10/27/2017 08:00
244300009	RW-69-201710	Bubble Strip	10/24/2017 09:40	10/27/2017 08:00
244300010	TMW-11-201710	Bubble Strip	10/23/2017 14:00	10/27/2017 08:00
244300011	MW-50-201710	Bubble Strip	10/23/2017 17:10	10/27/2017 08:00
244300012	MW-95-201710	Bubble Strip	10/26/2017 10:20	10/27/2017 08:00
244300013	MW-58R-201710	Bubble Strip	10/24/2017 12:20	10/27/2017 08:00
244300014	MW-86-201710	Bubble Strip	10/26/2017 11:20	10/27/2017 08:00
244300015	MW-87-201710	Water	10/26/2017 09:32	10/27/2017 08:00
244300016	MW-38-201710	Water	10/26/2017 10:49	10/27/2017 08:00
244300017	MW-89-201710	Water	10/26/2017 08:42	10/27/2017 08:00
244300018	MW-25-201710	Water	10/26/2017 09:10	10/27/2017 08:00
244300019	ITMW-9-201710	Water	10/25/2017 09:05	10/27/2017 08:00
244300020	TMW-10-201710	Water	10/24/2017 14:50	10/27/2017 08:00
244300021	IW-73-201710	Water	10/24/2017 11:25	10/27/2017 08:00
244300022	MW-61R-201710	Water	10/23/2017 16:52	10/27/2017 08:00
244300023	RW-69-201710	Water	10/24/2017 09:40	10/27/2017 08:00
244300024	TMW-11-201710	Water	10/23/2017 14:00	10/27/2017 08:00
244300025	MW-50-201710	Water	10/23/2017 17:10	10/27/2017 08:00
244300026	MW-95-201710	Water	10/26/2017 10:20	10/27/2017 08:00
244300027	MW-58R-201710	Water	10/24/2017 12:20	10/27/2017 08:00
244300028	MW-86-201710	Water	10/26/2017 11:20	10/27/2017 08:00

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300001** Date Received: 10/27/2017 08:00 Matrix: Bubble Strip

Sample ID: **MW-87-201710** Date Collected: 10/26/2017 09:32

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Hydrogen	**1.4**	nM	0.60	0.16	1	11/1/2017 07:02	TD	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300002** Date Received: 10/27/2017 08:00 Matrix: Bubble Strip

Sample ID: **MW-38-201710** Date Collected: 10/26/2017 10:49

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Hydrogen	**1.4**	nM	0.60	0.16	1	11/1/2017 07:15	TD	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300003** Date Received: 10/27/2017 08:00 Matrix: Bubble Strip

Sample ID: **MW-89-201710** Date Collected: 10/26/2017 08:42

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Hydrogen	**2.1**	nM	0.60	0.16	1	11/1/2017 07:27	TD	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300004** Date Received: 10/27/2017 08:00 Matrix: Bubble Strip

Sample ID: **MW-25-201710** Date Collected: 10/26/2017 09:10

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Hydrogen	**83**	nM	4.8	1.3	8	11/1/2017 08:09	TD	d,n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300005** Date Received: 10/27/2017 08:00 Matrix: Bubble Strip

Sample ID: **ITMW-9-201710** Date Collected: 10/25/2017 09:05

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Hydrogen	**1.6**	nM	0.60	0.16	1	11/1/2017 08:25	TD	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300006** Date Received: 10/27/2017 08:00 Matrix: Bubble Strip

Sample ID: **TMW-10-201710** Date Collected: 10/24/2017 14:50

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Hydrogen	**1.9**	nM	0.60	0.16	1	11/1/2017 08:37	TD	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300007** Date Received: 10/27/2017 08:00 Matrix: Bubble Strip

Sample ID: **IW-73-201710** Date Collected: 10/24/2017 11:25

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Hydrogen	**1.5**	nM	0.60	0.16	1	11/1/2017 08:51	TD	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300008** Date Received: 10/27/2017 08:00 Matrix: Bubble Strip

Sample ID: **MW-61R-201710** Date Collected: 10/23/2017 16:52

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Hydrogen	**1.3**	nM	0.60	0.16	1	11/1/2017 09:04	TD	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300009** Date Received: 10/27/2017 08:00 Matrix: Bubble Strip

Sample ID: **RW-69-201710** Date Collected: 10/24/2017 09:40

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Hydrogen	**1.7**	nM	0.60	0.16	1	11/1/2017 09:17	TD	n

CERTIFICATE OF ANALYSIS

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300010** Date Received: 10/27/2017 08:00 Matrix: Bubble Strip

Sample ID: **TMW-11-201710** Date Collected: 10/23/2017 14:00

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Hydrogen	**1.7**	nM	0.60	0.16	1	11/1/2017 09:29	TD	n

CERTIFICATE OF ANALYSIS

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300011** Date Received: 10/27/2017 08:00 Matrix: Bubble Strip

Sample ID: **MW-50-201710** Date Collected: 10/23/2017 17:10

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Hydrogen	**1.4**	nM	0.60	0.16	1	11/1/2017 09:42	TD	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300012** Date Received: 10/27/2017 08:00 Matrix: Bubble Strip

Sample ID: **MW-95-201710** Date Collected: 10/26/2017 10:20

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Hydrogen	**1.7**	nM	0.60	0.16	1	11/1/2017 09:54	TD	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300013** Date Received: 10/27/2017 08:00 Matrix: Bubble Strip

Sample ID: **MW-58R-201710** Date Collected: 10/24/2017 12:20

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Hydrogen	**1.3**	nM	0.60	0.16	1	11/1/2017 10:07	TD	n

CERTIFICATE OF ANALYSIS

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300014** Date Received: 10/27/2017 08:00 Matrix: Bubble Strip

Sample ID: **MW-86-201710** Date Collected: 10/26/2017 11:20

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Hydrogen	**200**	nM	4.8	1.3	8	11/1/2017 10:32	TD	d,n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300015** Date Received: 10/27/2017 08:00 Matrix: Water

Sample ID: **MW-87-201710** Date Collected: 10/26/2017 09:32

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**1.1**	ug/l	0.50	0.020	1	11/2/2017 15:02	BW	n
Ethane	**<0.10**	ug/l	0.10	0.0070	1	11/2/2017 15:02	BW	n
Ethene	**0.10**	ug/l	0.10	0.0050	1	11/2/2017 15:02	BW	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300016** Date Received: 10/27/2017 08:00 Matrix: Water

Sample ID: **MW-38-201710** Date Collected: 10/26/2017 10:49

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**26**	ug/l	0.50	0.020	1	11/2/2017 15:12	BW	n
Ethane	**0.69**	ug/l	0.10	0.0070	1	11/2/2017 15:12	BW	n
Ethene	**22**	ug/l	0.10	0.0050	1	11/2/2017 15:12	BW	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300017** Date Received: 10/27/2017 08:00 Matrix: Water

Sample ID: **MW-89-201710** Date Collected: 10/26/2017 08:42

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**5.4**	ug/l	0.50	0.020	1	11/2/2017 15:26	BW	n
Ethane	**<0.10**	ug/l	0.10	0.0070	1	11/2/2017 15:26	BW	n
Ethene	**0.66**	ug/l	0.10	0.0050	1	11/2/2017 15:26	BW	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300018** Date Received: 10/27/2017 08:00 Matrix: Water

Sample ID: **MW-25-201710** Date Collected: 10/26/2017 09:10

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**86**	ug/l	0.50	0.020	1	11/2/2017 15:37	BW	n
Ethane	**18**	ug/l	0.10	0.0070	1	11/2/2017 15:37	BW	n
Ethene	**2.1**	ug/l	0.10	0.0050	1	11/2/2017 15:37	BW	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300019** Date Received: 10/27/2017 08:00 Matrix: Water

Sample ID: **ITMW-9-201710** Date Collected: 10/25/2017 09:05

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**29**	ug/l	0.50	0.020	1	11/2/2017 16:28	BW	n
Ethane	**0.12**	ug/l	0.10	0.0070	1	11/2/2017 16:28	BW	n
Ethene	**<0.10**	ug/l	0.10	0.0050	1	11/2/2017 16:28	BW	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300020** Date Received: 10/27/2017 08:00 Matrix: Water

Sample ID: **TMW-10-201710** Date Collected: 10/24/2017 14:50

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**410**	ug/l	0.50	0.020	1	11/2/2017 16:39	BW	n
Ethane	**<0.10**	ug/l	0.10	0.0070	1	11/2/2017 16:39	BW	n
Ethene	**0.54**	ug/l	0.10	0.0050	1	11/2/2017 16:39	BW	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300021** Date Received: 10/27/2017 08:00 Matrix: Water

Sample ID: **IW-73-201710** Date Collected: 10/24/2017 11:25

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**5.2**	ug/l	0.50	0.020	1	11/2/2017 16:49	BW	n
Ethane	**<0.10**	ug/l	0.10	0.0070	1	11/2/2017 16:49	BW	n
Ethene	**<0.10**	ug/l	0.10	0.0050	1	11/2/2017 16:49	BW	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300022** Date Received: 10/27/2017 08:00 Matrix: Water

Sample ID: **MW-61R-201710** Date Collected: 10/23/2017 16:52

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**14000**	ug/l	0.50	0.020	1	11/2/2017 17:00	BW	n
Ethane	**0.71**	ug/l	0.10	0.0070	1	11/2/2017 17:00	BW	n
Ethene	**0.16**	ug/l	0.10	0.0050	1	11/2/2017 17:00	BW	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300023** Date Received: 10/27/2017 08:00 Matrix: Water

Sample ID: **RW-69-201710** Date Collected: 10/24/2017 09:40

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**21**	ug/l	0.50	0.020	1	11/3/2017 08:08	BW	n
Ethane	**<0.10**	ug/l	0.10	0.0070	1	11/3/2017 08:08	BW	n
Ethene	**0.27**	ug/l	0.10	0.0050	1	11/3/2017 08:08	BW	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300024** Date Received: 10/27/2017 08:00 Matrix: Water

Sample ID: **TMW-11-201710** Date Collected: 10/23/2017 14:00

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**16000**	ug/l	0.50	0.020	1	11/3/2017 08:18	BW	n
Ethane	**0.48**	ug/l	0.10	0.0070	1	11/3/2017 08:18	BW	n
Ethene	**1.4**	ug/l	0.10	0.0050	1	11/3/2017 08:18	BW	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300025** Date Received: 10/27/2017 08:00 Matrix: Water

Sample ID: **MW-50-201710** Date Collected: 10/23/2017 17:10

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**660**	ug/l	0.50	0.020	1	11/3/2017 08:27	BW	n
Ethane	**0.39**	ug/l	0.10	0.0070	1	11/3/2017 08:27	BW	n
Ethene	**<0.10**	ug/l	0.10	0.0050	1	11/3/2017 08:27	BW	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300026** Date Received: 10/27/2017 08:00 Matrix: Water

Sample ID: **MW-95-201710** Date Collected: 10/26/2017 10:20

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**4.6**	ug/l	0.50	0.020	1	11/3/2017 08:37	BW	n
Ethane	**0.50**	ug/l	0.10	0.0070	1	11/3/2017 08:37	BW	n
Ethene	**0.25**	ug/l	0.10	0.0050	1	11/3/2017 08:37	BW	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300027** Date Received: 10/27/2017 08:00 Matrix: Water

Sample ID: **MW-58R-201710** Date Collected: 10/24/2017 12:20

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**34**	ug/l	0.50	0.020	1	11/3/2017 08:47	BW	n
Ethane	**<0.10**	ug/l	0.10	0.0070	1	11/3/2017 08:47	BW	n
Ethene	**0.44**	ug/l	0.10	0.0050	1	11/3/2017 08:47	BW	n

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ANALYTICAL RESULTS

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID: **244300028** Date Received: 10/27/2017 08:00 Matrix: Water

Sample ID: **MW-86-201710** Date Collected: 10/26/2017 11:20

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**50**	ug/l	0.50	0.020	1	11/3/2017 08:56	BW	n
Ethane	**4.9**	ug/l	0.10	0.0070	1	11/3/2017 08:56	BW	n
Ethene	**0.82**	ug/l	0.10	0.0050	1	11/3/2017 08:56	BW	n

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ANALYTICAL RESULTS QUALIFIERS

Workorder: 24430 FORT SMITH, AR / 3437500S

DEFINITIONS/QUALIFIERS

MDL	Method Detection Limit. Can be used synonymously with LOD; Limit Of Detection.
PQL	Practical Quanitation Limit. Can be used synonymously with LOQ; Limit Of Quantitation.
ND	Not detected at or above reporting limit.
DF	Dilution Factor.
S	Surrogate.
RPD	Relative Percent Difference.
% Rec	Percent Recovery.
U	Indicates the compound was analyzed for, but not detected at or above the noted concentration.
J	Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL).
n	The laboratory does not hold NELAP/TNI accreditation for this method or analyte.
d	The analyte concentration was determined from a dilution.

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QUALITY CONTROL DATA

Workorder: 24430 FORT SMITH, AR / 3437500S

QC Batch: DISG/6468 Analysis Method: AM20GAX

QC Batch Method: AM20GAX

Associated Lab Samples: 244300001, 244300002, 244300003, 244300004, 244300005, 244300006, 244300007, 244300008, 244300009, 244300010, 244300011, 244300012, 244300013, 244300014

METHOD BLANK: 51981

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Hydrogen	nM	<0.60	0.60	n

LABORATORY CONTROL SAMPLE & LCSD: 51982 51983

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Hydrogen	nM	24	23	23	95	95	80-120	0	20	n

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QUALITY CONTROL DATA

Workorder: 24430 FORT SMITH, AR / 3437500S

QC Batch: DISG/6470 Analysis Method: AM20GAX

QC Batch Method: AM20GAX

Associated Lab Samples: 244300015, 244300016, 244300017, 244300018, 244300019, 244300020, 244300021, 244300022

METHOD BLANK: 52005

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Methane	ug/l	<0.50	0.50	n
Ethane	ug/l	<0.10	0.10	n
Ethene	ug/l	<0.10	0.10	n

LABORATORY CONTROL SAMPLE & LCSD: 52006 52007

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Methane	ug/l	750	730	760	98	101	80-120	3	20	n
Ethane	ug/l	38	40	41	104	107	80-120	2.8	20	n
Ethene	ug/l	35	37	38	104	107	80-120	2.8	20	n

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QUALITY CONTROL DATA

Workorder: 24430 FORT SMITH, AR / 3437500S

QC Batch: DISG/6471 Analysis Method: AM20GAX

QC Batch Method: AM20GAX

Associated Lab Samples: 244300023, 244300024, 244300025, 244300026, 244300027, 244300028

METHOD BLANK: 52008

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Methane	ug/l	<0.50	0.50	n
Ethane	ug/l	<0.10	0.10	n
Ethene	ug/l	<0.10	0.10	n

LABORATORY CONTROL SAMPLE & LCSD: 52010 52012

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Methane	ug/l	750	720	690	96	92	80-120	4.3	20	n
Ethane	ug/l	38	40	38	104	101	80-120	2.9	20	n
Ethene	ug/l	35	37	35	104	100	80-120	3.9	20	n

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QUALITY CONTROL DATA QUALIFIERS

Workorder: 24430 FORT SMITH, AR / 3437500S

QUALITY CONTROL PARAMETER QUALIFIERS

n	The laboratory does not hold NELAP/TNI accreditation for this method or analyte.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 24430 FORT SMITH, AR / 3437500S

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
244300001	MW-87-201710			AM20GAX	DISG/6468
244300002	MW-38-201710			AM20GAX	DISG/6468
244300003	MW-89-201710			AM20GAX	DISG/6468
244300004	MW-25-201710			AM20GAX	DISG/6468
244300005	ITMW-9-201710			AM20GAX	DISG/6468
244300006	TMW-10-201710			AM20GAX	DISG/6468
244300007	IW-73-201710			AM20GAX	DISG/6468
244300008	MW-61R-201710			AM20GAX	DISG/6468
244300009	RW-69-201710			AM20GAX	DISG/6468
244300010	TMW-11-201710			AM20GAX	DISG/6468
244300011	MW-50-201710			AM20GAX	DISG/6468
244300012	MW-95-201710			AM20GAX	DISG/6468
244300013	MW-58R-201710			AM20GAX	DISG/6468
244300014	MW-86-201710			AM20GAX	DISG/6468
244300015	MW-87-201710			AM20GAX	DISG/6470
244300016	MW-38-201710			AM20GAX	DISG/6470
244300017	MW-89-201710			AM20GAX	DISG/6470
244300018	MW-25-201710			AM20GAX	DISG/6470
244300019	ITMW-9-201710			AM20GAX	DISG/6470
244300020	TMW-10-201710			AM20GAX	DISG/6470
244300021	IW-73-201710			AM20GAX	DISG/6470
244300022	MW-61R-201710			AM20GAX	DISG/6470
244300023	RW-69-201710			AM20GAX	DISG/6471
244300024	TMW-11-201710			AM20GAX	DISG/6471
244300025	MW-50-201710			AM20GAX	DISG/6471
244300026	MW-95-201710			AM20GAX	DISG/6471
244300027	MW-58R-201710			AM20GAX	DISG/6471
244300028	MW-86-201710			AM20GAX	DISG/6471

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CHAIN-OF-CUSTODY / Analytical Request Document

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Section A
Required Client Information:

Company:	~~Environ~~ Ramboll
Address:	7500 College Blvd., Ste. 925
	Overland Park, KS 66210
Email To:	~~wstonestreet@environcorp.com~~ vsiegler@ramboll.com
Phone:	~~913-553-5926~~ (316)-847-1223
Fax:	—
Requested Due Date/TAT:	

Section B
Required Project Information:

Report To:	~~Wendy Stonestreet~~ Victoria Siegler
Copy To:	thouseknight@ramboll.com nzurweller@ramboll.com
Purchase Order No.:	
Project Name:	Fort Smith, AR
Project Number:	34375005

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	~~Colleen Clyne~~ K-clyne
Pace Profile #:	~~7444, line 1~~ 7444, line 1 -

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Section D
Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved +1 (Ar)	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other (TSP) +2(Ar)	Analysis Test	AM20 GAX Hydrogen (1)	AM 21 GAX Volatile Fatty Acids	AM 20 GAX Methane, Ethane, Ethene (2)	AM 20 GAX Acetylene	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-87-201710	~~WT~~/AR	G	10/26/17	0932				3	X							X		X		X			
2	MW-38-201710	~~WT~~/AR	G	10/26/17	1049				3	X							X		X		X			
3	MW-89-201710	~~WT~~/AR	G	10/26/17	0842				3	X							X		X		X			
4	MW-25-201710	~~WT~~/AR	G	10/26/17	0910				3	X							X		X		X			
5	ITMW-9-201710	~~WT~~/AR	G	10/25/17	0905				3	X							X		X		X			
6	TMW-10-201710	~~WT~~/AR	G	10/24/17	1450				3	X							X		X		X			
7	IW-73-201710	~~WT~~/AR	G	10/24/17	1125				3	X							X		X		X			
8	MW-61R-201710	~~WT~~/AR	G	10/23/17	1652				3	X							X		X		X			
9	RW-19-201710	~~WT~~/AR	G	10/24/17	0940				3	X							X		X		X			
10	TMW-11-201710	~~WT~~/AR	G	10/23/17	1400				3	X							X		X		X			
11	MW-50-201710	~~WT~~/AR	G	10/23/17	1710				3	X							X		X		X			
12	MW-95-201710	~~WT~~/AR	G	10/26/17	1020				3	X							X		X		X			

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
~~Level IV data package required~~	Jo Pavlowsky / Ramboll	10/26/17	1330	Lee PAS	10.27	0800	1	Y	Y	
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Johanna Pavlowsky

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 10/26/17

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

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 2 of 2

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Environ	Report To: ~~Wendy Stonestreet~~ Victoria Siegler		Attention:	
Address:	7500 College Blvd., Ste. 925	Copy To:	thorseknight@ramboll.com nzmueller@ramboll.com	Company Name:	
	Overland Park, KS 66210			Address:	
Email To:	wstonestreet@environcorp.com vsiegler@ramboll.com	Purchase Order No.:		Pace Quote Reference:	
Phone:	~~913-553-5926~~ (314)-881-1223	Project Name:	Fort Smith, AR	Pace Project Manager:	Colleen Clyne
Requested Due Date/TAT:		Project Number:	343-75001	Pace Profile #:	7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information: SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	Valid Matrix Codes: MATRIX / CODE (DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved (x1)	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other TSP (x2)	Analysis Test Y/N	AM20 GAX Hydrogen	AM 21 GAX Volatile Fatty Acids	AM 20 GAX Methane,Ehtane,Ethene	AM 20 GAX Acetylene	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-58R-20170	WT	AR	G	10/24/17	1220				3	X							X			X		X			
2	MW-86-20170	WT	AR	G	10/26/17	1120				3	X							X			X		X			
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12																										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Level IV data package required	Johanna Pawlowsky/Ramboll	10-26-17	1330	Lee PAS	10/27	0800	1	Y	Y	

SAMPLER NAME AND SIGNATURE					
PRINT Name of SAMPLER:	Johanna Pawlowsky				
SIGNATURE of SAMPLER:	Johanna Pawlowsky	DATE Signed (MM/DD/YY):	10/26/17		

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

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

Cooler Receipt Form

Client Name: Ramboll Project: Fort Smith, AR Lab Work Order: 24430

A. **Shipping/Container Information** (circle appropriate response)

Courier: (FedEx) UPS USPS Client Other:_____ **Air bill Present:** (Yes) No

Tracking Number: 810708889720

Custody Seal on Cooler/Box Present: (Yes) No **Seals Intact:** (Yes) No

Cooler/Box Packing Material: Bubble Wrap Absorbent Foam Other:_____

Type of Ice: (Wet) Blue None **Ice Intact:** (Yes) Melted

Cooler Temperature: 1°C **Radiation Screened:** Yes (No) **Chain of Custody Present:** (Yes) No

Comments:_____

B. **Laboratory Assignment/Log-in** (check appropriate response)

	YES	NO	N/A	Comment Reference non-Conformance
Chain of Custody properly filled out	✓			
Chain of Custody relinquished	✓			
Sampler Name & Signature on COC	✓			
Containers intact	✓			
Were samples in separate bags	✓			
Sample container labels match COC Sample name/date and time collected	✓			
Sufficient volume provided	✓			
PAES containers used	✓			
Are containers properly preserved for the requested testing? (as labeled)	✓			
If an unknown preservation state, were containers checked? Exception: VOA's coliform			✓	If yes, see pH form.
Was volume for dissolved testing field filtered, as noted on the COC? Was volume received in a preserved container?			✓	
Headspace present?	✓			

Comments:_____

Cooler contents examined/received by: _____ Date: 10.27.17

Project Manager Review: _____ Date: 10/27/17

Attachment D

Data Validation Report

LEVEL II DATA VALIDATION REVIEW

2017 Annual Groundwater Monitoring Event
Whirlpool Corporation
Fort Smith, Arkansas

Laboratory Sample Delivery Groups (SDGs): 60255167, 60255260, 60255450, 60255559, 60256266, 60256365, 60256590, 60256510, 60256529, 060OJ and P1705345

Laboratory: PACE Analytical, Lenexa, Kansas; Microbial Insights, Knoxville, Tennessee; ALS, Simi Valley, California

Reviewer: Kristin Drucquer

Date Reviewed: November 17, 2017

This data validation report has been prepared by Ramboll Environ US Corporation (Ramboll Environ) to assess the validity and usability of laboratory analytical data generated from samples collected during the temporary monitoring well installation and the 2017 annual groundwater sampling event at the Whirlpool Corporation, Fort Smith, Arkansas Site (the "site") from October 10, 2017 through October 26, 2017.

The analytical data were evaluated for quality assurance and quality control (QA/QC) based on the following document: *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (OSWER 9355.0-136, EPA-540-R-2017-002, January, 2017) and *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Inorganic Methods Data Review* (OSWER 9355.0-135, EPA-540-R-2017-001, January, 2017)

This report summarizes the QA/QC evaluation of the data according to precision, accuracy, representativeness, completeness and comparability relative to the project data quality objectives. This report provides a quantitative and qualitative assessment of the data and identifies potential sources of error, uncertainty and bias that may affect the overall usability of the data.

One hundred thirteen (113) groundwater samples, one air matrix sample, eight blind groundwater field duplicates, five equipment rinsate blanks and eight trip blanks were analyzed for one or more of the following analyses:

- Volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) 8260;
- VOCs by USEPA TO-15;
- Alkalinity (bicarbonate, carbonate and total) by Standard Method (SM) 2320B;
- Ammonia by USEPA 350.1;
- Chloride and sulfate by USEPA 300.0;
- Iron and manganese by USEPA 6010;
- Nitrate, nitrite and nitrogen as nitrite and nitrate by USEPA 353.2;
- Sulfide by SM4500S2D;
- Total organic carbon (TOC) by SM5310C; and
- Dechlorinating Bacteria analysis by Microbial Insights Standard Operating Procedure.

Pace Analytical Services, LLC (Pace) located in Lenexa, Kansas analyzed all the aqueous samples; ALS in Simi Valley analyzed the air sample for VOCs by Method TO-15; Microbial Insights in Knoxville, Tennessee performed the analysis for dechlorinating bacteria.

The table below summarizes the field sample identifications, sample type, laboratory sample identification and matrix types for the data included in this data set:

FIELD ID	SAMPLE TYPE	LAB ID	MATRIX
SDG: 60255167			
TMW-20-201710	SA	60255167001	Aqueous
TMW-21-201710	SA	60255167002	Aqueous
TMW-24-201710	SA	60255167003	Aqueous
TB-01-201710	TB	60255167004	Aqueous
SDG: 60255260			
TMW-25-201710	SA	60255260001	Aqueous
TMW-26-201710	SA	60255260002	Aqueous
TMW-27-201710	SA	60255260003	Aqueous
TB-02-201710	TB	60255260004	Aqueous
SDG: 60255450			
TMW-28-201710	SA	60242910005	Aqueous
TMW-29-201710	SA	60242910006	Aqueous
TB-03-201710	TB	60242910007	Aqueous
SDG: 60255559			
TMW-22-201710	SA	60255559001	Aqueous
TMW-23-201710	SA	60255559002	Aqueous
TMW-30-201710	SA	60255559003	Aqueous
TB-04-201710	TB	60255559004	Aqueous
SDG: 60256266			
MW-63R-201710	SA	60256266001	Aqueous
MW-194-201710	SA	60256266002	Aqueous
TMW-29-201710	SA	60256266003	Aqueous
TB-03-201710	TB	60256266004	Aqueous
MW-195-201710	SA	60256266005	Aqueous
TMW-20-201710	SA	60256266006	Aqueous
FD-01-201710	FD	60256266007	Aqueous
EB-01-201710	EB	60256266008	Aqueous
TMW-11-201710	SA	60256266009	Aqueous
MW-50-201710	SA	60256266010	Aqueous
MW-61R-201710	SA	60256266011	

FIELD ID	SAMPLE TYPE	LAB ID	MATRIX
SDG: 60256365			
MW-60R-201710	SA	60256365001	Aqueous
TMW-16-201710	SA	60256365002	Aqueous
TMW-26-201710	SA	60256365003	Aqueous
MW-182-201710	SA	60256365004	Aqueous
TMW-30-201710	SA	60256365005	Aqueous
MW-68-201710	SA	60256365006	Aqueous
FD-02-201710	FD	60256365007	Aqueous
MW-57R-201710	SA	60256365008	Aqueous
MW-56R-201710	SA	60256365009	Aqueous
MW-17S-201710	SA	60256365010	Aqueous
TMW-21-201710	SA	60256365011	Aqueous
TMW-24-201710	SA	60256365012	Aqueous
MW-185-201710	SA	60256365013	Aqueous
MW-176-201710	SA	60256365014	Aqueous
MW-46R-201710	SA	60256365015	Aqueous
RW-69-201710	SA	60256365016	Aqueous
MW-58R-201710	SA	60256365017	Aqueous
IW-73-201710	SA	60256365018	Aqueous
MW-82-201710	SA	60256365019	Aqueous
FD-03-201710	FD	60256365020	Aqueous
MW-40R-201710	SA	60256365021	Aqueous
IW-77-201710	SA	60256365022	Aqueous
MW-196-201710	SA	60256365023	Aqueous
MW-99-201710	SA	60256365024	Aqueous
MW-98-201710	SA	60256365025	Aqueous
MW-184-201710	SA	60256365026	Aqueous
TMW-19-201710	SA	60256365027	Aqueous
MW-186-201710	SA	60256365028	Aqueous
FD-04-201710	SA	60256365029	Aqueous
MW-187-201710	SA	60256365030	Aqueous
MW-188-201710	SA	60256365031	Aqueous
TMW-10-201710	SA	60256365032	Aqueous
TMW-22-201710	SA	60256365033	Aqueous
EB-02-201710	EB	60256365034	Aqueous
TB-02-201710	TB	60256365035	Aqueous
TB-03-201710	TB	60256365036	Aqueous

FIELD ID	SAMPLE TYPE	LAB ID	MATRIX
SDG: 60256590			
MW-89-201710	SA	60256590001	Aqueous
MW-38-201710	SA	60256590002	Aqueous
MW-93-201710	SA	60256590003	Aqueous
MW-95-201710	SA	60256590004	Aqueous
MW-25-201710	SA	60256590005	Aqueous
ITMW-18-201710	SA	60256590006	Aqueous
FD-08-201710	FD	60256590007	Aqueous
EB-03-201710	EB	60256590008	Aqueous
EB-04-201710	EB	60256590009	Aqueous
MW-179-201710	SA	60256590010	Aqueous
MW-87-201710	SA	60256590011	Aqueous
MW-19-201710	SA	60256590012	Aqueous
EB-05-201710	EB	60256590013	Aqueous
MW-86-201710	SA	60256590014	Aqueous
FD-07-201710	FD	60256590015	Aqueous
SDG: 60256510			
MW-62-201710	SA	60256510001	Aqueous
MW-96-201710	SA	60256510002	Aqueous
MW-97-201710	SA	60256510003	Aqueous
MW-183-201710	SA	60256510004	Aqueous
ITMW-2-201710	SA	60256510005	Aqueous
ITMW-1-201710	SA	60256510006	Aqueous
MW-55R-201710	SA	60256510007	Aqueous
IW-78-201710	SA	60256510008	Aqueous
ITMW-20-201710	SA	60256510009	Aqueous
ITMW-21-201710	SA	60256510010	Aqueous
ITMW-7-201710	SA	60256510011	Aqueous
MW-29-201710	SA	60256510012	Aqueous
ITMW-5-201710	SA	60256510013	Aqueous
MW-22-201710	SA	60256510014	Aqueous
MW-84-201710	SA	60256510015	Aqueous
MW-83-201710	SA	60256510016	Aqueous
MW-28-201710	SA	60256510017	Aqueous
MW-91-201710	SA	60256510018	Aqueous
MW-178-201710	SA	60256510019	Aqueous
FD-06-201710	FD	60256510020	Aqueous
MW-39R-201710	SA	60256510021	Aqueous
FD-05-201710	FD	60256510022	Aqueous
TMW-23-201710	SA	60256510023	Aqueous

FIELD ID	SAMPLE TYPE	LAB ID	MATRIX
MW-191-201710	SA	60256510024	Aqueous
MW-189-201710	SA	60256510025	Aqueous
MW-190-201710	SA	60256510026	Aqueous
MW-192-201710	SA	60256510027	Aqueous
TMW-27-201710	SA	60256510028	Aqueous
TMW-25-201710	SA	60256510029	Aqueous
ITMW-16-201710	SA	60256510030	Aqueous
ITMW-10-201710	SA	60256510031	Aqueous
MW-27-201710	SA	60256510032	Aqueous
MW-24-201710	SA	60256510033	Aqueous
ITMW-9-201710	SA	60256510034	Aqueous
MW-26-201710	SA	60256510035	Aqueous
TB-04-201710	TB	60256510036	Aqueous
SDG: 60256529			
VP-07-201710	SA	60256529001	Aqueous
VP-08-201710	SA	60256529002	Aqueous
VP-10-201710	SA	60256529003	Aqueous
VP-12-201710	SA	60256529004	Aqueous
VP-14-201710	SA	60256529005	Aqueous
SDG: 060OJ			
TMW-11-201710	SA	TMW-11-201710	Aqueous
MW-50-201710	SA	MW-50-201710	Aqueous
MW-61R-201710	SA	MW-61R-201710	Aqueous
TMW-10-201710	SA	TMW-10-201710	Aqueous
RW-69-201710	SA	RW-69-201710	Aqueous
IW-73-201710	SA	IW-73-201710	Aqueous
MW-58R-201710	SA	MW-58R-201710	Aqueous
ITMW-9-201710	SA	ITMW-9-201710	Aqueous
MW-95-201710	SA	MW-95-201710	Aqueous
MW-87-201710	SA	MW-87-201710	Aqueous
MW-89-201710	SA	MW-89-201710	Aqueous
MW-25-201710	SA	MW-25-201710	Aqueous
MW-38-201710	SA	MW-38-201710	Aqueous
MW-86-201710	SA	MW-86-201710	Aqueous
SDG: P1705345			
VP-09-201710	SA	P1705345-001	Air

Sample Type: SA = Sample TB = Trip Blank FD = Field Duplicate EB = Equipment Blank

The laboratory reports were evaluated for the following QC elements:

- Data package completeness;

- Sample preservation and holding times;
- Blanks;
- Surrogate compound recoveries;
- Laboratory control sample (LCS);
- Matrix spike/matrix spike duplicates (MS/MSD);
- Laboratory and field precision; and
- Overall assessment of data.

General Overall Assessment:

_____ Data are usable without qualification
__X__ Data are usable with qualification (noted below)
_____ Some or all data are unusable for any purpose (detailed below)

Case Narrative Comments: Any case narrative comments concerning data qualification were noted below.

1.0 Data Package Completeness

Were all items delivered as specified on the COC and is the data package complete?

Yes, the analysis was performed as requested on the chain-of-custody records. All samples were received by the laboratory and analyzed properly with appropriate corrective actions taken when appropriate. No data points were rejected; therefore, the data completeness measure for this data set is 100% and is considered acceptable.

2.0 Laboratory Case Narrative, Sample Preservation and Cooler Receipt Form

Were issues noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated the following:

- **SDG: 60255260 –** The laboratory indicated that the recovery for 2-butanone in the LCS was above QC limits. See Section 7.0 for further discussion.
- **SDG: 60256266 –** The laboratory indicated that the recoveries for nitrate and nitrite were above the laboratory control limits in the MS samples. See Section 8.0 for further details.
- **SDG: 60256365 –** The laboratory indicated that the recoveries for bromoform, carbon tetrachloride, dibromomethane and tetrachloroethene were above the laboratory control limits in one or more LCS. See Section 7.0 for further discussion. The laboratory also noted that recoveries for nitrate and nitrite were above the laboratory control limits in the MS samples. See Section 8.0 for further details.
- **SDG: 60256590 -** The laboratory indicated that the recovery for bromoform in the LCS was above QC limits. See Section 7.0 for further discussion. The laboratory also noted that recoveries for nitrite; and nitrogen, as nitrite and nitrate, were above the laboratory control limits in the MS samples. See Section 8.0 for further details. The case narrative also indicated that TOC was detected in one method blank. See Section 4.0 for further discussion.

- **SDG: 60255450 -** The laboratory indicated that the recovery for 2-butanone in the LCS was above QC limits. See Section 7.0 for further discussion.
- **SDG: 60255559 –** The laboratory indicated that the recoveries for 2-butanone and 1,4-dichlorobenzene in the LCS were above QC limits. See Section 7.0 for further discussion.
- **SDG: 60256510 -** The laboratory indicated that the recovery for styrene in the MS and MSD was above the laboratory control limit. The laboratory also noted that recoveries for nitrate and nitrite were above the laboratory control limits in the MS samples. See Section 8.0 for further details. The case narrative also indicated that TOC was detected in one method blank. See Section 4.0 for further discussion.
- **SDG: P1705345 –** The laboratory indicated that internal standard and surrogate recoveries were outside the laboratory control limits. See Section 5.0 and Section 6.0 for further discussion.

Samples were received at the laboratories in good condition and at proper temperature <6 degrees Celsius (°C), when required.

3.0 Technical Holding Times

Were samples extracted/analyzed within method specific holding time requirements?

Yes. All samples were prepared and/or analyzed within the method specific required holding time of 14 days for hydrochloric (HCl) acid preserved samples. Samples MW-82-201710, FD-03-201710, IW-77-201710, ITMW-18-201710, FD-07-201710, MW-19-201710, IW-78-201710, MW-84-201710 and MW-83-201710 were preserved with ascorbic acid. The samples were analyzed within a reduced holding time of seven days.

4.0 Blank Contamination

Were any analytes detected in the associated laboratory or field blanks?

Yes. The following table summarizes analytes detected in laboratory method and field blanks collected as part of this data set:

SDG	BLANK ID	BLANK TYPE	ANALYTE	CONCENTRATION	UNITS
60255167	2037829	Method	Bromomethane	0.36 J	µg/L
60256365	2049409	Method	Bromomethane	0.95 J	µg/L
60256365	EB-02-201710	Equipment	Acetone	2.1 J	µg/L
60256590	2051160	Method	Chloromethane	0.12 J	µg/L
60256590	2051808	Method	Chloroform	0.27 J	µg/L
60256590	2050852	Method	TOC	0.37 J	µg/L
60256510	TB-04-201710	Trip	Trichloroethene	0.19 J	µg/L

ID = Identification µg/L = micrograms per liter
J = result was detected between the method detection limit and reporting limit and is considered estimated

Analytical data that were reported non-detect or at concentrations greater than five times the associated blank concentration (ten times for common laboratory contaminants) did not require qualification. Results that are qualified due to blank contamination are summarized in the table below.

SDG	FIELD ID	ANALYTE	QUALIFICATION
60256590	MW-60R-201710	Bromomethane	U
60256365	TMW-16-201710	Bromomethane	U
60256365	TMW-26-20171024	Bromomethane	U
60256365	MW-182-201710	Bromomethane	U
60256365	TMW-30-201710	Bromomethane	U
60256365	MW-68-201710	Bromomethane	U
60256365	MW-57R-201710	Bromomethane	U
60256365	MW-56R-201710	Bromomethane	U
60256365	MW-175-201710	Bromomethane	U
60256365	TMW-24-20171024	Bromomethane	U
60256365	MW-98-201710	Acetone	U
60256510	MW-62R-201710	Trichloroethene	U
60256510	ITMW-2-201710	Trichloroethene	U
60256510	MW-29-201710	Trichloroethene	U
60256510	MW-84-201710	Trichloroethene	U
60256510	MW-190-201710	Trichloroethene	U
60256510	MW-192-201710	Trichloroethene	U
60256510	MW-27-201710	Trichloroethene	U
60256590	MW-95-201710	TOC	U
60256590	MW-87-201710	TOC	U

ID = Identification U = Non-detect

5.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No. Three surrogates (4-bromofluorobenzene, 1,2-dichloroethane-d4 and toluene-d8) were added to each sample analyzed for VOCs to evaluate the laboratory performance on individual samples. Percent recoveries (%R) for all volatile surrogates in all samples analyzed for VOCs were within the laboratory acceptance limits, with one exception. The surrogate 4-bromofluorobenzene was below the control limit in air sample VP-09-201710 analyzed by TO-15. The laboratory noted this surrogate was not associated with the target analytes reported; therefore, no data were qualified.

6.0 Internal Standards

Were the Internal standard areas within control limits and was the retention time criteria met?

No. Internal standards indicate whether GC/MS sensitivity and response were stable during

each analysis. The laboratory reported that all criteria were within method requirements, with one exception. The laboratory noted that one internal standard used in the TO-15 analysis of air sample VP-09-201710 was outside the acceptance criteria. The laboratory noted the internal standard was not associated with the target analytes reported; therefore, no data were qualified.

7.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No. The LCS provides information on the accuracy of the analytical method and on the laboratory performance. The following table summarizes the LCS results that were outside the acceptance limits.

SDG	LCS ID	ANALYTE	LCS (%)	LCS CRITERIA (Recovery %)
60255260	2038357	Chloroethane	**118**	72-117
60256365	2052654	Bromoform	**135**	79-126
60256590	2052654	Bromoform	**135**	79-126
60255450	2040700	2-Butanone	**121**	72-117
60255559	2040703	1,4-Dichlorobenzene	**117**	85-115
60255559	2040703	2-Butanone	**121**	72-117

ID = Identification LCS = Laboratory Control Sample RPD = Relative Percent Difference
% = Percent

LCS recoveries above evaluation criteria indicate a potential high bias. All associated results were non-detect, with three exceptions. Bromoform was detected between the MDL and RL in samples MW-25-201710 and FD-08-201710; and above the reporting limit in sample MW-86-201710. The associated results are qualified “J” as estimated with a potential high bias.

8.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples reported as part of these SDGs?

Yes. MS/MSD data are used to assess long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery at the time of sample analysis.

Were MS/MSD recoveries within evaluation criteria?

No. MS/MSD recoveries which were outside acceptance evaluation criteria are summarized in the table below.

SDG	SAMPLE ID	ANALYTE	MS/MSD RECOVERY (%)	RPD (%)	MS/MSD RECOVERY/RPD CRITERIA (%)
60256266	MW-61R-201710	Nitrate	**168**	NA	70-130
60256266	MW-61R-201710	Nitrite	**39**	NA	90-110
60256590	MW-95-201710	Nitrate	**157**	NA	70-130
60256590	MW-95-201710	Nitrite	**37**	NA	90-110
60256510	MW-29-201710	Styrene	**3 / 3**	NA	64-134
60256510	ITMW-9-201710	Nitrite	**39**	NA	90-110
60256510	ITMW-9-201710	Nitrogen, Nitrite and Nitrate	**72**	NA	90-110

MS = Matrix Spike MSD = Matrix Spike Duplicate NA = Not Applicable
RPD = Relative Percent Difference % = Percent

Only the parent samples spiked were evaluated for qualification. Non-detect results associated with recoveries with a high bias were not qualified. MS/MSD recoveries for non-project samples were not evaluated.

Results that are qualified due to MS/MSD recoveries are summarized in the table below.

SDG	FIELD ID	ANALYTE	QUALIFICATION
60256266	MW-61R-201710	Nitrogen, Nitrite	UJ
60256510	ITMW-9-201710	Nitrogen, Nitrite	J
60256510	ITMW-9-201710	Nitrogen	J
60256510	MW-29-201710	Styrene	UJ
60256590	MW-95-201710	Nitrogen, Nitrate (As N)	J
60256590	MW-95-201710	Nitrogen, Nitrite	UJ

ID = Identification UJ = Estimated non-detect J = Estimated

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples performed as part of this SDG?

Yes, laboratory duplicates, when required by the method were analyzed and were within acceptance criteria.

10.0 Field Duplicate Results (Field Precision)

Were field duplicate samples collected as part of the evaluated SDGs?

Yes. The table below summarizes field duplicate pairs.

SDG	FIELD ID	FIELD DUPLICATE ID
60256266	TMW-20-201710	FD-01-201710
60256365	MW-62R-201710	FD-02-201710

SDG	FIELD ID	FIELD DUPLICATE ID
60256365	MW-82-201710	FD-03-201710
60256365	MW-186-201710	FD-04-201710
60256510	MW-39R-201710	FD-05-201710
60256510	MW-178-201710	FD-06-201710
60256590	ITMW-18-201710	FD-07-201710
60256590	MW-25-201710	FD-08-201710

ID = Identification

Were field duplicates within evaluation criteria?

No. RPD values were less than the control limit of <30% for all compounds with concentrations reported above the reporting limit.

11.0 Detects and Calibration Range

For samples that were diluted and non-detect, were undiluted results also reported?

No. All samples collected as part of this data set and analyzed with dilutions had detections.

For samples that were not diluted and detected, were the results within calibration range?

Yes. Results reported between the laboratory method detection limit (MDL) and RL were flagged "J" as estimated by the laboratory.

12.0 Additional Qualifications

Were additional qualifications applied?

No.

13.0 Overall Data Assessment

The data are usable for its intended purpose based on an evaluation of the QC parameters discussed in this report. Some data are qualified as estimated due to the inability to meet all QC criteria. The table below summarizes the final qualifications for the analytical data.

Data Qualifier Summary:

SDG	FIELD ID	ANALYTE	QUALIFIER	REASON CODE
60256590	MW-60R-201710	Bromomethane	**U**	1
60256365	TMW-16-201710	Bromomethane	**U**	1
60256365	TMW-26-20171024	Bromomethane	**U**	1
60256365	MW-182-201710	Bromomethane	**U**	1
60256365	TMW-30-201710	Bromomethane	**U**	1
60256365	MW-68-201710	Bromomethane	**U**	1

SDG	FIELD ID	ANALYTE	QUALIFIER	REASON CODE
60256365	MW-57R-201710	Bromomethane	**U**	1
60256365	MW-56R-201710	Bromomethane	**U**	1
60256365	MW-175-201710	Bromomethane	**U**	1
60256365	TMW-24-20171024	Bromomethane	**U**	1
60256365	MW-98-201710	Acetone	**U**	1
60256510	MW-62R-201710	Trichloroethene	**U**	1
60256510	ITMW-2-201710	Trichloroethene	**U**	1
60256510	MW-29-201710	Trichloroethene	**U**	1
60256510	MW-84-201710	Trichloroethene	**U**	1
60256510	MW-190-201710	Trichloroethene	**U**	1
60256510	MW-192-201710	Trichloroethene	**U**	1
60256510	MW-27-201710	Trichloroethene	**U**	1
60256590	MW-95-201710	TOC	**U**	1
60256590	MW-87-201710	TOC	**U**	1
60256590	MW-25-201710	Bromoform	**J**	2
60256590	FD-08-201710	Bromoform	**J**	2
60256590	MW-86-201710	Bromoform	**J**	2
60256266	MW-61R-201710	Nitrogen, Nitrite	**UJ**	
60256510	ITMW-9-201710	Nitrogen, Nitrite	**J**	
60256510	ITMW-9-201710	Nitrogen	**J**	
60256510	MW-29-201710	Styrene	**UJ**	
60256590	MW-95-201710	Nitrogen, Nitrate (As N)	**J**	
60256590	MW-95-201710	Nitrogen, Nitrite	**UJ**	

Data Validation Qualifier Codes:

U = Non-detect. The compound was analyzed for, but not detected.

J = Estimated. The associated numerical value is an estimated quantity. The analyte was detected but the reported value may not be accurate or precise.

UJ = Estimated Non-detect. The analyte was not detected above the method detection limit. However, it is an estimated quantity due to poor accuracy or precision. This qualification is also used to flag possible false negative results in the case where low bias in the analytical system is indicated by low calibration response, surrogate or other spike recovery.

R = Rejected. The sample results are unusable due to the quality of the data generated.

Data Qualifier Reason Codes:

1 Samples were qualified as non-detect (UJ) due to blank contamination.

2 Samples were qualified as estimated (J) due to associated LCS recoveries.

3 Samples were qualified as estimated non-detect (UJ) or estimated detected (J) due to associated MS/MSD recoveries.

Attachment E

TCE Mass Estimate Calculations

TABLE 1
THICKNESS OF SATURATED SOILS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Ground Elevation	Top of Saturated Soils	Bottom of Saturated Soils	Saturated Soil Interval
North Plume				
IW-72	472.2	450.2	446.4	3.8
IW-73	472.1	NA[2]	NA[2]	NA[2]
IW-74	472.3	454.3	446.3	8.0
IW-75	472.8	NA[2]	NA[2]	NA[2]
IW-76	473.2	NA[2]	NA[2]	NA[2]
IW-77	473.8	454.8	445.8	9.0
IW-78	474.2	NA[2]	NA[2]	NA[2]
IW-79	474.1	NA[2]	NA[2]	NA[2]
IW-80	473.7	454.7	446.7	8.0
MW-23	475.8	453.8	447.8	6.0
MW-24	476.6	453.6	447.1	6.5
MW-27	475.7	451.7	447.4	4.3
MW-28	470.6	447.1	445.9	1.2
MW-31	476.1	448.1	447.1	1.0
MW-32	475.7	NA[2]	NA[2]	NA[2]
MW-33	474.9	NA[2]	NA[2]	NA[2]
MW-35R	474.0	NA[2]	NA[2]	NA[2]
MW-36	473.4	NA[2]	NA[2]	NA[2]
MW-39	475.6	450.1	447.6	2.5
MW-40	473.4	450.1	447.1	3.0
MW-41	472.3	453.3	445.8	7.5
MW-42B	471.8	449.8	446.3	3.5
MW-43	471.0	451.0	446.3	4.7
MW-46R	466.5	450.5	445.8	4.7
MW-50	463.2	451.2	445.6	5.6
MW-55	465.5	447.5	446.8	0.7
MW-56	463.4	445.4	444.9	0.5
MW-57	463.1	447.1	446.5	0.6
MW-58	462.9	446.3	445.9	0.4
MW-60	461.0	447.2	445.6	1.6[3]
MW-61	459.8	445.5	444.7	0.8[3]
MW-62	464.5	446.0	444.2	1.8
MW-63	464.0	444.7	444.5	0.2[3]
MW-65	474.1	453.6	445.7	7.9
MW-66	462.7	450.7	446.5	4.2[3]
MW-67	459.4	448.4	445.2	3.2[3]
MW-68	470.0	448.0	446.5	1.5
MW-70	471.7	NA[2]	NA[2]	NA[2]
MW-71	471.5	NA[2]	NA[2]	NA[2]
RW-69	471.5	449.5	445.5	4.0
			Average Thickness (feet)	**3.7**

TABLE 1
THICKNESS OF SATURATED SOILS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Ground Elevation	Top of Saturated Soils	Bottom of Saturated Soils	Saturated Soil Interval
South Plume				
ITMW-1	474.6	450.6	444.1	6.5
ITMW-10	478.6	451.6	446.1	5.5
ITMW-11	474.0	457.5	444.5	13.0
ITMW-12	474.7	456.7	444.7	12.0
ITMW-13	475.4	450.4	446.4	4.0
ITMW-14	475.7	455.7	445.7	10.0
ITMW-15	474.8	454.0	444.8	9.2
ITMW-16	476.5	458.5	445.3	13.2
ITMW-17	476.1	454.1	447.1	7.0
ITMW-18	473.9	457.9	444.9	13.0
ITMW-19	474.3	457.8	445.3	12.5
ITMW-2	475.1	457.1	445.6	11.5
ITMW-20	475.7	453.2	447.4	5.8
ITMW-21	474.4	449.4	446.4	3.0
ITMW-3	472.8	451.6	444.6	7.0
ITMW-4	477.6	458.1	447.1	11.0
ITMW-5	476.6	452.1	446.1	6.0
ITMW-6	481.1	455.4	445.6	9.8
ITMW-7	479.7	NA[2]	NA[2]	NA[2]
ITMW-9	479.5	460.2	446.3	13.9
MW-22	473.9	450.9	449.9	1.0
MW-25	474.7	446.7	445.0	1.8
MW-26	476.1	451.1	446.9	4.2
MW-29	475.1	452.1	447.1	5.0
MW-30	479.2	446.7	443.7	3.0
MW-37	474.0	457.0	445.5	11.5
MW-38	474.9	NA[2]	NA[2]	NA[2]
MW-92	473.9	451.9	444.9	7.0
MW-93	478.0	456.0	443.5	12.5
MW-94	478.0	455.0	445.0	10.0
MW-95	478.0	452.0	445.0	7.0
MW-172	473.4	459.4	445.8	13.6
			Average Thickness (feet)	**8.3**

TABLE 1
THICKNESS OF SATURATED SOILS
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Ground Elevation	Top of Saturated Soils	Bottom of Saturated Soils	Saturated Soil Interval
NE Corner Plume				
MW-87	471.0	451.0	447.8	3.2
MW-88	469.1	453.6	449.1	4.5
MW-89	467.1	451.6	449.5	2.1
MW-90	467.0	452.0	447.0	5.0
MW-91	469.2	451.7	449.2	2.5
MW-96	458.3	449.8	444.0	5.8
MW-97	459.9	451.9	445.9	6.0
MW-98	462.0	451.0	444.4	6.6
MW-99	467.1	449.3	445.1	4.2
			Average Thickness (feet)	**4.4**

Notes:

1. Saturated thickness calculated from soil description in boring log.
2. NA - Boring log not available
3. No saturated soil observation recorded in boring log during drilling. Interval inferred based on soil description.

TABLE 2
ESTIMATED QUANTITY OF TCE IN GROUNDWATER
Whirlpool Facility - Fort Smith, Arkansas

GROUNDWATER	Volume of Water						TCE Concentration		Mass of TCE		Volume of TCE	
Date	Plume Area (Square Feet)	Saturated Thickness (Feet)	Total Porosity[2]	Plume Area (Cubic Feet)	Gallons	Liters	Estimated Avg. Min. Concentration Assumed to be Present Throughout the Respective Section of Plume (µg/L)	Estimated Avg. Max. Concentration Assumed to be Present Throughout the Respective Section of Plume (µg/L)	Min. Kg.	Max. Kg.	Min. Vol. (Gallons)	Max. Vol. (Gallons)
North Plume												
March 2014 - 5 to 100 µg/L	*246,800*	3.7[1]	0.4	366,251	2,739,559	10,369,231	5	100	0.1	1.0	0.0	0.2
March 2014 - 100 to 1,000 µg/L	*184,500*	3.7[1]	0.4	273,798	2,048,009	7,751,714	100	1,000	0.8	7.8	0.1	1.4
March 2014 - > 1,000 µg/L	*100*	3.7[1]	0.4	148	1,110	4,201	1,000	1,500	0.0	0.0	0.0	0.0
March 2014 Subtotal	431,400								0.8	8.8	0.2	1.6
May 2014 - 5 to 100 µg/L	*279,000*	3.7[1]	0.4	414,036	3,096,989	11,722,104	5	100	0.1	1.2	0.0	0.2
May 2014 - 100 to 1,000 µg/L	*185,110*	3.7[1]	0.4	274,703	2,054,780	7,777,343	100	1,000	0.8	7.8	0.1	1.4
May 2014 - > 1,000 µg/L	*100*	3.7[1]	0.4	148	1,110	4,201	1,000	1,500	0.0	0.0	0.0	0.0
May 2014 Subtotal	464,210								0.8	9.0	0.2	1.6
July 2014 - 5 to 100 µg/L	*294,300*	3.7[1]	0.4	436,741	3,266,824	12,364,930	5	100	0.1	1.2	0.0	0.2
July 2014 - 100 to 1,000 µg/L	*192,500*	3.7[1]	0.4	285,670	2,136,812	8,087,832	100	1,000	0.8	8.1	0.1	1.5
July 2014 - > 1,000 µg/L	*200*	3.7[1]	0.4	297	2,220	8,403	1,000	1,500	0.0	0.0	0.0	0.0
July 2014 Subtotal	487,000								0.9	9.3	0.2	1.7
October 2014 - 5 to 100 µg/L	*299,500*	3.7[1]	0.4	444,458	3,324,546	12,583,406	5	100	0.1	1.3	0.0	0.2
October 2014 - 100 to 1,000 µg/L	*199,900*	3.7[1]	0.4	296,652	2,218,954	8,398,741	100	1,000	0.8	8.4	0.2	1.5
October 2014 - > 1,000 µg/L	*400*	3.7[1]	0.4	594	4,440	16,806	1,000	1,500	0.0	0.0	0.0	0.0
October 2014 Subtotal	499,800								0.9	9.7	0.2	1.8
January 2015 - 5 to 100 µg/L	*296,000*	3.7[1]	0.4	439,264	3,285,695	12,436,355	5	100	0.1	1.2	0.0	0.2
January 2015 - 100 to 1,000 µg/L	*180,466*	3.7[1]	0.4	267,812	2,003,230	7,582,227	100	1,000	0.8	7.6	0.1	1.4
January 2015 - > 1,000 µg/L	*0*	3.7[1]	0.4	0	0	0	1,000	1,500	0.0	0.0	0.0	0.0
January 2015 Subtotal	476,466								0.8	8.8	0.1	1.6
April 2015 - 5 to 100 µg/L	308,950	3.7[1]	0.4	458,482	3,429,444	12,980,445	5	100	0.1	1.3	0.0	0.2
April 2015 - 100 to 1,000 µg/L	177,037	3.7[1]	0.4	262,723	1,965,167	7,438,158	100	1,000	0.7	7.4	0.1	1.3
April 2015 - > 1,000 µg/L	0	3.7[1]	0.4	0	0	0	1,000	1,500	0.0	0.0	0.0	0.0
April 2015 Subtotal	485,987								0.8	8.7	0.1	1.6
July 2015 - 5 to 100 µg/L	334,058	3.7[1]	0.4	495,742	3,708,151	14,035,350	5	100	0.1	1.4	0.0	0.3
July 2015 - 100 to 1,000 µg/L	165,146	3.7[1]	0.4	245,077	1,833,173	6,938,561	100	1,000	0.7	6.9	0.1	1.3
July 2015 - > 1,000 µg/L	0	3.7[1]	0.4	0	0	0	1,000	1,500	0.0	0.0	0.0	0.0
July 2015 Subtotal	499,204								0.8	8.3	0.1	1.5
October 2015 - 5 to 100 µg/L	303,199	3.7[1]	0.4	449,947	3,365,606	12,738,818	5	100	0.1	1.3	0.0	0.2
October 2015 - 100 to 1,000 µg/L	152,180	3.7[1]	0.4	225,835	1,689,247	6,393,799	100	1,000	0.6	6.4	0.1	1.2
October 2015 - > 1,000 µg/L	0	3.7[1]	0.4	0	0	0	1,000	1,500	0.0	0.0	0.0	0.0
October 2015 Subtotal	455,379								0.7	7.7	0.1	1.4
January 2016 - 5 to 100 µg/L	302,982	3.7[1]	0.4	449,625	3,363,194	12,729,690	5	100	0.1	1.3	0.0	0.2
January 2016 - 100 to 1,000 µg/L	159,991	3.7[1]	0.4	237,427	1,775,954	6,721,985	100	1,000	0.7	6.7	0.1	1.2
January 2016 - > 1,000 µg/L	0	3.7[1]	0.4	0	0	0	1,000	1,500	0.0	0.0	0.0	0.0
January 2016 Subtotal	462,973								0.7	8.0	0.1	1.4
May 2016 - 5 to 100 µg/L	299,669	3.7[1]	0.4	444,709	3,326,422	12,590,506	5	100	0.1	1.3	0.0	0.2
May 2016 - 100 to 1,000 µg/L	163,732	3.7[1]	0.4	242,978	1,817,478	6,879,153	100	1,000	0.7	6.9	0.1	1.2
May 2016 - > 1,000 µg/L	0	3.7[1]	0.4	0	0	0	1,000	1,500	0.0	0.0	0.0	0.0
May 2016 Subtotal	463,401								0.8	8.1	0.1	1.5
November 2016 - 5 to 100 µg/L	345,581	3.7[1]	0.4	512,842	3,836,060	14,519,486	5	100	0.1	1.5	0.0	0.3
November - 100 to 1,000 µg/L	151,493	3.7[1]	0.4	224,816	1,681,621	6,364,935	100	1,000	0.6	6.4	0.1	1.2
November 2016 - > 1,000 µg/L	0	3.7[1]	0.4	0	0	0	1,000	1,500	0.0	0.0	0.0	0.0
November 2016 Subtotal	497,074								0.7	7.8	0.1	1.4
April 2017 - 5 to 100 µg/L	295,575	3.7[1]	0.4	438,634	3,280,980	12,418,509	5	100	0.1	1.2	0.0	0.2
April 2017 - 100 to 1,000 µg/L	206,761	3.7[1]	0.4	306,833	2,295,109	8,686,988	100	1,000	0.9	8.7	0.2	1.6
April 2017 - > 1,000 µg/L	0	3.7[1]	0.4	0	0	0	1,000	1,500	0.0	0.0	0.0	0.0
April 2017 Subtotal	502,336								0.9	9.9	0.2	1.8
October 2017 - 5 to 100 ug/l	254,136	3.7[1]	0.4	377,138	2,820,990	10,677,446	5	100	0.1	1.1	0.0	0.2
October 2017 - 100 to 1,000 ug/l	226,195	3.7[1]	0.4	335,673	2,510,837	9,503,520	100	1,000	1.0	9.5	0.2	1.7
October 2017 - > 1,000 ug/l	0	3.7[1]	0.4	0	0	0	1,000	1,500	0.0	0.0	0.0	0.0
October 2017 Subtotal	480,331								1.0	10.6	0.2	1.9
South Plume												
October 2014 - 5 to 100 µg/L	*519,800*	8.3[1]	0.4	1,727,815	12,924,058	48,917,558	5	100	0.2	4.9	0.0	0.9
October 2014 - 100 to 1,000 µg/L	*261,500*	8.3[1]	0.4	869,226	6,501,810	24,609,353	100	1,000	2.5	24.6	0.4	4.5
October 2014 - > 1,000 µg/L	*119,000*	8.3[1]	0.4	395,556	2,958,759	11,198,902	1,000	1,500	11.2	16.8	2.0	3.0
October 2014 Subtotal	900,300								13.9	46.3	2.5	8.4
January 2015 - 5 to 100 µg/L	*442,344*	8.3[1]	0.4	1,470,351	10,998,229	41,628,296	5	100	0.2	4.2	0.0	0.8
January 2015 - 100 to 1,000 µg/L	*324,537*	8.3[1]	0.4	1,078,761	8,069,132	30,541,665	100	1,000	3.1	30.5	0.6	5.5
January 2015 - 1,000 to 10,000 µg/L	*86,311*	8.3[1]	0.4	286,898	2,145,995	8,122,592	1,000	1,500	8.1	12.2	1.5	2.2
January 2015 - > 10,000 µg/L	*16,637*	8.3[1]	0.4	55,301	413,654	1,565,682	10,000	40,000	15.7	62.6	2.8	11.3
January 2015 Subtotal	869,829								27.0	109.5	4.9	19.8
April 2015 - 5 to 100 µg/L	446,025	8.3[1]	0.4	1,482,587	11,089,752	41,974,709	5	100	0.2	4.2	0.0	0.8
April 2015 - 100 to 1,000 µg/L	320,887	8.3[1]	0.4	1,066,628	7,978,380	30,198,170	100	1,000	3.0	30.2	0.5	5.5
April 2015 - 1,000 to 10,000 µg/L	82,635	8.3[1]	0.4	274,679	2,054,597	7,776,650	1,000	1,500	7.8	11.7	1.4	2.1
April 2015 - > 10,000 µg/L	19,906	8.3[1]	0.4	66,168	494,933	1,873,322	10,000	40,000	18.7	74.9	3.4	13.6
April 2015 Subtotal	869,453								29.7	121.0	5.4	21.9
July 2015 - 5 to 100 µg/L	366,826	8.3[1]	0.4	1,219,330	9,120,586	34,521,416	5	100	0.2	3.5	0.0	0.6
July 2015 - 100 to 1,000 µg/L	439,964	8.3[1]	0.4	1,462,440	10,939,054	41,404,318	100	1,000	4.1	41.4	0.7	7.5
July 2015 - 1,000 to 10,000 µg/L	158,420	8.3[1]	0.4	526,588	3,938,879	14,908,656	1,000	1,500	14.9	22.4	2.7	4.0
July 2015 - > 10,000 µg/L	17,739	8.3[1]	0.4	58,964	441,054	1,669,389	10,000	40,000	16.7	66.8	3.0	12.1
July 2015 Subtotal	982,949								35.9	134.0	6.5	24.3
October 2015 - 5 to 100 µg/L	452,019	8.3[1]	0.4	1,502,511	11,238,783	42,538,795	5	100	0.2	4.3	0.0	0.8
October 2015 - 100 to 1,000 µg/L	410,850	8.3[1]	0.4	1,365,665	10,215,177	38,664,446	100	1,000	3.9	38.7	0.7	7.0
October 2015 - 1,000 to 10,000 µg/L	178,334	8.3[1]	0.4	592,782	4,434,011	16,782,732	1,000	1,500	16.8	25.2	3.0	4.6
October 2015 - > 10,000 µg/L	26,442	8.3[1]	0.4	87,893	657,441	2,488,415	10,000	40,000	24.9	99.5	4.5	18.0
October 2015 Subtotal	1,067,645								45.7	167.6	8.3	30.4

TABLE 2
ESTIMATED QUANTITY OF TCE IN GROUNDWATER
Whirlpool Facility - Fort Smith, Arkansas

GROUNDWATER	Volume of Water						TCE Concentration		Mass of TCE		Volume of TCE	
Date	Plume Area (Square Feet)	Saturated Thickness (Feet)	Total Porosity[2]	Plume Area (Cubic Feet)	Gallons	Liters	Estimated Avg. Min. Concentration Assumed to be Present Throughout the Respective Section of Plume (µg/L)	Estimated Avg. Max. Concentration Assumed to be Present Throughout the Respective Section of Plume (µg/L)	Min. Kg.	Max. Kg.	Min. Vol. (Gallons)	Max. Vol. (Gallons)
January 2016 - 5 to 100 µg/L	471,252	8.3[1]	0.4	1,566,442	11,716,984	44,348,784	5	100	0.2	4.4	0.0	0.8
January 2016 - 100 to 1,000 µg/L	432,480	8.3[1]	0.4	1,437,562	10,752,966	40,699,976	100	1,000	4.1	40.7	0.7	7.4
January 2016 - 1,000 to 10,000 µg/L	185,422	8.3[1]	0.4	616,344	4,610,254	17,449,810	1,000	1,500	17.4	26.2	3.2	4.7
January 2016 - > 10,000 µg/L	26,570	8.3[1]	0.4	88,320	660,636	2,500,506	10,000	40,000	25.0	100.0	4.5	18.1
January 2016 Subtotal	1,115,725								46.7	171.3	8.5	31.0
May 2016 - 5 to 100 µg/L	500,800	8.3[1]	0.4	1,664,659	12,451,651	47,129,498	5	100	0.2	4.7	0.0	0.9
May 2016 - 100 to 1,000 µg/L	411,507	8.3[1]	0.4	1,367,849	10,231,513	38,726,275	100	1,000	3.9	38.7	0.7	7.0
May 2016 - 1,000 to 10,000 µg/L	182,314	8.3[1]	0.4	606,012	4,532,968	17,157,283	1,000	1,500	17.2	25.7	3.1	4.7
May 2016 - > 10,000 µg/L	26,570	8.3[1]	0.4	88,320	660,636	2,500,506	10,000	40,000	25.0	100.0	4.5	18.1
May 2016 Subtotal	1,121,191								46.3	169.2	8.4	30.6
November 2016 - 5 to 100 µg/L	610,474	8.3[1]	0.4	2,029,216	15,178,533	57,450,746	5	100	0.3	5.7	0.1	1.0
November 2016 - 100 to 1,000 µg/L	448,303	8.3[1]	0.4	1,490,159	11,146,391	42,189,088	100	1,000	4.2	42.2	0.8	7.6
November 2016 - 1,000 to 10,000 µg/L	183,846	8.3[1]	0.4	611,104	4,571,059	17,301,457	1,000	1,500	17.3	26.0	3.1	4.7
November 2016 - > 10,000 µg/L	27,485	8.3[1]	0.4	91,360	683,374	2,586,570	10,000	40,000	25.9	103.5	4.7	18.7
November 2016 Subtotal	1,270,108								47.7	177.3	8.6	32.1
April 2017 - 5 to 100 µg/L	491,932	8.3[1]	0.4	1,635,183	12,231,169	46,294,976	5	100	0.2	4.6	0.0	0.8
April 2017 - 100 to 1,000 µg/L	552,838	8.3[1]	0.4	1,837,632	13,745,491	52,026,682	100	1,000	5.2	52.0	0.9	9.4
April 2017 - 1,000 to 10,000 µg/L	179,440	8.3[1]	0.4	596,460	4,461,522	16,886,860	1,000	1,500	16.9	25.3	3.1	4.6
April 2017 - > 10,000 µg/L	29,275	8.3[1]	0.4	97,309	727,869	2,754,983	10,000	40,000	27.5	110.2	5.0	20.0
April 2017 Subtotal	1,253,485								49.9	192.2	9.0	34.8
October 2017 - 5 to 100 ug/l	446,517	8.3[1]	0.4	1,484,222	11,101,980	42,020,996	5	100	0.2	4.2	0.0	0.8
October 2017 - 100 to 1,000 ug/l	494,647	8.3[1]	0.4	1,644,208	12,298,677	46,550,493	100	1,000	4.7	46.6	0.8	8.4
October 2017 - 1,000 to 10,000 ug/l	249,441	8.3[1]	0.4	829,144	6,201,994	23,474,546	1,000	1,500	23.5	35.2	4.3	6.4
October 2017 - > 10,000 ug/l	29,275	8.3[1]	0.4	97,309	727,869	2,754,983	10,000	40,000	27.5	110.2	5.0	20.0
October 2017 Subtotal	1,219,880								55.9	196.2	10.1	35.5
Northeast Plume												
October 2014 - 5 to 100 µg/L	*187,600*	4.4[1]	0.4	330,926	2,475,329	9,369,122	5	100	0.0	0.9	0.0	0.2
October 2014 - 100 to 1,000 µg/L	*69,200*	4.4[1]	0.4	122,069	913,075	3,455,987	100	1,000	0.3	3.5	0.1	0.6
October 2014 - > 1,000 µg/L	*0*	4.4[1]	0.4	0	0	0	1,000	1,500	0.0	0.0	0.0	0.0
October 2014 Subtotal	256,800								0.4	4.4	0.1	0.8
January 2015 - 5 to 100 µg/L	*166,439*	4.4[1]	0.4	293,598	2,196,116	8,312,299	5	100	0.0	0.8	0.0	0.2
January 2015 - 100 to 1,000 µg/L	*74,000*	4.4[1]	0.4	130,536	976,409	3,695,709	100	1,000	0.4	3.7	0.1	0.7
January 2015 - > 1,000 µg/L	*0*	4.4[1]	0.4	0	0	0	1,000	1,500	0.0	0.0	0.0	0.0
January 2015 Subtotal	240,439								0.4	4.5	0.1	0.8
April 2015 - 5 to 100 µg/L	183,000	4.4[1]	0.4	322,812	2,414,634	9,139,389	5	100	0.0	0.9	0.0	0.2
April 2015 - 100 to 1,000 µg/L	70,500	4.4[1]	0.4	124,362	930,228	3,520,912	100	1,000	0.4	3.5	0.1	0.6
April 2015 - > 1,000 µg/L	0	4.4[1]	0.4	0	0	0	1,000	1,500	0.0	0.0	0.0	0.0
April 2015 Subtotal	253,500								0.4	4.4	0.1	0.8
July 2015 - 5 to 100 µg/L	176,731	4.4[1]	0.4	311,753	2,331,916	8,826,302	5	100	0.0	0.9	0.0	0.2
July 2015 - 100 to 1,000 µg/L	76,915	4.4[1]	0.4	135,678	1,014,872	3,841,290	100	1,000	0.4	3.8	0.1	0.7
July 2015 - > 1,000 µg/L	0	4.4[1]	0.4	0	0	0	1,000	1,500	0.0	0.0	0.0	0.0
July 2015 Subtotal	253,646								0.4	4.7	0.1	0.9
October 2015 - 5 to 100 µg/L	160,153	4.4[1]	0.4	282,510	2,113,174	7,998,364	5	100	0.0	0.8	0.0	0.1
October 2015 - 100 to 1,000 µg/L	77,178	4.4[1]	0.4	136,142	1,018,342	3,854,425	100	1,000	0.4	3.9	0.1	0.7
October 2015 - > 1,000 µg/L	0	4.4[1]	0.4	0	0	0	1,000	1,500	0.0	0.0	0.0	0.0
October 2015 Subtotal	237,331								0.4	4.7	0.1	0.8
January 2016 - 5 to 100 µg/L	160,000	4.4[1]	0.4	282,240	2,111,156	7,990,726	5	100	0.0	0.8	0.0	0.1
January 2016 - 100 to 1,000 µg/L	80,142	4.4[1]	0.4	141,370	1,057,448	4,002,441	100	1,000	0.4	4.0	0.1	0.7
January 2016 - > 1,000 µg/L	0	4.4[1]	0.4	0	0	0	1,000	1,500	0.0	0.0	0.0	0.0
January 2016 Subtotal	240,142								0.4	4.8	0.1	0.9
May 2016 - 5 to 100 µg/L	160,000	4.4[1]	0.4	282,240	2,111,156	7,990,726	5	100	0.0	0.8	0.0	0.1
May 2016 - 100 to 1,000 µg/L	80,142	4.4[1]	0.4	141,370	1,057,448	4,002,441	100	1,000	0.4	4.0	0.1	0.7
May 2016 - > 1,000 µg/L	0	4.4[1]	0.4	0	0	0	1,000	1,500	0.0	0.0	0.0	0.0
May 2016 Subtotal	240,142								0.4	4.8	0.1	0.9
November 2016 - 5 to 100 µg/L	189,715	4.4[1]	0.4	334,657	2,503,236	9,474,749	5	100	0.0	0.9	0.0	0.2
November 2016 - 100 to 1,000 µg/L	82,223	4.4[1]	0.4	145,041	1,084,909	4,106,382	100	1,000	0.4	4.1	0.1	0.7
November 2016 - > 1,000 µg/L	0	4.4[1]	0.4	0	0	0	1,000	1,500	0.0	0.0	0.0	0.0
November 2016 Subtotal	271,938								0.5	5.1	0.1	0.9
April 2017 - 5 to 100 µg/L	188,939	4.4[1]	0.4	333,289	2,493,003	9,436,015	5	100	0.0	0.9	0.0	0.2
April 2017 - 100 to 1,000 µg/L	85,399	4.4[1]	0.4	150,644	1,126,819	4,265,009	100	1,000	0.4	4.3	0.1	0.8
April 2017 - > 1,000 µg/L	0	4.4[1]	0.4	0	0	0	1,000	1,500	0.0	0.0	0.0	0.0
April 2017 Subtotal	274,339								0.5	5.2	0.1	0.9
October 2017 - 5 to 100 ug/l	185,157	4.4[1]	0.4	326,617	2,443,099	9,247,129	5	100	0.0	0.9	0.0	0.2
October 2017 - 100 to 1,000 ug/l	85,517	4.4[1]	0.4	150,853	1,128,378	4,270,911	100	1,000	0.4	4.3	0.1	0.8
October 2017 - > 1,000 ug/l	0	4.4[1]	0.4	0	0	0	1,000	1,500	0.0	0.0	0.0	0.0
October 2017 Subtotal	270,675								0.5	5.2	0.1	0.9

Notes:
1: Saturated thickness estimated from 4th Quarter 2014 RADD sampled wells and new 4th Quarter well completions (see Table 1).
2: Total porosity estimated from Freeze and Cherry (1979).
TCE: Trichloroethylene
µg/L: Micrograms per liter

Attachment F

January 2018 Revised Action Plan



ATTACHMENT F
Revised Action Plan
Whirlpool Facility
Fort Smith, Arkansas

Prepared for:
Whirlpool Corporation

Prepared by:
Ramboll Environ US Corporation

Date:
January 2018

Project Number:
1690006146

RAMBOLL ENVIRON

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1 Introduction

Ramboll Environ US Corporation (Ramboll Environ), on behalf of Whirlpool Corporation (Whirlpool), is submitting this Revised Action Plan in accordance with the Arkansas Department of Environmental Quality (ADEQ) approved September 2016 Revised Groundwater Monitoring Plan (RGWMP) for the Whirlpool site in Fort Smith, Arkansas. In accordance with the RGWMP, an action plan is required whenever "expansion of the plume is confirmed by validated data indicating constituent concentrations exceeding remedial action levels (RALs) collected during two consecutive monitoring events." As discussed in Appendix F (Action Plan) of the 2016 Annual Report dated February 2017 (February 2017 Action Plan), trichloroethene (TCE) concentrations at monitoring well locations MW-189 and MW-194 were determined to exceed the TCE RAL [i.e. 5 micrograms per liter (µg/L)] during two consecutive monitoring events. Additional investigation was proposed in the February 2017 Action Plan in the areas surrounding MW-189 (south onsite plume), MW-194 (northeast portion of the north, offsite plume) and at the southwest portion of the south plume. ADEQ acknowledged the proposed investigation in the February 2017 Action Plan in the March 9, 2017, comment letter[1]. Investigation of these areas was completed in April 2017.

The results of the April 2017 investigation and subsequent 2017 semi-annual groundwater monitoring event were summarized in the 2017 Semi-Annual Report which also included the July 2017 Revised Action Plan. The April 2017 investigation and subsequent groundwater monitoring results identified inconsistent data compared with previous investigation and groundwater monitoring data at the northeast boundary of the North Plume and at the southwest boundary of the South Plume. As a result, the July 2017 Revised Action Plan proposed further groundwater investigation at the northeast portion of the North Plume and the southwest portion of the South Plume. ADEQ acknowledged the proposed investigation in the July 2017 Revised Action Plan in the August 11, 2017, comment letter[2]. The investigations near the boundaries of the North and South Plumes were completed in October 2017. The results of the October 2017 investigation are summarized in Section 2 of this report.

Notwithstanding the inconsistent groundwater data at the northeast boundary of the North Plume and at the southwest boundary of the South Plume which indicated variations in TCE concentrations near the plume boundaries which caused the basis for this January 2018 Revised Action Plan:

- No complete exposure pathways exist (i.e. direct exposure, consumption or vapor intrusion); therefore, there is no unacceptable risk to human health or the environment;
- MW-189 is located on the Whirlpool property, a deed restriction exists to preclude use of shallow groundwater, TMW-19 is located onsite immediately down-gradient of MW-189, TMW-19 will be used in the future as a plume boundary well at this location;
- TMW-16 is located on the Whirlpool property, a deed restriction exists to preclude use of shallow groundwater and further investigation down-gradient of TMW-16 has

[1] ADEQ issued comments on the February 2017 Action Plan on March 9, 2017. Responses to ADEQ's comments were issued on March 28, 2017.
[2] ADEQ issued comments on the July 2017 Revised Action Plan on August 11, 2017. Responses to ADEQ's comments were issued on September 6, 2017.

characterized significantly lower TCE concentrations in groundwater near the west property boundary (although, further investigation is proposed at this location); and

- Whirlpool has completed settlement agreements with the property owners at the northeast boundary of the North Plume which includes a deed restriction precluding the use of shallow groundwater (See Figure 5-1 in Appendix A).

Whirlpool continues to be committed to fully investigating plume boundary conditions in accordance with the RGWMP and performing supplemental remedies as appropriate to address plume boundary conditions.

2 Data Summary

The investigations proposed in the July 2017 Revised Action Plan regarding the North and South Plumes were completed October 10-16, 2017, prior to the annual groundwater monitoring event conducted October 23-26, 2017**.** The North Plume investigation focused on the vicinity near former TMW-12 and TMW-13 and the South Plume investigation focused on the vicinity of TMW-16**.** Each investigation is summarized below.

Prior to initiating drilling activities for the installation of the temporary wells, both Arkansas One-Call Utility Locating Services and a private utility locator were contacted to identify underground utilities and other potential obstructions in the work areas.

A CME 550X ATV hollow stem auger drilling rig was used to install the temporary groundwater monitoring wells during the October 2017 investigation. The soil cuttings generated from the temporary well installations were collected and containerized in 55 gallon drums and staged on the former Whirlpool manufacturing facility property. Water generated from decontamination, well development, purging and sampling activities was also containerized for disposal.

Immediately after installation of each temporary well (excluding TMW-22A which did not produce water), the well was developed, the water level was recorded and a groundwater sample was collected and submitted to Pace Analytical for analysis for volatile organic compounds (VOCs) (EPA Method 8260) with a same day laboratory turnaround time (i.e. laboratory results were received approximately 24 hours after shipping the samples). These initial laboratory results from Pace Analytical provided timely VOC groundwater data to assess and adjust the locations of the subsequent temporary monitoring wells as the investigation proceeded. The laboratory results are provided in Table 1.

During the subsequent annual groundwater monitoring event, water levels were measured and groundwater samples were collected utilizing low flow sampling techniques. Purging was performed while monitoring pH, conductivity, dissolved oxygen (DO), oxidation reduction potential (ORP) and turbidity. After stabilization of these parameters to within 10%, the groundwater samples were collected and submitted to Pace Analytical for analysis for VOCs (EPA Method 8260) with a standard laboratory turnaround time.

Summaries of the results of the north plume investigation, south plume investigation and magnetic susceptibility are provided in the following sections.

2.1 Northern Plume Investigation at Former TMW-12 and TMW-13

Supplemental investigation was completed in the vicinity of the former TMW-12 and TMW-13 to:

- Further delineate TCE concentrations in groundwater due to the inconsistent data detected in groundwater at TMW-13;
- Assess plume boundary conditions in the vicinity of TMW-13; and

- Further evaluate TCE concentrations in this area to assess appropriate reagent dosing, if supplemental remediation is determined to be warranted in the event the northern plume is migrating beyond the eastern boundary.

The investigation consisted of installation of seven additional temporary groundwater monitoring wells TMW-20, TMW-21, TMW-22, TMW-22A, TMW-23, TMW-24 and TMW-29[3] (Figure 4).

The temporary groundwater monitoring wells were installed to total depths targeting the top of the shale bedrock below the Basal Transmissive Zone ranging from 15 to 20 feet below ground surface (bgs). Continuous sampling was conducted at each location while drilling to confirm the stratigraphic profile and the appropriate screened interval for the respective temporary groundwater monitoring wells. Each borehole was logged by a Ramboll Environ geologist for United States Geological Survey (USGS) classification. During drilling, soil cores were screened with a photoionization detector (PID). Four of the temporary monitoring wells (TMW-20, TMW-22, TMW-24 and TMW-29) were constructed with 7 feet of 2 inch diameter, 0.01 inch slot polyvinyl chloride (PVC) screen and 2 inch diameter, solid flush threaded schedule 40 PVC riser pipe to the surface. TMW-22A and TMW-23 was constructed with 5 feet of screen and TMW-21 was constructed with 10 feet of screen. A 20/40 grade sand pack was installed in the well annulus around the PVC screen to approximately 2 feet above the top of the screen followed by hydrated bentonite chips to grade. The top of the well casing was completed in a traffic rated road box set at surface grade and surveyed for elevation and location following installation.

The boring at TMW-22A was placed near the southern portion of the in-situ chemical reduction (ISCR) treatment area and likely encountered subsurface soil affected by the ISCR remedy (i.e. treatment wall) performed in the vicinity of MW-61R based upon the strong organic odor exhibited by the soil. The boring at TMW-22A did not produce groundwater and was properly closed in accordance with Arkansas Department of Pollution Control and Ecology (ADPC&E) Interim Policy 96-4 (as noted in the July 2017 Revised Action Plan). The PVC well casings and well material (filter sand and bentonite chips) were removed by overdrilling and the remaining borehole annulus was then sealed with cement bentonite slurry. The replacement well, TMW-22 installed south of TMW-22A, did produce groundwater and was able to be successfully developed and sampled.

Results

The temporary monitoring well logs are included in Appendix C. The observed Unified Soil Classification System (USCS) classifications for the new borings generally consisted of silty clay and/or clayey sand underlain by moist to wet clayey gravel with sand (Basal Transmissive Zone) ranging from 1.5 feet (TMW-21) to 5 feet (TMW-22) in thickness over a thin layer of dry clayey silt underlain by hard laminated shale (bedrock). These observations were generally consistent with the field classifications for previous borings in the area except at TMW-21 where the moist Basal Transmissive Zone was overlain by 2.5 feet of wet clayey sand.

The thickness of Basal Transmissive Zone material observed to be saturated ranged from approximately 2 feet in the west at TMW-23 to approximately 3.5 feet at TMW-29 to the east.

[3] ADEQ was contacted via phone on October 25, 2017, to discuss the installation of TWM-29.

Although the Basal Transmissive Zone was 5 feet thick at TMW-22, the Basal Transmissive Zone at this location did not exhibit the degree of saturation (observed as moist) as other locations. During groundwater sampling the water level at TMW-22 did not stabilize, resulting in more drawdown as compared to the other wells; and therefore, a potentially lower hydraulic conductivity may exist at TMW-22.

The potentiometric surface map for October 2017 for the north plume generally indicates a northeast flow direction (Figure 2). Further assessment of the potentiometric surface map indicates:

- A northeasterly-gradient generally trending from MW-58R to TMW-23 to TMW-10 [a change in elevation from 462.16 to 455.99 feet mean sea level (msl)];
- From MW-57R, the gradient trends easterly to approximately TMW-12 and TMW-21 (a change in elevation from 459.7 to 456.68 feet msl); and
- From MW-56R, the gradient trends slightly southeast before bending northeast towards MW-194 (a change in elevation from 459.93 to 457.88 feet msl).

The updated map of the shale bedrock surface (Figure 1) indicates the lowest bedrock elevation to the northeast is at MW-195 (441.9 feet msl). This low is within a relatively small area just northeast from the high for the area at TMW-21 at 445.26 feet msl and is bounded north and south by higher elevations. There is considerable topographic change in the shale bedrock surface within the area; although, the potentiometric gradient generally slopes to the northeast and the bedrock surface appears to exhibit limited impact on the potentiometric gradient.

The TCE concentrations for the temporary wells installed were below detection limits at TMW-20 (less than 0.17 µg/L), 461 µg/L at TMW-21, 486 µg/L at TMW-22, 62.2 µg/L at TMW-23, 385 g/L at TMW-24 and below detection limits at TMW-29 (less than 0.17 µg/L). During the April 2017 semi-annual groundwater monitoring event, the TCE concentrations in groundwater at former TMW-12 and TMW-13 were 463 µg/L and 193 µg/L, respectively. The data from TMW-12 and TMW-13 were considered inconsistent with previous groundwater monitoring data in the area; however, the groundwater monitoring results for October 2017 for the additional temporary wells confirm higher TCE concentrations in groundwater are present near the plume boundaries.

Conclusions

The plume boundary has been defined at the north plume based on the following:

- The potentiometric surface gradient generally trends northeast.
- The plume is bounded on the north and east by wells exhibiting TCE concentrations less than the RAL (5 µg/L) (MW-60R, MW-61R, MW-195, TMW-20 and TMW-29). The TCE concentration at MW-194 exceeds the RAL (15.4 µg/L vs. 5 µg/L); however, further investigation at this location is limited due to underground and overhead utilities and construction along Jenny Lind Road. The TCE concentration at MW-194 does not represent a risk to human health or the environment, but suggests a potential for plume

expansion at this location (see Section 3 for further discussion to mitigate plume expansion).

- TMW-21, TMW-22 and TMW-24 are located up-gradient of the North Plume boundaries (based on the potentiometric surface) and TCE concentrations in these wells range from 385 µg/L to 486 µg/L which confirms the April 2017 investigation indicating higher TCE concentrations are present near the plume boundaries (see Section 3 for further discussion).

2.2 Southern Plume Investigation at TMW-16

Supplemental investigation was completed in the vicinity of TMW-16 to:

- Further delineate TCE concentrations in groundwater due to the inconsistent data detected in groundwater at TMW-16;
- Assess property boundary conditions in the vicinity of TMW-16; and
- Evaluate TCE concentrations in this area to assess appropriate reagent dosing, if supplemental remediation is determined to be warranted in the event the southern plume is migrating beyond the western property boundary.

The investigation consisted of installation of five temporary groundwater monitoring wells in the vicinity of TMW-16 and MW-186 consisting of TMW-25 through TMW-28 and TMW-30 (TMW-28 was properly abandoned after installation and sampling) (Figure 3).

The temporary groundwater monitoring wells were installed to total depths targeting the top of the shale at the base of the Basal Transmissive Zone ranging from 26 feet bgs (TMW-27) to 30.5 feet bgs (TMW-25). Continuous sampling was conducted at each well location to observe the stratigraphic profile and determine the screened interval. Each borehole was logged by a Ramboll Environ geologist for USGS classification. During drilling, soil cores were screened with a PID. The temporary monitoring wells were constructed with 10 feet of 2 inch diameter, 0.01 inch slot PVC screen and 2 inch diameter, solid flush threaded schedule 40 PVC riser pipe to the surface. A 20/40 grade sand pack was installed in the well annulus around the PVC screen to approximately 2 feet above the top of the screen followed by hydrated bentonite chips to grade. The top of the well casing was completed in a traffic rated road box set at surface grade and surveyed for elevation and location following installation.

The laboratory results for the groundwater sample from TMW-28 (located at the northern extent of the area investigated near TMW-16) indicated the TCE concentration in groundwater at this location was below detection limits (less than 0.17 µg/L); therefore, this well was properly abandoned[4]. The PVC well casing and well material (filter sand and bentonite chips) were removed by overdrilling and the remaining borehole annulus was then sealed with cement bentonite slurry. Temporary wells TMW-25 through TMW-27 and TMW-30 were retained for sampling during the annual groundwater monitoring event.

[4] ADEQ was contacted via phone on October 25, 2017, to discuss the abandonment of TWM-28 and installation of TMW-30.

Results

The temporary monitoring well logs are included in Appendix C. The observed USCS classifications for TMW-25 through TMW-28 (noting TMW-28 was abandoned after installation and initial groundwater sampling) and TMW-30 were generally consistent with the field classification for TMW-16 and MW-186; clayey silt and/or silty clay over clayey sand underlain by clayey gravel with sand (Basal Transmissive Zone), over a thin layer of dry clayey silt underlain by hard laminated shale (bedrock). In TMW-27 and TMW-28 along the property boundary a few inches of saturated sand was observed between the Basal Transmissive Zone and the dry silt.

Generally three to six feet of saturated soils were encountered in the Basal Transmissive Zone in TMW-25 through TMW-28 and TMW-30 similar to the subsurface conditions encountered at MW-186 and TMW-16.

The potentiometric surface map for October 2017 for the south plume area continues to indicate a localized hydraulic divide in the potentiometric surface gradient (Figure 2). The divide trends northwest to southeast, more or less splitting between the 459 and 460 elevation contours along a line from the former storage area at the southwest corner of the former manufacturing building toward ITMW-6 and MW-190. The potentiometric surface map indicates a gradient sloping to the southwest along the west-southwest low in the shale bedrock surface. The hydraulic divide and slope in the potentiometric surface more or less correlate with the shale topography.

The shale bedrock elevation map was updated and modified to reflect the current understanding of the shale surface based upon the installation of the five additional temporary monitoring wells (Figure 1). The shale bedrock elevation map indicates a low or trough trending west-southwest, from the former TMW-17 and TMW-189 towards TMW-16, TMW-26 and TMW-27. This low is bounded to the south-southwest by a higher shale elevation extending southwest from MW-189 to the highest point at MW-188.

The TCE concentrations for the temporary wells installed were 245 µg/L at TMW-25, 36.3 µg/L at TMW-26, below detection limits at TMW-27 and TMW-28 (less than 0.17 µg/L) and 0.55 µg/L at TMW-30. The TCE concentration was 956 µg/L at TMW-16.

MW-182, TMW-25, TMW-16 and TMW-26 are installed linearly in the general direction of groundwater flow near the south plume boundary; however, the TCE concentrations in TMW-25 and TMW-16 are much higher than the TCE concentrations in MW-182 and TMW-26, which is inconsistent with typical plume migration. This observed inconsistency in the TCE concentration particularly at TMW-16 is anticipated to be due to the shale bedrock surface having greater influence on the migration of TCE in groundwater in this area; although further monitoring is necessary to confirm the variable, inconsistent TCE concentrations observed at the southwest portion of the south plume.

Conclusions

The boundary of the south plume has been defined based on the following:

- The potentiometric surface gradient trends west-southwest along a depression in the shale bedrock as it approaches the west property boundary; and
- Although the plume is not entirely defined at the west property boundary, sufficient characterization has been performed to limit further investigation to an area bounded on the north and south by TMW-27 and MW-186, respectively (see Section 3 for further discussion).

2.3 Total Organic Carbon and Magnetic Susceptibility

As discussed within the March 28, 2017, Response to ADEQ Correspondence dated March 9, 2017, regarding the 2016 Annual Report, Ramboll Environ collected soil samples for total organic carbon (TOC) and magnetic susceptibility analysis from each boring for the temporary monitoring wells during the October 2017 effort. Soil samples were collected from the Basal Transmissive Zone using laboratory supplied containers. The depths of samples and associated analytical results are listed in the table below:

Well ID	Sample Interval (feet)	TOC	Mag Susceptibility	
			Result (m^3/kg)	Plus or Minus
TMW-20	12.5-13.0	ND	8.77E-08	2.39E-09
TMW-21	14.0-14.5	682 J	1.95E-07	3.28E-08
TMW-22	15.5-16.0	ND	2.13E-07	5.10E-09
TMW-23	15.0-15.5	660 J	1.46E-07	9.55E-09
TMW-24	15.0-15.5	ND	1.36E-07	2.88E-09
TMW-25	28.0-28.5	ND	1.89E-07	1.71E-08
TMW-26	23.0-23.5	ND	3.04E-07	3.87E-08
TMW-27	24.5-25.0	ND	1.36E-07	8.85E-09
TMW-28	24.0-24.5	ND	1.01E-07	1.48E-08
TMW-29	11.5-12.0	728 J	1.52E-07	1.08E-08
TMW-30	25.5-26.0	ND	1.16E-07	1.41E-08

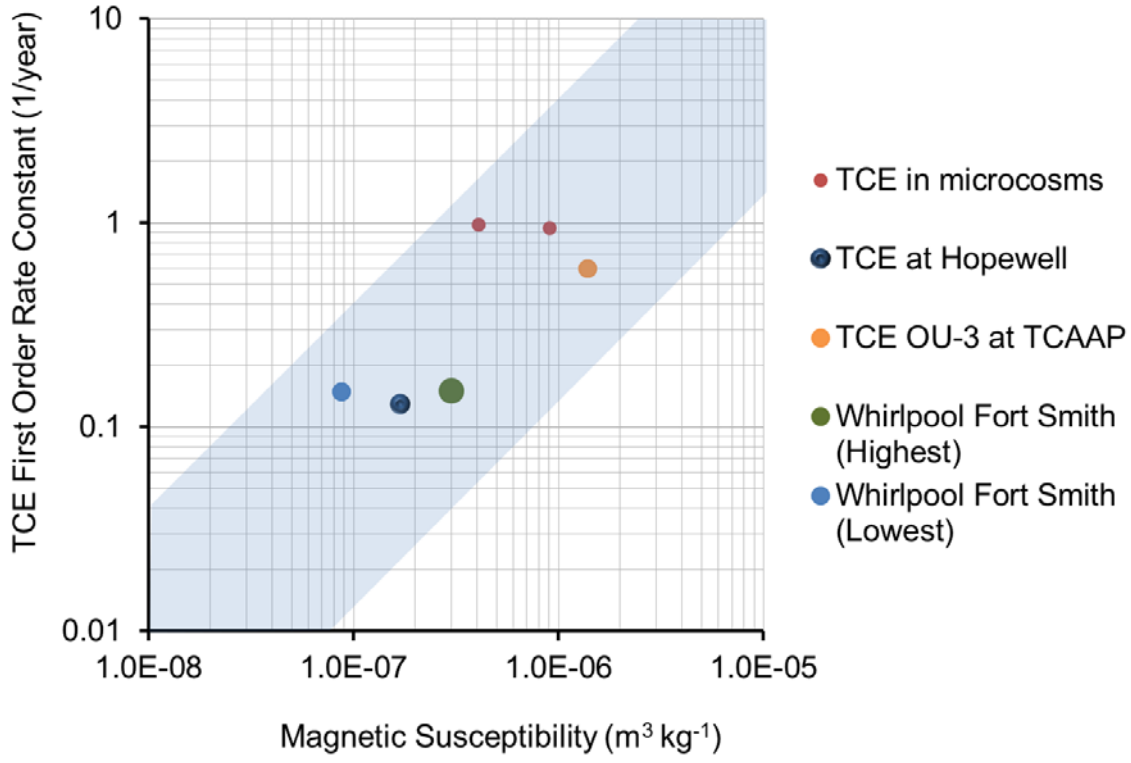
Notes:
m^3/kg: Cubic meters per kilograms; ND: Non-detect; J: Estimated concentration.

TOC soil results were comparable with the results from previous sampling efforts indicating low organic carbon concentrations in the Basil Transmissive Zone.

Magnetic susceptibility is an estimate of the amount of magnetite in a given sample and the magnetite may react abiotically with chlorinated compounds such as TCE (see November 11,

2016, Monitoring Well Installation letter submitted to ADEQ). The use and evaluation of magnetic susceptibility as a line of evidence for degradation processes is an emerging concept.

The USEPA Biological Pathway Identification Criteria screening tool (BioPIC) as discussed within the Development and Validation of a Quantitative Framework and Management Expectation Tool for the Selection of Bioremediation Approaches at Chlorinated Ethene Sites (ESTCP Project ER-201129) (final report December 2015) was used to evaluate the magnetic susceptibility results as they may relate to the TCE degradation pathway. The BioPIC tool plots the degradation rate constant versus magnetic susceptibility values to determine if the site specific values correlate with a value range (blue area on the plot below) then if the values plot within the blue area per the ESTCP expectation tool "the mass magnetic susceptibility can explain the apparent in situ rate of TCE degradation." The highest and lowest magnetic susceptibility results from the table above were plotted using the BioPIC tool and the resulting graph is shown below (using the degradation rate constant of -0.15 yr^{-1}):



The highest and lowest magnetic susceptibility values for the Whirlpool Fort Smith site fall within the blue area on the plot which means that "the mass magnetic susceptibility can explain the apparent in-situ rate of TCE degradation" (ESTCP Project ER-201129). Other test sites discussed within the ESTCP document were left on the plot for reference (red, dark blue and orange data points). These results are comparable to the range identified in the northern plume during September 2016 soil sampling activities completed at MW-194 through MW-196 and the southern plume during April 2017 soil sampling activities completed at temporary monitoring wells TMW-16 through TMW-19. Further discussion regarding abiotic degradation is presented in the 2017 Annual Report.

3 Revised Action Plan

This Revised Action Plan includes additional investigation and supplemental remedial actions based upon results of the investigation and monitoring performed in October 2017. This Revised Action Plan consists of:

- Additional investigation at the southwest portion of the south plume;
- Supplemental remedial actions at the north plume boundary; and
- Supplemental remedial actions at the south plume boundary.

3.1 Additional South Plume Investigation

As discussed in Section 2, additional investigation was completed at the southwest portion of the south plume in April and October 2017. This investigation identified groundwater impacts near the west property boundary near the southwest corner of the property in the vicinity of TMW-16. The investigation completed in October 2017 sufficiently delineated the extent of groundwater impact to the north and south, but the extent of impact is not fully delineated to the west toward the property boundary. The recent investigation and monitoring in this area have characterized a specific limited area of focus where supplemental groundwater investigation is necessary to assess the extent of groundwater impact west of TMW-26. The top of the shale bedrock surface depicts a bedrock trough originating near TMW-17 and TMW-189, extending west towards TMW-16 and encompassing TMW-26 and TMW-27. The potentiometric surface map indicates groundwater flow in the immediate vicinity of TMW-16 and TMW-26 is west, southwest (see Figure 2). The migration of TCE impacted groundwater in the vicinity of TMW-16 is controlled by the top of the shale bedrock surface and the groundwater flow direction.

We anticipate limited additional investigation in this area to delineate the extent of groundwater impact to the west. The proposed additional investigation consists of:

- An additional onsite temporary monitoring well installed along the west property boundary; and, if necessary; and
- Additional offsite temporary monitoring wells along the Arkansas Missouri Railroad spur immediately west of the former Whirlpool property.

Installation of these proposed temporary monitoring wells is proposed to occur sequentially; therefore, if the extent of TCE groundwater impact is characterized at concentrations less than 1 µg/L at the subject property boundary, then further investigation will not be performed. If the TCE concentration is greater than 1 µg/L in groundwater in the proposed onsite temporary monitoring well, then additional offsite investigation will be performed along the Arkansas Missouri Railroad spur. No further investigation west of the Arkansas Missouri Railroad spur is proposed at this time since the TCE concentration at TMW-26 has decreased to 36.3 µg/L compared to the TCE concentration at TMW-16 of 956 µg/L. If the proposed additional investigation is not sufficient to delineate the western extent of groundwater impact, then supplemental investigation will be proposed to ADEQ.

A hollow stem auger or sonic drilling rig will be used to install temporary groundwater monitoring wells along the west property boundary down-gradient of TMW-26. The temporary groundwater

monitoring well(s) will be installed to a total depth targeting the top of the shale at the base of the Basal Transmissive Zone. Soil cores will be collected at strategic depths from each location (continuous sampling will commence at depths below 20 feet bgs at each location based upon results from previous investigations) while drilling to confirm the stratigraphic profile and determine the appropriate screened interval for the temporary groundwater monitoring well. Each borehole will be logged by a Ramboll Environ geologist. The temporary monitoring well will be constructed with 5 to 10 feet of 1 inch diameter, 0.01 inch slot PVC screen and 1 inch diameter, solid flush threaded schedule 40 PVC riser pipe to the surface. A 20/40 grade sand pack will be installed in the well annulus around the PVC screen to approximately 2 feet above the top of the screen followed by hydrated bentonite chips to grade. The top of the well casing will be set at least 1 foot above grade and will be surveyed for elevation and location immediately following installation of the temporary groundwater monitoring well.

The temporary groundwater monitoring well(s) are proposed to be installed prior to the spring semi-annual groundwater monitoring event tentatively scheduled for April 2018 (i.e. approximately one week or less prior to the groundwater monitoring event) (see Schedule for Implementation at the end of this Revised Action Plan for further discussion of the schedule). After installation, the wells will be developed, allowed to stabilize and then groundwater levels will be measured. During the semi-annual groundwater monitoring event, water levels will again be measured and groundwater samples will be collected utilizing low flow sampling techniques. A minimum of one casing volume will be removed from the well while monitoring pH, conductivity, DO and ORP. At stabilization of these parameters to within 10%, groundwater samples will be collected. The groundwater samples will be analyzed for VOCs. After the semi-annual monitoring event, the PVC well casings will be pulled and the remaining borehole annulus will be sealed with bentonite for proper well closure.

Due to the well-established background conditions at groundwater monitoring wells throughout the south plume and based upon the specific data objectives presented for this investigation (i.e. characterization of flow and TCE concentrations), the collection of additional soil or groundwater samples and analysis of other parameters for these samples is not necessary.

The soil cuttings generated from temporary well installation and abandonment activities will be collected and containerized in 55 gallon drums and staged on the former Whirlpool manufacturing facility property. Water generated from decontamination, well development, purging and sampling activities will also containerized for disposal.

In addition, TMW-30 is no longer necessary and will be abandoned during this additional investigation.

3.2 Supplemental Remedial Actions

Proposed supplemental remedial actions to reduce TCE concentrations (and breakdown constituent concentrations) to limit future plume expansion for the north and south plumes consists of implementation of the ISCR remedy implemented in the vicinity of MW-61R in October 2015. The ISCR effort implemented in the vicinity of MW-61 has successfully reduced TCE concentrations and precluded plume expansion in the vicinity of MW-61. The ISCR technology implemented in the vicinity of MW-61R combines abiotic chemical reduction and

anaerobic bioremediation for the treatment of chlorinated solvents. ISCR reagents generally consist of a combination of controlled release organic carbon and zero-valent iron (ZVI) or reduced mineral compounds. The organic carbon provides the energy source for anaerobic bioremediation and the ZVI induces abiotic chemical reduction. These physical, chemical and biological processes combine to produce a reducing environment in the saturated zone stimulating chemical and microbiological dechlorination of TCE.

Proposed locations to perform supplemental ISCR remedies consist of the:

- Northeast portion of the North Plume;
- Southwest portion of the South Plume;
- Vicinity of MW-185; and
- Supplemental injections in the vicinity of MW-61R (including TMW-10 and TMW-11).

Each proposed supplemental ISCR remedy is summarized below. A work plan for these supplemental ISCR remedies will be submitted for ADEQ review and approval [including Underground Injection Control (UIC) Program review and approval] after ADEQ approval of this Revised Action Plan; therefore, the ISCR treatment zones described below are presented conceptually (i.e. specific details will be provided in a subsequent work plan). The proposed supplemental ISCR remedies are intended to be implemented in a manner similar to the ISCR effort performed in the vicinity of MW-61.

Northeast Portion of the North Plume

The northeast boundary of the North Plume is characterized by MW-61R, MW-196, MW-195, TMW-20, TMW-29 and MW-194. The boundary of the plume is entirely characterized, excluding TCE impacts in groundwater at MW-194 exceeding the RAL (TCE concentrations at MW-194 have been 12.7 µg/L, 10.8 µg/L and 15.4 µg/L in November 2016, April 2017 and October 2017, respectively). The TCE impacts in groundwater at MW-194 do not represent a risk to human health or the environment, but do indicate a potential for plume expansion at this location. Further characterization in the vicinity of MW-194 is limited due to underground and overhead utilities immediately east of MW-194 (i.e. between MW-194 and Jenny Lind Road) and the on-going construction along Jenny Lind Road. Whirlpool has completed a Settlement Agreement with the property owners east of Jenny Lind Road at this location and the respective Settlement Agreements include a deed restriction precluding the use of shallow groundwater (See Figure 5-1 in Appendix A).

Although the north plume boundaries have been characterized (noting the limited TCE groundwater impact at MW-194 described above), TCE groundwater impacts near the plume boundary at TMW-21, TMW-22 and TMW-24 exhibit TCE concentrations ranging from 385 µg/L to 486 µg/L. Supplemental remediation is proposed near these monitoring wells to reduce TCE concentrations and mitigate the potential for TCE in groundwater to migrate toward the current plume boundaries.

The proposed ISCR treatment zones for the northeast portion of the North Plume are depicted on Figure 4. The ISCR treatment zones consist of a primary treatment zone extending east from a location near TMW-22 towards TMW-21 and then extending south approximately 150 feet

(combined length approximately 300 feet). The treatment zone will be positioned immediately up-gradient of TMW-21 and TMW-22 to facilitate using these wells for subsequent monitoring. Additional shorter secondary treatment zones are proposed northeast between TWM-21 and MW-195 to address TCE impacts in groundwater that may have migrated past TMW-21 and between the structures at 5812 and 5814 Jenny Lind Road and immediately up-gradient of TMW-29.

Southwest Portion of the South Plume

The southwest boundary of the South Plume is characterized by MW-186, MW-187, TMW-30, TMW-26, TMW-16, TMW-27, TMW-25 and MW-182. The boundary of the south plume is entirely characterized, excluding TCE impacts in groundwater immediately down-gradient of TMW-26. As described above, additional investigation down-gradient of TMW-26 is proposed.

TCE groundwater impacts near the plume boundary characterized by TMW-26 and TMW-16 exhibit TCE concentrations of 36.3 µg/L and 956 µg/L, respectively. A supplemental ISCR remedy is proposed near these monitoring wells to preclude TCE groundwater impacts from migrating beyond the property boundary near TMW-26.

The proposed ISCR treatment zones for the southwest portion of the South Plume are depicted on Figure 3. The treatment zones consist of a primary treatment zone extending north and south down-gradient from TWM-16, a secondary treatment zone up-gradient of TMW-16 to reduce the TCE concentrations in groundwater at this specific location prior to reaching the primary treatment zone and a tertiary treatment zone down-gradient of TMW-26 to provide supplemental treatment for groundwater past the primary treatment zone.

Vicinity of MW-185

An action plan is necessary at MW-185 since the last two monitoring events exhibited TCE concentrations greater than the RAL (8 µg/L in April 2017 and 12.7 µg/L in October 2017 vs. 5 µg/L). An ISCR treatment zone is proposed in the vicinity of MW-185 to reduce TCE concentrations in this area to below the RAL. The impacts in this area are unexpected due to little or no groundwater gradient at this location and the former shipping department was located immediately up-gradient of the location of MW-185 (i.e. final assembled products were shipped from this location vs. receiving of various materials for manufacture and assembly of final products). Monitoring at MW-185 commenced in September 2015 and TCE concentrations were below detection limits or less than 1 µg/L through May 2016. Recent TCE concentrations in groundwater were 3.1 µg/L, 8 µg/L and 12.7 µg/L in November 2016, April 2017 and October 2017, respectively.

Supplemental Injections in the Vicinity of MW-61 (including TMW-10 and TMW-11)

Supplemental injections are proposed in the vicinity of MW-61 while injections are performed for the northeast portion of the North Plume. Additional injections are proposed in the vicinity of TMW-10 since access to this location was limited during the initial injections performed in October 2015 and additional injections are proposed up-gradient of MW-61R. Approximately six to ten supplemental injections are proposed in this area.

3.3 Schedule

We anticipate comments from ADEQ on this Revised Action Plan will be addressed to facilitate implementation of the investigation and supplemental ISCR remedy phases of this Revised Action Plan beginning in late March 2018 to early April 2018 (dependent upon Arkansas Missouri Railroad access approval, which Whirlpool will pursue beginning in January 2018). This will facilitate sequential performance of the proposed investigation followed by the spring semi-annual groundwater monitoring event in mid to late April 2018. The data from the proposed investigation and spring semi-annual monitoring event are anticipated by mid-May 2018 (assuming the investigation and monitoring are completed by late April 2018).

If the supplemental investigation data indicate that the TCE concentrations in groundwater greater than 1 µg/L extend west beyond the west property boundary and west beyond the Arkansas Missouri Railroad spur, then an addendum to this Revised Action Plan detailing proposed supplemental investigation west of the Arkansas Missouri Railroad spur will be submitted to ADEQ for review and approval. The addendum to the Revised Action Plan will be submitted within 60 days of the recent of the data from the spring semi-annual monitoring event.

A work plan for implementation of the supplemental ISCR remedies will be submitted within 30 days of the ADEQ approval of this Revised Action Plan. UIC permit correspondence will be submitted within 30 days of ADEQ's approval of the work plan and we anticipate UIC permit approval within 30 days of submittal. The supplemental ISCR remedies will be implemented within 30 to 60 days of UIC permit approval depending upon subcontractor availability. Therefore, the supplemental ISCR remedies are anticipated to be implemented in July or August 2018. This schedule is favorable to facilitate an approximate 90 day monitoring event during the November 2018 Annual Groundwater Monitoring event to assess the effectiveness of the supplemental ISCR remedies.

Tables

TABLE 1
INITIAL RESULTS TEMPORARY MONITORING WELLS
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	TMW-20	TMW-21	TMW-22	TMW-23	TMW-24
Field Sample ID		TMW-20-201710	TMW-21-201710	TMW-22-201710	TMW-23-201710	TMW-24-201710
Sample Date		10/10/2017	10/10/2017	10/13/2017	10/13/2017	10/10/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments						
Volatile Organic Compounds						
Acetone	12000	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)
Benzene	5	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)
Bromoform	80	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)
Bromomethane	7	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
2-Butanone	4900	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	720	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
Carbon Tetrachloride	5	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)
Chlorobenzene	100	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
Chloroethane	12000	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Chloroform	80	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Dibromochloromethane	80	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
1,1-Dichloroethane	2.4	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	5	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	7	U (0.20)	1.0 J (0.20)	1.5 (0.20)	U (0.20)	0.91 J (0.20)
cis-1,2-Dichloroethene	70	U (0.080)	8.7 (0.080)	13.9 (0.080)	2.0 (0.080)	7.7 (0.080)
trans-1,2-Dichloroethene	100	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
4-Methyl-2-pentanone	1000	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Methylene Chloride	5	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
1,1,2,2-Tetrachloroethane	0.066	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	5	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	1000	U (0.17)	U (0.17)	U (0.17)	U (0.17)	0.69 J (0.17)
1,1,1-Trichloroethane	200	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)
1,1,2-Trichloroethane	5	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
Trichloroethene	5	U (0.17)	**375 (0.17)**	**636 (0.17)**	**131 (0.17)**	**309 (0.17)**
Vinyl Chloride	2	U (0.13)	0.16 J (0.13)	U (0.13)	U (0.13)	0.18 J (0.13)

Notes:

1. All concentrations are presented in µg/L except where noted.
2. Only compounds with at least one detection are shown.
3. Concentrations that exceed the Remedial Action Levels per ADEQ RADD Issued Dec 2013 are bolded

U = Not detected

J = Estimated concentration

( ) = Method detection limit for VOCs

RADD = Remedial Action Decision Document

ADEQ = Arkansas Department of Environmental Quality

VOC = Volatile Organic Compounds

µg/L = Micrograms per Liter

mL = Milliliters

TABLE 1
INITIAL RESULTS TEMPORARY MONITORING WELLS
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	TMW-25	TMW-26	TMW-27	TMW-28	TMW-29	TMW-30
Field Sample ID		TMW-25-201710	TMW-26-201710	TMW-27-201710	TMW-28-201710	TMW-29-201710	TMW-30-201710
Sample Date		10/11/2017	10/11/2017	10/11/2017	10/12/2017	10/12/2017	10/13/2017
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments							
Volatile Organic Compounds							
Acetone	12000	3.3 J (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)	U (1.9)
Benzene	5	0.11 J (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)
Bromoform	80	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)
Bromomethane	7	U (0.16)	0.36 J (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
2-Butanone	4900	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	720	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
Carbon Tetrachloride	5	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)
Chlorobenzene	100	0.96 J (0.21)	U (0.21)	U (0.21)	1.8 (0.21)	U (0.21)	U (0.21)
Chloroethane	12000	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Chloroform	80	0.26 J (0.14)	0.50 J (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Dibromochloromethane	80	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
1,1-Dichloroethane	2.4	U (0.050)	0.68 J (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	5	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	7	0.33 J (0.20)	0.57 J (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	8.8 (0.080)	4.2 (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)
trans-1,2-Dichloroethene	100	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
4-Methyl-2-pentanone	1000	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Methylene Chloride	5	U (0.15)	0.35 J (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
1,1,2,2-Tetrachloroethane	0.066	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	5	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	1000	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)
1,1,1-Trichloroethane	200	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)
1,1,2-Trichloroethane	5	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
Trichloroethene	5	**140 (0.17)**	**185 (0.17)**	0.20 J (0.17)	U (0.17)	U (0.17)	U (0.17)
Vinyl Chloride	2	0.19 J (0.13)	0.23 J (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)

Notes:

1. All concentrations are presented in µg/L except where noted.
2. Only compounds with at least one detection are shown.
3. Concentrations that exceed the Remedial Action Levels per ADEQ RADD Issued Dec 2013 are bolded

U = Not detected

J = Estimated concentration

( ) = Method detection limit for VOCs

RADD = Remedial Action Decision Document

ADEQ = Arkansas Department of Environmental Quality

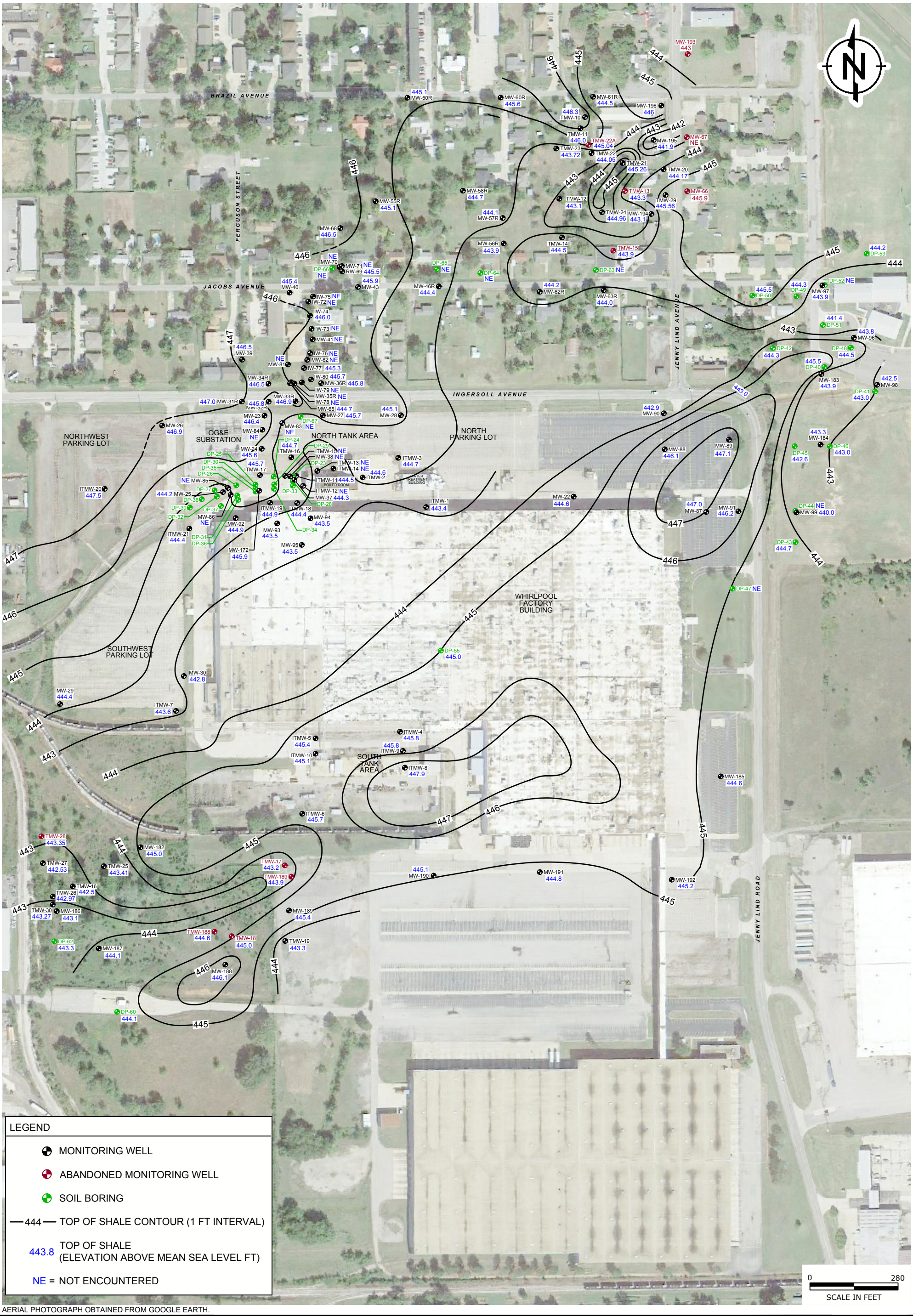
VOC = Volatile Organic Compounds

µg/L = Micrograms per Liter

mL = Milliliters

Figures

L:\Loop Project Files\00_CAD FILES\34\3437500_Whirlpool\3437500S_PHII\2017-10\01_Top of Competent Shale.dwg



AERIAL PHOTOGRAPH OBTAINED FROM GOOGLE EARTH.

RAMBOLL ENVIRON

DRAFTED BY: CKL | DATE: 11/1/17

TOP OF COMPETENT SHALE

WHIRLPOOL FACILITY
FORT SMITH, ARKANSAS

FIGURE
1

3437500S

0 150 300 450 600

Feet

1 inch = 300 feet

Notes
- Water levels measured October 23rd, 2017
- Water levels in ft
1) Water levels measured October 24th, 2017
2) Water levels not used in contour

MW-50R 454.95 | MW-60R 457.39 | MW-61R 452.76 | MW-196 453.86 | MW-195 455.46 1) | TMW-10 455.99 | TMW-11 456.19 | TMW-23 457.21 | TMW-22 456.57 | TMW-20 457.33 | TMW-21 456.68 | TMW-29 453.13 | MW-55R 462.70 | MW-58R 462.16 | TMW-12 458.33 | MW-57R 459.70 | TMW-24 457.33 | MW-194 457.88 | IW-72 462.77 | MW-68 462.94 | MW-40R 462.92 | MW-56R 459.93 | MW-71 461.93 | IW-73 462.92 | TMW-14 458.14 | MW-70 462.93 | MW-82 462.90 | RW-69 462.53 | MW-46R 462.55 1) | MW-63R 459.92 | MW-62R 458.84 | MW-97 451.23 | IW-77 462.98 | IW-75 462.95 | MW-81 462.91 | IW-74 462.85 | MW-35R 462.91 | MW-41R 462.17 | MW-96 451.72 | MW-39R 463.03 | IW-76 462.78 | IW-78 462.87 | IW-115 462.49 | MW-183 453.47 | MW-65 462.87 | IW-80 462.83 | MW-34R 463.02 | MW-36R 462.86 | MW-98 451.73 1) | MW-23 462.97 | IW-79 462.94 | MW-28 462.72 | MW-26 463.29 | MW-83 462.86 | MW-27 462.70 | MW-90 464.46 2) | MW-84 462.80 | MW-24 462.97 | ITMW-16 462.67 | MW-89 456.80 | MW-184 456.33 1) | MW-88 460.41 | MW-85 462.75 | ITMW-2 462.36 | ITMW-20 462.90 | MW-25 462.95 | MW-22 461.30 | MW-86 462.77 | ITMW-14 462.54 | ITMW-1 461.00 | MW-87 458.04 | MW-99 457.23 | ITMW-21 462.82 | ITMW-13 462.65 | MW-91 457.51 | MW-92 462.82 | ITMW-12 462.74 | ITMW-17 462.28 | ITMW-11 462.26 | MW-172 462.84 | MW-94 462.47 | ITMW-19 462.82 | MW-37 463.07 | ITMW-15 463.00 | ITMW-18 461.59 2) | MW-93 462.69 | MW-95 462.54 | MW-38 462.96 | MW-30 461.88 | MW-29 462.18 | ITMW-7 461.04 | ITMW-5 459.65 | ITMW-4 459.69 | ITMW-10 459.64 | ITMW-9 459.53 | MW-185 459.30 | ITMW-6 459.49 | TMW-27 456.03 | MW-182 458.66 | TMW-25 456.76 | MW-191 459.51 | MW-190 459.52 | MW-192 459.45 | TMW-16 456.30 | TMW-30 455.54 | MW-189 459.45 | MW-186 455.76 | TMW-26 455.26 1) | MW-187 457.30 | TMW-19 459.26 | MW-188 459.07

Brazil Ave | Ingersoll Ave | Ferguson St | Jenny Lind Rd | Boys Club Ln

Monitoring Well Location
Groundwater Contour
Groundwater Contour (dashed where inferred)
Approximate Property Boundary

RAMBOLL ENVIRON

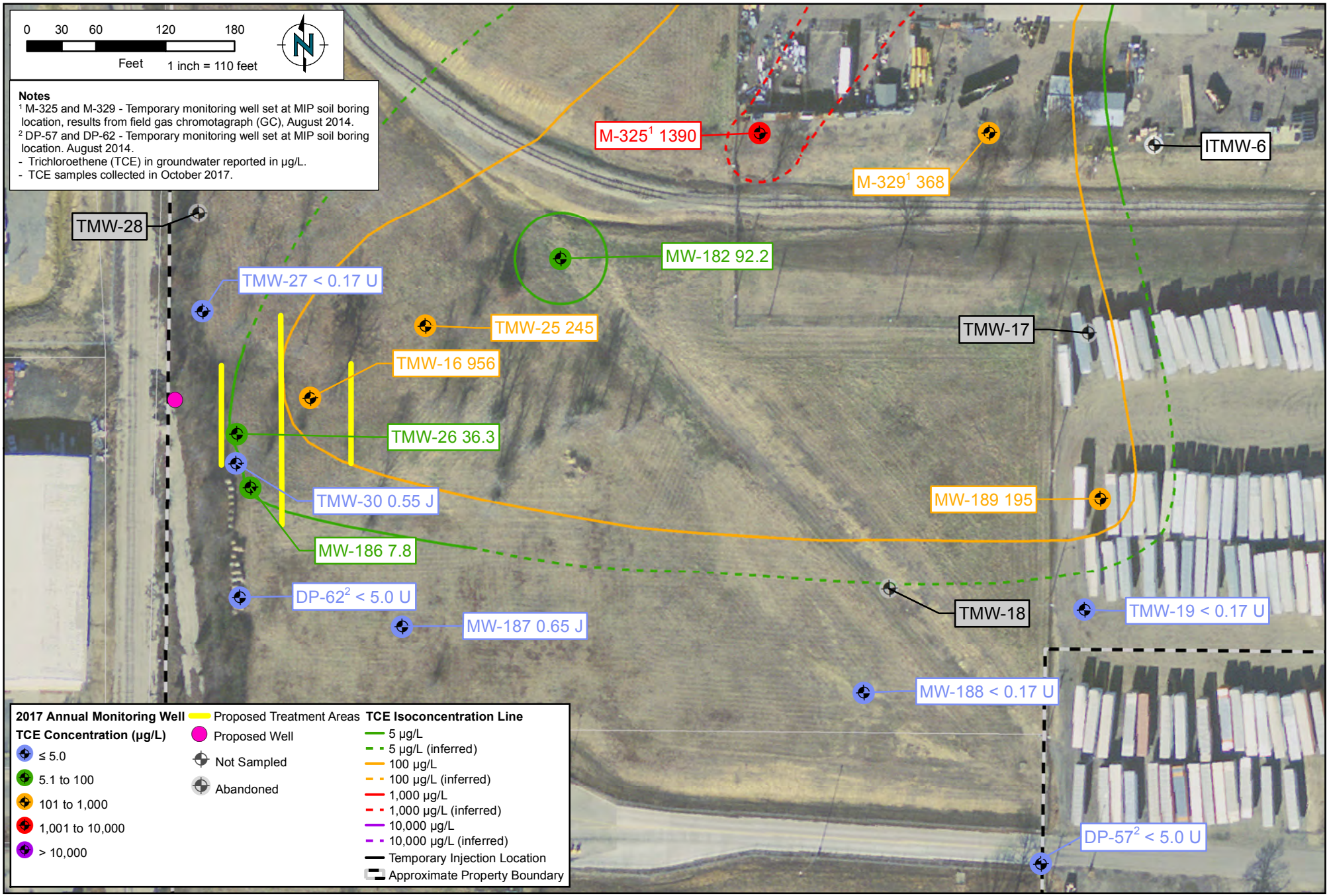
2017 ANNUAL SAMPLING POTENTIOMETRIC SURFACE

Whirlpool Facility - Fort Smith, Arkansas

Figure 2

DRAFTED BY: FK/WZ | DATE: 11/21/2017 | PROJECT: 1690003330

FILE: L:\Loop Project Files\Whirlpool Fort Smith\2017 Semi Annual M&R\mxd\Second 2017 Semi-Annual Potentiometric Surface Map_20171117.mxd



RAMBOLL ENVIRON

DRAFTED BY: FK | DATE: 01/08/2018

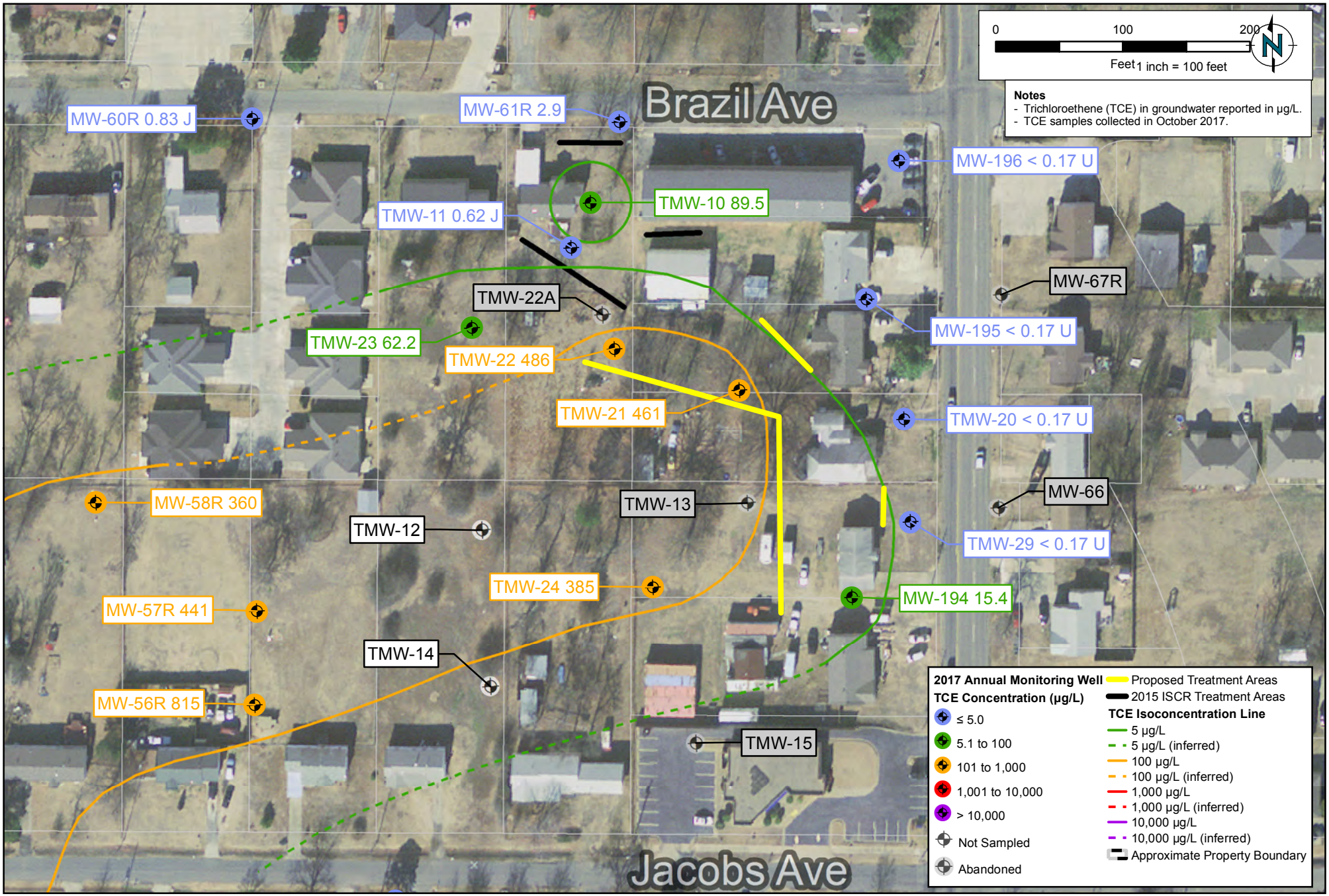
REVISED ACTION PLAN
SOUTH PLUME

Whirlpool Facility - Fort Smith, Arkansas

Figure 3

PROJECT: 1690003330

FILE: L:\Loop Project Files\Whirlpool Fort Smith\2017 Semi Annual M&R\mxd\Revised Action Plan - Southern Plume_20180108.mxd



RAMBOLL ENVIRON

DRAFTED BY: FK | DATE: 01/08/2018

REVISED ACTION PLAN
NORTH PLUME

Whirlpool Facility - Fort Smith, Arkansas

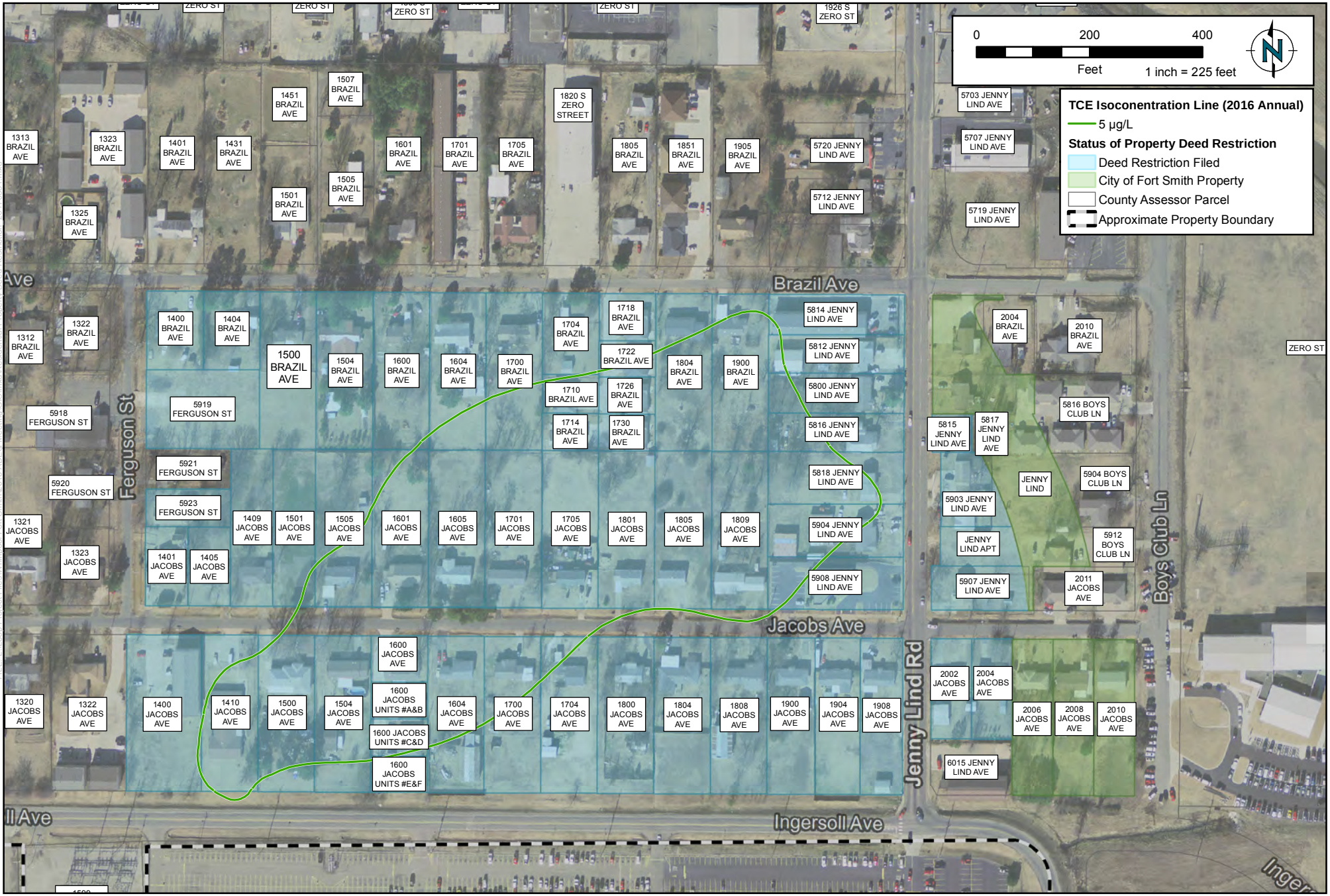
Figure 4

PROJECT: 1690003330

FILE: L:\Loop Project Files\Whirlpool Fort Smith\2017 Semi Annual M&R\mxd\Revised Action Plan - N and NE Plume_20180108.mxd

Appendix A

Figure 5-1
Status of Residential Property Deed Restriction



RAMBOLL ENVIRON

DRAFTED BY: FK | DATE: 03/31/2017

STATUS OF RESIDENTIAL PROPERTY DEED RESTRICTION

Whirlpool Facility - Fort Smith, Arkansas

Figure 5-1

PROJECT:

FILE: L:\Loop Project Files\Whirlpool Fort Smith\2016 ADEQ Meeting\GIS\mxd\Residential Property Deed Restriction_20170331.mxd

Appendix B

Figure 2A
2016 Annual Sampling TCE Isoconcentration Map Northern and Northeastern Plumes

Figure 2B
2016 Annual Sampling TCE Isoconcentration Map Southern Plume

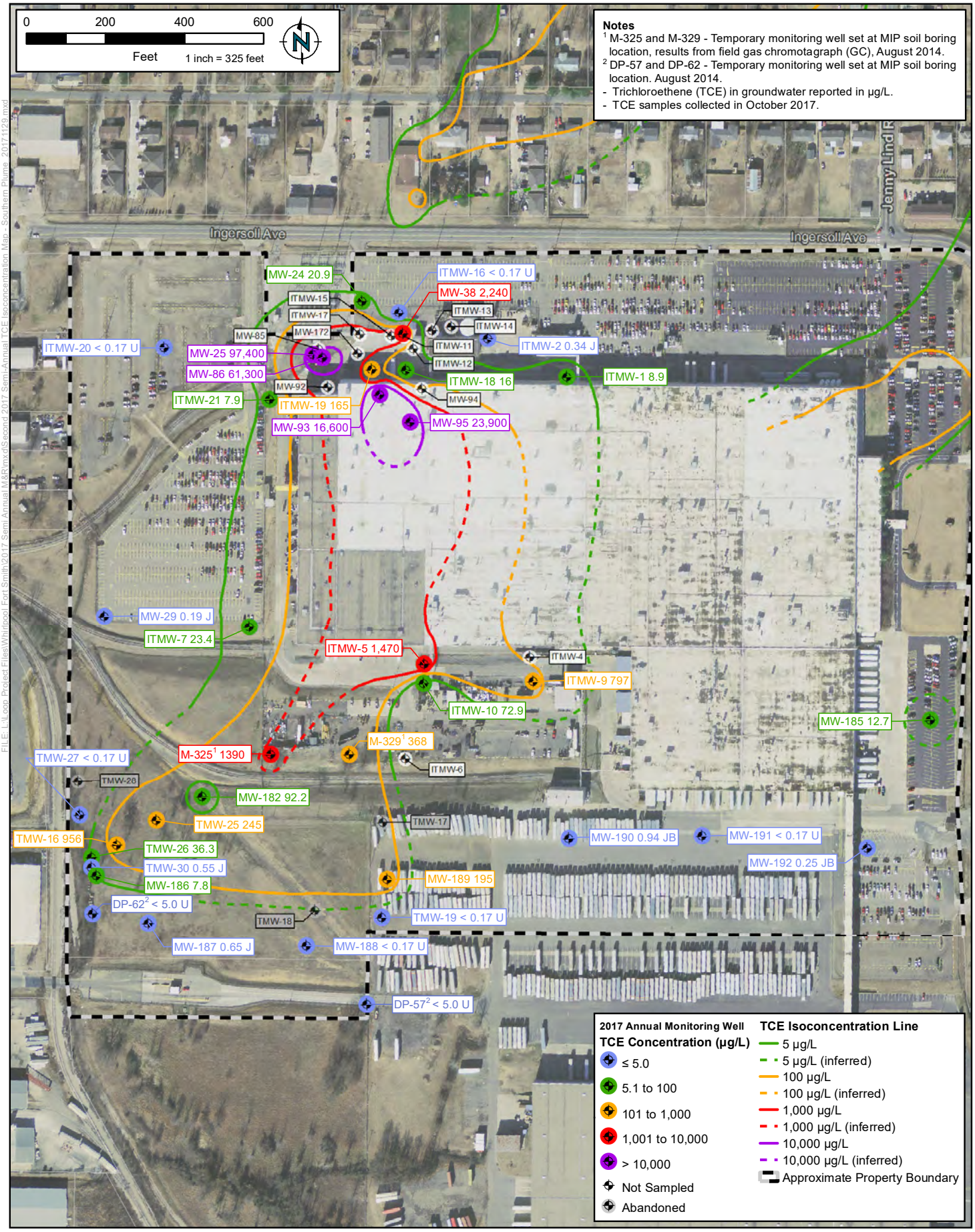
RAMBOLL ENVIRON

2017 ANNUAL TCE ISOCONCENTRATION MAP NORTHERN AND NORTHEASTERN PLUMES

Whirlpool Facility - Fort Smith, Arkansas

Figure 2A

DRAFTED BY: FK/WZ | DATE: 11/29/2017 | PROJECT: 1690003330



FILE: L:\Loop Project Files\Whirlpool Fort Smith\2017 Semi-Annual M&R\mxd\Second 2017 Semi-Annual TCE Isoconcentration Map - Southern Plume_20171129.mxd

RAMBOLL ENVIRON

2017 ANNUAL TCE ISOCONCENTRATION MAP SOUTHERN PLUME

Whirlpool Facility - Fort Smith, Arkansas

Figure 2B

DRAFTED BY: FK/WZ | DATE: 11/29/2017 | PROJECT: 1690003330

Appendix C

Temporary Monitoring Well Boring Logs

RAMBOLL ENVIRON

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: TMW-20		Date(s): **10/10/2017**	
Location: **Fort Smith, Arkansas**			
Logged By: **J. Pavlowsky**		Checked By: **M. Wilson, PG**	
Contractor: **McCray Drilling, LLC**		Purpose: **Temporary Monitoring Well**	
Drilling Method: **Hollow Stem Auger**		GS Elevation: **461.17 ft amsl**	TOC Elevation: **460.57 ft amsl**
Sampling Method: **HSA Continuous Sampler**		North: **369929.26**	East: **592210.02**
Well Construction:		Borehole Dia.: **8.25 inches**	Total Depth: **18.5 feet**
Blank Casing: Sch. 40 PVC 2 Inch	0 FT to 11.5 FT	Project Number: **3437500S**	
Screen: Sch. 40 2 Inch 0.010 PVC	11.5 FT to 18.5 FT	Project Name: **Whirlpool Corporation**	
Annular Fill: Bentonite	0 FT to 9.5 FT	Remarks:	
Sand	9.5 FT to 18.5 FT		

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
460	0	4				MH	Clayey Silt, dark brown to light brown with depth, trace reddish brown, trace coarse sand, non-plastic, dry		Flush Mount
						CL	Silty Clay, light brownish gray, trace reddish brown, with black nodules, trace sand, coarse, trace gravel, fine, sub-angular, plastic, slightly stiff, moist		
	5						Silty Clay, orange, with gray mottling, with black nodules, with sand, medium to coarse, trace gravel, fine, plastic, slightly stiff, moist		
455		5					Silty Clay, orange, with gray mottling, with gravel, trace subrounded, fine, plastic, stiff, moist		
						CL	Sandy Clay, dark brown and orange, with black nodules, sand, medium to coarse, with gravel, fine, slightly stiff, cohesive, moist		
	10					CL	Silty Clay, orange and gray, with sand, medium to coarse, trace black nodules, plastic, stiff, moist		
450		4	TMW-20-SL(12.5-13.0FT)-101017			SC	Clayey Sand, gray, very fine, soft, slightly cohesive, wet		
						GC	Clayey Gravel, orange, poorly sorted, subrounded to subangular, with poorly sorted sand, wet		
	15					CL	Silty Clay, light orangish gray, very plastic, stiff, moist		
445		3.5				MH	Clayey Silt (Weathered shale), gray to dark gray with depth, crumbles, increasingly laminated with depth, stiff, moist		
							Shale, dark gray, laminated, dry		
	20								
440									
	25								
435									

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS).GPJ; 11/21/17

RAMBOLL ENVIRON

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: TMW-21		Date(s): **10/10/2017**	
Location: **Fort Smith, Arkansas**			
Logged By: **J. Pavlowsky**		Checked By: **M. Wilson, PG**	
Contractor: **McCray Drilling, LLC**		Purpose: **Temporary Monitoring Well**	
Drilling Method: **Hollow Stem Auger**		GS Elevation: **460.26 ft amsl**	TOC Elevation: **460.01 ft amsl**
Sampling Method: **HSA Continuous Sampler**		North: **369958.89**	East: **592081.57**
Well Construction:		Borehole Dia.: **8.25 inches**	Total Depth: **20.0 feet**
Blank Casing: Sch. 40 PVC 2 Inch	0 FT to 10 FT	Project Number: **3437500S**	
Screen: Sch. 40 2 Inch 0.010 PVC	10 FT to 20 FT	Project Name: **Whirlpool Corporation**	
Annular Fill: Bentonite	0 FT to 8 FT	Remarks:	
Sand	8 FT to 20 FT		

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
460	0	5				MH	Topsoil, with root hairs Clayey Silt, light grayish brown, trace reddish brown, trace sand, coarse, stiff, cohesive, dry		Flush Mount
						CL	Silty Clay, orange and gray, with black nodules, with gravel, fine, trace sand, coarse, plastic, stiff, slightly moist		
455	5	5				MH	Clayey Silt, brownish orange, with black nodules, with sand, fine to coarse, cohesive moist		
450	10	4	TMW-21-SL(14.0-14.5FT)-101017			SC	Clayey Sand, gray, fine, soft, slightly cohesive, wet		
						GC	Clayey Gravel, reddish brown, with silt, stiff, cohesive, moist		
445	15	5					Shale, brownish gray, stiff, laminated, more competent with depth		
440	20								
435	25								

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS).GPJ; 11/21/17

RAMBOLL ENVIRON

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: TMW-22		Date(s): **10/11/2017**	
Location: **Fort Smith, Arkansas**			
Logged By: **N. Zurweller, RG**		Checked By: **M. Wilson, PG**	
Contractor: **McCray Drilling, LLC**		Purpose: **Temporary Monitoring Well**	
Drilling Method: **Hollow Stem Auger**		GS Elevation: **461.05 ft amsl**	TOC Elevation: **460.82 ft amsl**
Sampling Method: **HSA Continuous Sampler**		North: **369996.88**	East: **591985.19**
Well Construction:		Borehole Dia.: **8.25 inches**	Total Depth: **19.0 feet**
Blank Casing: Sch. 40 PVC 2 Inch 0 FT to 12 FT		Project Number: **3437500S**	
Screen: Sch. 40 2 Inch 0.010 PVC 12 FT to 19 FT		Project Name: **Whirlpool Corporation**	
Annular Fill: Bentonite 0 FT to 10 FT; Sand 10 FT to 19 FT		Remarks:	

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
460	0	5					Topsoil, light brown, silty, with root hairs, loose, dry		Flush Mount
						CL	Silty Clay, reddish brown, with gray mottling, with black nodules, slightly plastic, very stiff, dry		
455	5	5				CL	Sandy Clay, reddish brown, with black nodules, trace gravel, fine, subangular, sand, fine to coarse, slightly cohesive, slightly stiff, slightly moist		
						CL	Silty Clay, reddish brown, with gray mottling, with sand, very fine, trace black nodules, slightly plastic, stiff, slightly moist		
450	10	4	TMW-22-SL(15.5-16.0FT)-101117			GC	Clayey Gravel, reddish brown, with gray mottling, with sand, fine to coarse, gravel, fine to coarse, subrounded, slightly cohesive, moist		
445	15	4				MH	Clayey Silt (weathered shale), reddish brown, with gray, stiff, slightly laminated, dry		
							Shale, dark gray, hard, laminated, dry		
440	20								
435	25								

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS).GPJ; 11/21/17

RAMBOLL ENVIRON

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: TMW-22A		Date(s): **10/11/2017**	
Location: **Fort Smith, Arkansas**			
Logged By: **N. Zurweller, RG**		Checked By: **M. Wilson, PG**	
Contractor: **McCray Drilling, LLC**		Purpose: **Temporary Monitoring Well**	
Drilling Method: **Hollow Stem Auger**		GS Elevation: **460.04 ft amsl**	TOC Elevation: **Not available**
Sampling Method: **HSA Continuous Sampler**		North: **370023.78**	East: **591977.18**
Well Construction:		Borehole Dia.: **8.25 inches**	Total Depth: **15.0 feet**
Blank Casing: Sch. 40 PVC 2 Inch	0 FT to 10 FT	Project Number: **3437500S**	
Screen: Sch. 40 2 Inch 0.010 PVC	10 FT to 15 FT	Project Name: **Whirlpool Corporation**	
Annular Fill: Bentonite	0 FT to 8 FT	Remarks:	
Sand	8 FT to 15 FT		

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
						MH	Topsoil, dark brown, with root hairs, moist Clayey Silt		Flush Mount
		5				CL	Silty Clay, reddish brown, with gray mottling, with black nodules, plastic, very stiff, slightly moist		
455	5								
		5					Silty Clay, with reddish brown, trace gray mottling, with black nodules, with sand, fine to coarse, trace gravel, fine to coarse, subrounded to subangular, slightly plastic, stiff, moist		
450	10					GC	Clayey Gravel, reddish brown, with gray mottling, with sand, fine to coarse, gravel, fine to coarse, subrounded, cohesive, moist, organic odor		
		3							
445	15					MH	Clayey Silt (weathered shale), yellowish brown, very stiff, slightly laminated, dry Shale, very dark gray, hard, laminated, dry		
440	20								
435	25								

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS).GPJ; 11/21/17

RAMBOLL ENVIRON

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: TMW-23		Date(s): **10/12/2017**	
Location: **Fort Smith, Arkansas**			
Logged By: **J. Pavlowsky**		Checked By: **M. Wilson, PG**	
Contractor: **McCray Drilling, LLC**		Purpose: **Temporary Monitoring Well**	
Drilling Method: **Hollow Stem Auger**		GS Elevation: **462.22 ft amsl**	TOC Elevation: **461.94 ft amsl**
Sampling Method: **HSA Continuous Sampler**		North: **370019.46**	East: **591874.44**
Well Construction:		Borehole Dia.: **8.25 inches**	Total Depth: **19.0 feet**
Blank Casing: Sch. 40 PVC 2 Inch 0 FT to 14 FT		Project Number: **3437500S**	
Screen: Sch. 40 2 Inch 0.010 PVC 14 FT to 19 FT		Project Name: **Whirlpool Corporation**	
Annular Fill: Bentonite 0 FT to 12 FT; Sand 12 FT to 19 FT		Remarks:	

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
							Topsoil		Flush Mount
				0.9		ML	Sandy Silt, light brown, fine, loose, soft, dry		
460		5				MH	Clayey Silt, dark brown, with black and gray mottling, with root hairs, soft, crumbles, moist		
				1.7		CL	Silty Clay, orangish brown, with gray mottling, trace black nodules, with sand, fine, crumbles, stiff, dry		
	5								
				1.5					
455		5					Silty Clay, dark orange brown, with gray mottling, with black nodules, with sand, slightly plastic, very stiff, moist		
				2.2					
	10						Silty Clay, dark orange brown, with gray mottling, with black nodules, with sand, with gravel, fine to coarse, slightly plastic, very stiff, moist		
						SC	Clayey Sand, gray and orange, fine, plastic, soft, crumbles, moist		
450		5		2.6		GC	Clayey Gravel, dark orangish brown, subangular, soft, crumbles, moist		
			TMW-23-SL(15.0-15.5FT)-101217	1.6		CL	Sandy Clay, orange, with gray mottling, fine, very stiff, plastic, crumbles, moist		
	15					GC	Clayey Gravel, orange, fine to coarse, plastic, soft, wet		
				1.6					
445		4				MH	Clayey Silt (weathered shale), nonplastic, laminated, soft, dry		
				1.3					
							Shale, dark gray, laminated		
	20								
440									
	25								
435									

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS).GPJ; 11/21/17

RAMBOLL ENVIRON

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: TMW-24		Date(s): **10/10/2017**	
Location: **Fort Smith, Arkansas**			
Logged By: **N. Zurweller, RG**		Checked By: **M. Wilson, PG**	
Contractor: **McCray Drilling, LLC**		Purpose: **Temporary Monitoring Well**	
Drilling Method: **Hollow Stem Auger**		GS Elevation: **461.46 ft amsl**	TOC Elevation: **461.23 ft amsl**
Sampling Method: **HSA Continuous Sampler**		North: **369807.60**	East: **592005.52**
Well Construction:		Borehole Dia.: **8.25 inches**	Total Depth: **19.0 feet**
Blank Casing: Sch. 40 PVC 2 Inch	0 FT to 12 FT	Project Number: **3437500S**	
Screen: Sch. 40 2 Inch 0.010 PVC	12 FT to 19 FT	Project Name: **Whirlpool Corporation**	
Annular Fill: Bentonite	0 FT to 10 FT	Remarks:	
Sand	10 FT to 19 FT		

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
460	0	5				MH	Topsoil, light brown, with root hairs, loose, dry Clayey Silt, light grayish brown, trace root hairs, slightly cohesive, dry		Flush Mount
						CL	Silty Clay, reddish brown, with black nodules, trace root hairs, plastic, very stiff, dry		
	5						Silty Clay, reddish brown, with gray, trace sand, coarse, trace gravel, fine, subangular, trace root hairs, slightly plastic, stiff, dry		
455		5					Silty Clay as above, with black nodules		
							Silty Clay as above, trace black nodules, increasing sand with depth		
	10					SC	Clayey Sand, reddish brown, with gray, very fine, slightly plastic, slightly stiff, moist		
450		4	TMW-24-SL(15.0-15.5FT)-101017						
	15					GC	Clayey Gravel, reddish brown, with sand, fine to coarse, gravel, fine to coarse, subrounded to subangular, cohesive, wet		
445		4				MH	Clayey Silt (weathered shale), yellowish brown and grayish brown, very stiff, slightly laminated, moist		
							Shale, reddish brown and gray, with weathered shale, hard, laminated, dry		
							Shale, dark gray, hard, laminated, dry		
	20								
440									
	25								
435									

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS).GPJ; 11/21/17

RAMBOLL ENVIRON

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: TMW-25		Date(s): **10/11/2017**	
Location: **Fort Smith, Arkansas**			
Logged By: **J. Pavlowsky**		Checked By: **M. Wilson, PG**	
Contractor: **McCray Drilling, LLC**		Purpose: **Temporary Monitoring Well**	
Drilling Method: **Hollow Stem Auger**		GS Elevation: **473.41 ft amsl**	TOC Elevation: **473.14 ft amsl**
Sampling Method: **HSA Continuous Sampler**		North: **367847.51**	East: **590283.05**
Well Construction:		Borehole Dia.: **8.25 inches**	Total Depth: **30.5 feet**
Blank Casing: Sch. 40 PVC 2 Inch	0 FT to 20.5 FT	Project Number: **3437500S**	
Screen: Sch. 40 2 Inch 0.010 PVC	20.5 to 30.5 FT	Project Name: **Whirlpool Corporation**	
Annular Fill: Bentonite	0 FT to 18.5 FT	Remarks:	
Sand	18.5 FT to 30.5 FT		

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
470	0	5					Topsoil		Flush Mount
							Fill, light brown, silty, dry		
							Fill, red brown, silty, loose, dry		
						MH	Fill, light brown/tan, silty, loose, dry		
							Clayey Silt, light brown, with gray mottling, with black nodules, loose, dry		
	5	5				ML	Silt, light brown, with black nodules, loose, dry		
465						CL	Silty Clay, orangish brown, with gray mottling, with black nodules, slightly plastic, very stiff, crumbles, dry		
	10	5							
460									
	15	5							
455						CL	Sandy Clay, orange, with gray mottling, with black nodules, increasing sand with depth, fine, plastic, stiff, dry		
	20	5							
450									
	25	3.5	TMW-25-SL(28-28.5FT)-101117			SC	Clayey Sand, light gray, very fine, slightly cohesive, soft, moist		
445						GC	Clayey Gravel, brown, poorly sorted, with trace cobbles, nonplastic, soft, wet		
	30	.5				CL	Silty Clay (weathered shale), orangish brown, with pieces of dark grey shale, laminated, stiff, slightly plastic, wet		
440							Shale, dark gray, laminated		

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS).GPJ; 11/21/17

RAMBOLL ENVIRON

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: TMW-26		Date(s): **10/10/2017**	
Location: **Fort Smith, Arkansas**			
Logged By: **N. Zurweller, RG**		Checked By: **M. Wilson, PG**	
Contractor: **McCray Drilling, LLC**		Purpose: **Temporary Monitoring Well**	
Drilling Method: **Hollow Stem Auger**		GS Elevation: **469.47 ft amsl**	TOC Elevation: **472.10 ft amsl**
Sampling Method: **HSA Continuous Sampler**		North: **367762.97**	East: **590114.70**
Well Construction:		Borehole Dia.: **8.25 inches**	Total Depth: **28.0 feet**
Blank Casing: Sch. 40 PVC 2 Inch 0 FT to 18 FT		Project Number: **3437500S**	
Screen: Sch. 40 2 Inch 0.010 PVC 18 FT to 28 FT		Project Name: **Whirlpool Corporation**	
Annular Fill: Bentonite 0 FT to 16 FT; Sand 16 FT to 28 FT		Remarks:	

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
							Topsoil, light brown, with root hairs, loose, dry		Flush Mount
		5				MH	Clayey Silt, light brown, with reddish brown, trace root hairs, slightly cohesive, loose, dry		
465	5					CL	Silty Clay, reddish brown and light grayish brown, trace black nodules, slightly plastic, dry		
		4					Silty Clay, reddish brown, with gray, trace black nodules, trace root hairs, trace sand, very fine, increasing sand with depth, slightly plastic, very stiff, dry		
460	10								
		5							
455	15								
		3.5							
450	20					SC	Clayey Sand, reddish brown, with gray, trace black nodules, very fine, cohesive, moist		
		3.0	TMW-26-SL(23-23.5FT)-101017			GC	Clayey Gravel, reddish brown, with sand, fine to coarse, trave black nodules, gravel, fine to coarse, subrounded to subangular, with cobbles (broken), cohesive, wet		
445	25					MH	Clayey Silt (weathered shale), yellowish brown, slightly cohesive, very stiff, slightly laminated, slightly moist		
		3.0					Shale, very dark gray, hard, laminated, dry		
440									

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS).GPJ; 11/21/17

RAMBOLL ENVIRON

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: TMW-27		Date(s): **10/11/2017**	
Location: **Fort Smith, Arkansas**			
Logged By: **J. Pavlowsky**		Checked By: **M. Wilson, PG**	
Contractor: **McCray Drilling, LLC**		Purpose: **Temporary Monitoring Well**	
Drilling Method: **Hollow Stem Auger**		GS Elevation: **468.03 ft amsl**	TOC Elevation: **467.45 ft amsl**
Sampling Method: **HSA Continuous Sampler**		North: **367870.98**	East: **590090.81**
Well Construction:		Borehole Dia.: **8.25 inches**	Total Depth: **26.0 feet**
Blank Casing: Sch. 40 PVC 2 Inch 0 FT to 16 FT		Project Number: **3437500S**	
Screen: Sch. 40 2 Inch 0.010 PVC 16 FT to 26 FT		Project Name: **Whirlpool Corporation**	
Annular Fill: Bentonite 0 FT to 14 FT; Sand 14 FT to 26 FT		Remarks:	

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
465	0	4					Topsoil, with root hairs		Flush Mount
						MH	Clayey Silt, brown, trace sand, medium to coarse, soft, crumbles, slightly moist		
	5					CL	Silty Clay, orangish brown, with black nodules, trace red nodules, trace sand, fine, plastic, slightly stiff, slightly moist		
460		5					Silty Clay, orangish light brown, with gray mottling, with black nodules, with sand, fine, stiff, crumbles, dry		
	10								
455		5							
	15					CL	Sandy Clay, orangish brown, with gray mottling, fine, plastic, soft, moist		
450		5							
	20						Sandy Clay, pale orange with gray mottling, fine to very fine, plastic, slightly stiff, wet		
445		3.5	TMW-27-SL(24.5-25.0FT)-101117			SC	Clayey Sand, blue-gray, with gray mottling, with gravel, medium to coarse, plastic, wet		
						GC			
	25					SW	Clayey Gravel, orangish dark brown, poorly sorted, with sand, fine to coarse, stiff, noncohesive, wet		
		1				CL	Sand, orangish brown, well graded, soft, wet		
							Silty Clay, (weathered shale), orange, laminated, soft, slightly plastic, wet		
440							Shale, dark gray, laminated		

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS).GPJ; 11/21/17

RAMBOLL ENVIRON

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: TMW-28		Date(s): **10/12/2017**	
Location: **Fort Smith, Arkansas**			
Logged By: **N. Zurweller, RG**		Checked By: **M. Wilson, PG**	
Contractor: **McCray Drilling, LLC**		Purpose: **Temporary Monitoring Well**	
Drilling Method: **Hollow Stem Auger**		GS Elevation: **468.85 ft amsl**	TOC Elevation: **468.27 ft amsl**
Sampling Method: **HSA Continuous Sampler**		North: **367956.16**	East: **590091.81**
Well Construction:		Borehole Dia.: **8.25 inches**	Total Depth: **27.0 feet**
Blank Casing: Sch. 40 PVC 2 Inch 0 FT to 17 FT		Project Number: **3437500S**	
Screen: Sch. 40 2 Inch 0.010 PVC 17 FT to 27 FT		Project Name: **Whirlpool Corporation**	
Annular Fill: Bentonite 0 FT to 15 FT; Sand 15 FT to 27 FT		Remarks:	

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
				2.4			Topsoil, light brown, wit root hairs, silty, loose, dry		Flush Mount
		5		1.2		MH	Clayey Silt, reddish brown, trace gray and red mottling, trace black nodules, trace sand, coarse, slightly plastic, stiff, dry		
465	5			4.5					
		5				CL	Silty Clay, reddish brown, with gray mottling, trace black nodules, slightly plastic, very stiff, dry		
460	10			5.5					
				5.5					
		5							
455				4.2					
	15			4.4		CL	Sandy Clay, gray, with reddish brown, sand, very fine, increasing sand with depth, cohesive, slightly stiff, slightly moist		
		4							
450				4.2					
	20					SC	Clayey Sand, gray, with reddish brown, very fine, cohesive, soft, wet		
				5.2		GC	Clayey Gravel, reddish brown, with sand, fine to coarse, with black nodules, gravel, fine to coarse, cohesive, wet		
		4	TMW-28-SL(24-24.5FT)-101217						
445				5.0					
	25					SW	Sand, reddish brown, with clay, with gravel, fine to coarse, subrounded, sand, fine, with medium to coarse, cohesive, wet		
		2		5.3		MH	Clayey Silt (weathered shale), yellowish brown, slightly plastic, stiff, slightly laminated, moist		
				6.6			Shale, very dark gray, hard, laminated, dry		
440									

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS).GPJ; 11/21/17

RAMBOLL ENVIRON

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: TMW-29		Date(s): **10/12/2017**	
Location: **Fort Smith, Arkansas**			
Logged By: **N. Zurweller, RG**		Checked By: **M. Wilson, PG**	
Contractor: **McCray Drilling, LLC**		Purpose: **Temporary Monitoring Well**	
Drilling Method: **Hollow Stem Auger**		GS Elevation: **462.56 ft amsl**	TOC Elevation: **462.19 ft amsl**
Sampling Method: **HSA Continuous Sampler**		North: **369848.09**	East: **592210.50**
Well Construction:		Borehole Dia.: **8.25 inches**	Total Depth: **19.0 feet**
Blank Casing: Sch. 40 PVC 2 Inch 0 FT to 12 FT		Project Number: **3437500S**	
Screen: Sch. 40 2 Inch 0.010 PVC 12 FT to 19 FT		Project Name: **Whirlpool Corporation**	
Annular Fill: Bentonite 0 FT to 10 FT; Sand 10 FT to 19 FT		Remarks:	

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
460	0	5		2.2			Topsoil, light brown, silty, loose, dry		Flush Mount
				2.7		MH	Clayey Silt, reddish brown, trace gray mottling, trace black nodules, plastic, slightly stiff, moist		
	5					CL	Silty Clay, reddish brown, with gray mottling, plastic, stiff, slightly moist		
455		5		2.4			Silty Clay, reddish brown, trace gray mottling, with sand, fine, trace coarse, with black nodules, trace gravel, fine, subangular, plastic, slightly stiff, slightly moist		
				2.0					
	10		TMW-29-SL(11.5-12.0FT)-101017			SC	Clayey Sand, reddish brown, trace gray mottling, fine, with medium and coarse, cohesive, moist		
450		5		3.0		GC	Clayey Gravel, reddish brown, with sand, fine to coarse, trace gray, trace black nodules, gravel, fine, subrounded, very moist		
				3.1			Clayey Gravel as above, gravel, fine to coarse		
	15					CL	Silty Clay, reddish brown and gray, plastic, stiff, moist		
		4		2.9		SC	Clayey Sand, reddish brown, fine, wet		
445						CL	Silty Clay, reddish brown and gray, plastic, stiff, moist		
				2.8		MH	Clayey Silt (weathered shale), yellowish brown and gray, hard, slightly laminated, dry		
	20						Shale, dark gray, trace reddish brown, hard, laminated, dry		
440									
	25								
435									

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS).GPJ; 11/21/17

RAMBOLL ENVIRON

1807 Park 270 Drive Suite 320, St. Louis, MO 63146

Site ID: TMW-30		Date(s): **10/13/2017**	
Location: **Fort Smith, Arkansas**			
Logged By: **N. Zurweller, RG**		Checked By: **M. Wilson, PG**	
Contractor: **McCray Drilling, LLC**		Purpose: **Temporary Monitoring Well**	
Drilling Method: **Hollow Stem Auger**		GS Elevation: **469.77 ft amsl**	TOC Elevation: **469.37 ft amsl**
Sampling Method: **HSA Continuous Sampler**		North: **367737.09**	East: **590112.78**
Well Construction:		Borehole Dia.: **8.25 inches**	Total Depth: **28.5 feet**
Blank Casing: Sch. 40 PVC 2 Inch 0 FT to 18.5 FT		Project Number: **3437500S**	
Screen: Sch. 40 2 Inch 0.010 PVC 18.5 FT to 28.5 FT		Project Name: **Whirlpool Corporation**	
Annular Fill: Bentonite 0 FT to 16.5 FT; Sand 16.5 FT to 28.5 FT		Remarks:	

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	Graphic Log	USCS Code	Material Description	Water Level	Well Construction
				1.2			Topsoil, brown and lightly brown, with root hairs, loose, moist		Flush Mount
		4		2.5		MH	Organic Material, black Clayey Silt, light brown, trace root hairs, trace sand, coarse, loose, dry		
465	5	5		1.0		CL	Silty Clay, reddish brown, with gray mottling, trace black nodules, slightly plastic, very stiff, dry		
				2.7					
460	10	5		3.7					
				2.6					
455	15	3.0		4.0					
				3.9		CL	Sandy Clay, reddish brown, with gray mottling, sand, very fine, plastic, slightly stiff, moist		
450	20	3.0		4.5		SC	Clayey Sand, reddish brown, trace gray, with black nodules, sand, very fine, cohesive, wet		
				4.1		GC	Clayey Gravel, reddish brown, with sand, fine to coarse, gravel, fine to coarse, subrounded, trace cobbles, cohesive, wet		
445	25	3.5	TMW-30-SL(25.5-26.0FT)-101317	4.1		MH	Clayey Silt, yellowish brown, slightly plastic, stiff, slightly laminated, slightly moist		
				3.5			Shale, very dark gray, hard, laminated, dry		
440									

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS).GPJ; 11/21/17

Appendix D

Temporary Well Installation Laboratory Report

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

October 11, 2017

Nick Zurweller
Ramboll Environ
7500 College Blvd.
Ste. 295
Overland Park, KS 66210

RE: Project: FORT SMITH, AR
Pace Project No.: 60255167

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on October 11, 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,

Richard Mannz
richard.mannz@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: M. Wilson

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60255167

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 15-016-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587
Missouri Certification: 10070

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: FORT SMITH, AR
Pace Project No.: 60255167

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60255167001	**TMW-20-201710**	Water	10/10/17 14:10	10/11/17 07:05
60255167002	**TMW-21-201710**	Water	10/10/17 15:45	10/11/17 07:05
60255167003	**TMW-24-201710**	Water	10/10/17 17:00	10/11/17 07:05
60255167004	**TB-01-201710**	Water	10/10/17 14:10	10/11/17 07:05

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60255167

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60255167001	**TMW-20-201710**	EPA 5030B/8260	PGH	38	PASI-K
60255167002	**TMW-21-201710**	EPA 5030B/8260	PGH	38	PASI-K
60255167003	**TMW-24-201710**	EPA 5030B/8260	PGH	38	PASI-K
60255167004	**TB-01-201710**	EPA 5030B/8260	PGH	38	PASI-K

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60255167

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: October 11, 2017

General Information:
4 samples were analyzed for EPA 5030B/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: 498194

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60255167

Sample: TMW-20-201710 **Lab ID: 60255167001** Collected: 10/10/17 14:10 Received: 10/11/17 07:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/11/17 10:22	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/11/17 10:22	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/11/17 10:22	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/11/17 10:22	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/11/17 10:22	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/11/17 10:22	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/11/17 10:22	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/11/17 10:22	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/11/17 10:22	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/11/17 10:22	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/11/17 10:22	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/11/17 10:22	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/11/17 10:22	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/11/17 10:22	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/11/17 10:22	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/11/17 10:22	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/11/17 10:22	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/11/17 10:22	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/11/17 10:22	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/11/17 10:22	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/11/17 10:22	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/11/17 10:22	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/11/17 10:22	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/11/17 10:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/11/17 10:22	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/11/17 10:22	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/11/17 10:22	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/11/17 10:22	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/11/17 10:22	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/11/17 10:22	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/11/17 10:22	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/11/17 10:22	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/11/17 10:22	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/11/17 10:22	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/11/17 10:22	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/11/17 10:22	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		10/11/17 10:22	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/11/17 10:22		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60255167

Sample: TMW-21-201710 **Lab ID: 60255167002** Collected: 10/10/17 15:45 Received: 10/11/17 07:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/11/17 10:36	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/11/17 10:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/11/17 10:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/11/17 10:36	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/11/17 10:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/11/17 10:36	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/11/17 10:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/11/17 10:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/11/17 10:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/11/17 10:36	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/11/17 10:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/11/17 10:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/11/17 10:36	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/11/17 10:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/11/17 10:36	107-06-2	
1,1-Dichloroethene	**1.0J**	ug/L	1.0	0.20	1		10/11/17 10:36	75-35-4	
cis-1,2-Dichloroethene	**8.7**	ug/L	1.0	0.080	1		10/11/17 10:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/11/17 10:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/11/17 10:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/11/17 10:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/11/17 10:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/11/17 10:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/11/17 10:36	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/11/17 10:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/11/17 10:36	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/11/17 10:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/11/17 10:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/11/17 10:36	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/11/17 10:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/11/17 10:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/11/17 10:36	79-00-5	
Trichloroethene	**375**	ug/L	5.0	0.85	5		10/11/17 11:04	79-01-6	
Vinyl chloride	**0.16J**	ug/L	1.0	0.13	1		10/11/17 10:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/11/17 10:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/11/17 10:36	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		1		10/11/17 10:36	17060-07-0	
Toluene-d8 (S)	104	%	80-120		1		10/11/17 10:36	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/11/17 10:36		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60255167

Sample: TMW-24-201710 **Lab ID: 60255167003** Collected: 10/10/17 17:00 Received: 10/11/17 07:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/11/17 10:50	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/11/17 10:50	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/11/17 10:50	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/11/17 10:50	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/11/17 10:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/11/17 10:50	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/11/17 10:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/11/17 10:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/11/17 10:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/11/17 10:50	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/11/17 10:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/11/17 10:50	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/11/17 10:50	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/11/17 10:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/11/17 10:50	107-06-2	
1,1-Dichloroethene	**0.91J**	ug/L	1.0	0.20	1		10/11/17 10:50	75-35-4	
cis-1,2-Dichloroethene	**7.7**	ug/L	1.0	0.080	1		10/11/17 10:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/11/17 10:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/11/17 10:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/11/17 10:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/11/17 10:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/11/17 10:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/11/17 10:50	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/11/17 10:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/11/17 10:50	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/11/17 10:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/11/17 10:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/11/17 10:50	127-18-4	
Toluene	**0.69J**	ug/L	1.0	0.17	1		10/11/17 10:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/11/17 10:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/11/17 10:50	79-00-5	
Trichloroethene	**309**	ug/L	5.0	0.85	5		10/11/17 11:18	79-01-6	
Vinyl chloride	**0.18J**	ug/L	1.0	0.13	1		10/11/17 10:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/11/17 10:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/11/17 10:50	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		10/11/17 10:50	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/11/17 10:50	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/11/17 10:50		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60255167

Sample: TB-01-201710 **Lab ID: 60255167004** Collected: 10/10/17 14:10 Received: 10/11/17 07:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/11/17 10:08	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/11/17 10:08	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/11/17 10:08	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/11/17 10:08	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/11/17 10:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/11/17 10:08	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/11/17 10:08	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/11/17 10:08	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/11/17 10:08	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/11/17 10:08	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/11/17 10:08	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/11/17 10:08	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/11/17 10:08	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/11/17 10:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/11/17 10:08	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/11/17 10:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/11/17 10:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/11/17 10:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/11/17 10:08	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/11/17 10:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/11/17 10:08	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/11/17 10:08	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/11/17 10:08	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/11/17 10:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/11/17 10:08	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/11/17 10:08	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/11/17 10:08	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/11/17 10:08	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/11/17 10:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/11/17 10:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/11/17 10:08	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/11/17 10:08	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/11/17 10:08	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/11/17 10:08	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/11/17 10:08	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		10/11/17 10:08	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/11/17 10:08	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/11/17 10:08		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60255167

QC Batch: 498194 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60255167001, 60255167002, 60255167003, 60255167004

METHOD BLANK: 2037829 Matrix: Water
Associated Lab Samples: 60255167001, 60255167002, 60255167003, 60255167004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/11/17 09:54	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/11/17 09:54	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/11/17 09:54	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/11/17 09:54	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/11/17 09:54	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/11/17 09:54	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/11/17 09:54	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/11/17 09:54	
2-Hexanone	ug/L	ND	10.0	1.2	10/11/17 09:54	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/11/17 09:54	
Acetone	ug/L	ND	10.0	1.9	10/11/17 09:54	
Benzene	ug/L	ND	1.0	0.060	10/11/17 09:54	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/11/17 09:54	
Bromoform	ug/L	ND	1.0	0.070	10/11/17 09:54	
Bromomethane	ug/L	0.36J	5.0	0.16	10/11/17 09:54	
Carbon disulfide	ug/L	ND	5.0	0.12	10/11/17 09:54	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/11/17 09:54	
Chlorobenzene	ug/L	ND	1.0	0.21	10/11/17 09:54	
Chloroethane	ug/L	ND	1.0	0.15	10/11/17 09:54	
Chloroform	ug/L	ND	1.0	0.14	10/11/17 09:54	
Chloromethane	ug/L	ND	1.0	0.080	10/11/17 09:54	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/11/17 09:54	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/11/17 09:54	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/11/17 09:54	
Ethylbenzene	ug/L	ND	1.0	0.18	10/11/17 09:54	
Methylene chloride	ug/L	ND	1.0	0.15	10/11/17 09:54	
Styrene	ug/L	ND	1.0	0.12	10/11/17 09:54	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/11/17 09:54	
Toluene	ug/L	ND	1.0	0.17	10/11/17 09:54	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/11/17 09:54	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/11/17 09:54	
Trichloroethene	ug/L	ND	1.0	0.17	10/11/17 09:54	
Vinyl chloride	ug/L	ND	1.0	0.13	10/11/17 09:54	
Xylene (Total)	ug/L	ND	3.0	0.42	10/11/17 09:54	
1,2-Dichloroethane-d4 (S)	%	95	80-120		10/11/17 09:54	
4-Bromofluorobenzene (S)	%	99	80-120		10/11/17 09:54	
Toluene-d8 (S)	%	104	80-120		10/11/17 09:54	

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60255167

LABORATORY CONTROL SAMPLE: 2037830

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.8	99	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	20.0	100	74-124	
1,1,2-Trichloroethane	ug/L	20	18.8	94	81-118	
1,1-Dichloroethane	ug/L	20	21.5	107	82-122	
1,1-Dichloroethene	ug/L	20	21.6	108	78-123	
1,2-Dichloroethane	ug/L	20	19.4	97	78-117	
1,2-Dichloropropane	ug/L	20	20.9	104	81-118	
2-Butanone (MEK)	ug/L	100	108	108	72-117	
2-Hexanone	ug/L	100	101	101	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	99.7	100	77-124	
Acetone	ug/L	100	110	110	66-127	
Benzene	ug/L	20	21.3	107	82-115	
Bromodichloromethane	ug/L	20	20.0	100	83-123	
Bromoform	ug/L	20	18.2	91	79-126	
Bromomethane	ug/L	20	20.0	100	39-146	
Carbon disulfide	ug/L	20	21.2	106	75-121	
Carbon tetrachloride	ug/L	20	18.7	93	82-117	
Chlorobenzene	ug/L	20	21.9	109	89-114	
Chloroethane	ug/L	20	22.2	111	71-133	
Chloroform	ug/L	20	20.0	100	78-117	
Chloromethane	ug/L	20	21.9	110	19-181	
cis-1,2-Dichloroethene	ug/L	20	20.5	102	78-119	
cis-1,3-Dichloropropene	ug/L	20	19.9	100	81-116	
Dibromochloromethane	ug/L	20	18.2	91	81-122	
Ethylbenzene	ug/L	20	21.0	105	83-112	
Methylene chloride	ug/L	20	21.9	110	78-127	
Styrene	ug/L	20	21.8	109	88-117	
Tetrachloroethene	ug/L	20	21.3	106	80-121	
Toluene	ug/L	20	21.2	106	78-113	
trans-1,2-Dichloroethene	ug/L	20	20.0	100	79-120	
trans-1,3-Dichloropropene	ug/L	20	20.8	104	81-119	
Trichloroethene	ug/L	20	19.2	96	78-118	
Vinyl chloride	ug/L	20	21.0	105	66-133	
Xylene (Total)	ug/L	60	66.0	110	83-114	
1,2-Dichloroethane-d4 (S)	%			92	80-120	
4-Bromofluorobenzene (S)	%			96	80-120	
Toluene-d8 (S)	%			101	80-120	

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60255167

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.

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-K Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: 498194

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60255167

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60255167001	**TMW-20-201710**	EPA 5030B/8260	498194		
60255167002	**TMW-21-201710**	EPA 5030B/8260	498194		
60255167003	**TMW-24-201710**	EPA 5030B/8260	498194		
60255167004	**TB-01-201710**	EPA 5030B/8260	498194		

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Sample Condition Upon Receipt

WO# : 60255167

60255167

Client Name: Ramboll Environ

Courier: FedEx ☐ UPS ☐ VIA ☑ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☑ Foam ☐ None ☐ Other ☐

Thermometer Used: CF 0.0 / CF +0.3 T-266 / T-239 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 2-9 **Corr. Factor** CF 0.0 / CF +0.3 **Corrected** 2-9

Date and initials of person examining contents: PV 10/11/17

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☑Yes ☐No ☐N/A	same day
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	☐Yes ☐No ☑N/A	
Cyanide water sample checks: ☑ N/A Lead acetate strip turns dark? (Record only) Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No ☐Yes ☐No	
Trip Blank present:	☑Yes ☐No ☐N/A	
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Required Client Information:

Company: Ramboll Environ
Address: 7500 College Blvd., Ste. 925
Overland Park, KS 66210
Email To: ~~wstonestreet@environcorp.com~~ azurweller@ramboll.com
Phone: ~~913-152-6926~~ 636-579-6883 Fax:
Requested Due Date/TAT: Same Day TAT

Section B Required Project Information:

Report To: ~~Wendy Stonestreet~~ Nick Zurweller
Copy To: ~~Tamara Gleason~~ mwilson@ramboll.com
Purchase Order No.:
Project Name: Fort Smith, AR
Project Number: 34375005

Section C Invoice Information:

Attention: ~~Tamara Gleason~~ Tamara
Company Name: Ramboll Environ HouseKnight
Address: THouseKnight@ramboll.com
Pace Quote Reference:
Pace Project Manager: Colleen Clyne (913) 563-1406
Pace Profile #: 7444 water, 7709 soil

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: AR

Section D Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	8260 client specific list	9060 TOC in Soil	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TMW-20-201710	WT	G			10/10/17	1410		3				X						X			60255167
2	TMW-21-201710						1545															002
3	TMW-24-201710						1700															003
4	~~TripBlank-01-201710~~								2													XZ
5	TB-01-201710	WT							2				X						X			004
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Same Day TAT!	/Ramboll Environ	10/10/17	1800	Dale E Lee	10-10	6pm	2-9	X	X	X
				PACE	10/11/17	8705				

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nick Zurweller
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 10/10/17

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

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

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

October 12, 2017

Nick Zurweller
Ramboll Environ
7500 College Blvd.
Ste. 295
Overland Park, KS 66210

RE: Project: FORT SMITH, ARK
Pace Project No.: 60255260

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on October 12, 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,

Richard Mannz
richard.mannz@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: M. Wilson

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: FORT SMITH, ARK
Pace Project No.: 60255260

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 15-016-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587
Missouri Certification: 10070

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SAMPLE SUMMARY

Project: FORT SMITH, ARK
Pace Project No.: 60255260

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60255260001	**TMW-25-201710**	Water	10/11/17 17:00	10/12/17 05:00
60255260002	**TMW-26-201710**	Water	10/11/17 12:05	10/12/17 05:00
60255260003	**TMW-27-201710**	Water	10/11/17 16:20	10/12/17 05:00
60255260004	**TB-02-201710**	Water	10/11/17 12:05	10/12/17 05:00

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, ARK
Pace Project No.: 60255260

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60255260001	**TMW-25-201710**	EPA 5030B/8260	PGH	38	PASI-K
60255260002	**TMW-26-201710**	EPA 5030B/8260	PGH	38	PASI-K
60255260003	**TMW-27-201710**	EPA 5030B/8260	PGH	38	PASI-K
60255260004	**TB-02-201710**	EPA 5030B/8260	PGH	38	PASI-K

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PROJECT NARRATIVE

Project: FORT SMITH, ARK
Pace Project No.: 60255260

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: October 12, 2017

General Information:
4 samples were analyzed for EPA 5030B/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: 498320

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: 2038357)
  - 2-Butanone (MEK)

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

QC Batch: 498320

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

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

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ANALYTICAL RESULTS

Project: FORT SMITH, ARK
Pace Project No.: 60255260

Sample: TMW-25-201710 **Lab ID: 60255260001** Collected: 10/11/17 17:00 Received: 10/12/17 05:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**3.3J**	ug/L	10.0	1.9	1		10/12/17 10:53	67-64-1	
Benzene	**0.11J**	ug/L	1.0	0.060	1		10/12/17 10:53	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/12/17 10:53	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/12/17 10:53	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/12/17 10:53	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/12/17 10:53	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/12/17 10:53	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/12/17 10:53	56-23-5	
Chlorobenzene	**0.96J**	ug/L	1.0	0.21	1		10/12/17 10:53	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/12/17 10:53	75-00-3	
Chloroform	**0.26J**	ug/L	1.0	0.14	1		10/12/17 10:53	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/12/17 10:53	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/12/17 10:53	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/12/17 10:53	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/12/17 10:53	107-06-2	
1,1-Dichloroethene	**0.33J**	ug/L	1.0	0.20	1		10/12/17 10:53	75-35-4	
cis-1,2-Dichloroethene	**8.8**	ug/L	1.0	0.080	1		10/12/17 10:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/12/17 10:53	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/12/17 10:53	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/12/17 10:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/12/17 10:53	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/12/17 10:53	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/12/17 10:53	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/12/17 10:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/12/17 10:53	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/12/17 10:53	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/12/17 10:53	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/12/17 10:53	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/12/17 10:53	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/12/17 10:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/12/17 10:53	79-00-5	
Trichloroethene	**140**	ug/L	1.0	0.17	1		10/12/17 10:53	79-01-6	
Vinyl chloride	**0.19J**	ug/L	1.0	0.13	1		10/12/17 10:53	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/12/17 10:53	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		10/12/17 10:53	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	80-120		1		10/12/17 10:53	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		10/12/17 10:53	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/12/17 10:53		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, ARK
Pace Project No.: 60255260

Sample: TMW-26-201710 **Lab ID: 60255260002** Collected: 10/11/17 12:05 Received: 10/12/17 05:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/12/17 10:25	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/12/17 10:25	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/12/17 10:25	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/12/17 10:25	75-25-2	
Bromomethane	**0.36J**	ug/L	5.0	0.16	1		10/12/17 10:25	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/12/17 10:25	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/12/17 10:25	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/12/17 10:25	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/12/17 10:25	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/12/17 10:25	75-00-3	
Chloroform	**0.50J**	ug/L	1.0	0.14	1		10/12/17 10:25	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/12/17 10:25	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/12/17 10:25	124-48-1	
1,1-Dichloroethane	**0.68J**	ug/L	1.0	0.050	1		10/12/17 10:25	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/12/17 10:25	107-06-2	
1,1-Dichloroethene	**0.57J**	ug/L	1.0	0.20	1		10/12/17 10:25	75-35-4	
cis-1,2-Dichloroethene	**4.2**	ug/L	1.0	0.080	1		10/12/17 10:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/12/17 10:25	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/12/17 10:25	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/12/17 10:25	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/12/17 10:25	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/12/17 10:25	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/12/17 10:25	591-78-6	
Methylene chloride	**0.35J**	ug/L	1.0	0.15	1		10/12/17 10:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/12/17 10:25	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/12/17 10:25	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/12/17 10:25	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/12/17 10:25	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/12/17 10:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/12/17 10:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/12/17 10:25	79-00-5	
Trichloroethene	**185**	ug/L	5.0	0.85	5		10/12/17 11:07	79-01-6	
Vinyl chloride	**0.23J**	ug/L	1.0	0.13	1		10/12/17 10:25	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/12/17 10:25	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		10/12/17 10:25	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	80-120		1		10/12/17 10:25	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/12/17 10:25	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/12/17 10:25		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, ARK
Pace Project No.: 60255260

Sample: TMW-27-201710 **Lab ID: 60255260003** Collected: 10/11/17 16:20 Received: 10/12/17 05:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/12/17 10:39	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/12/17 10:39	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/12/17 10:39	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/12/17 10:39	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/12/17 10:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/12/17 10:39	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/12/17 10:39	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/12/17 10:39	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/12/17 10:39	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/12/17 10:39	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/12/17 10:39	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/12/17 10:39	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/12/17 10:39	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/12/17 10:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/12/17 10:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/12/17 10:39	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/12/17 10:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/12/17 10:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/12/17 10:39	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/12/17 10:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/12/17 10:39	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/12/17 10:39	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/12/17 10:39	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/12/17 10:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/12/17 10:39	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/12/17 10:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/12/17 10:39	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/12/17 10:39	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/12/17 10:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/12/17 10:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/12/17 10:39	79-00-5	
Trichloroethene	**0.20J**	ug/L	1.0	0.17	1		10/12/17 11:21	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/12/17 10:39	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/12/17 10:39	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/12/17 10:39	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	80-120		1		10/12/17 10:39	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		10/12/17 10:39	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/12/17 10:39		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, ARK
Pace Project No.: 60255260

Sample: TB-02-201710 **Lab ID: 60255260004** Collected: 10/11/17 12:05 Received: 10/12/17 05:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		10/12/17 10:11	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		10/12/17 10:11	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		10/12/17 10:11	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		10/12/17 10:11	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		10/12/17 10:11	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		10/12/17 10:11	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	0.12	1		10/12/17 10:11	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		10/12/17 10:11	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		10/12/17 10:11	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		10/12/17 10:11	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		10/12/17 10:11	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		10/12/17 10:11	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/12/17 10:11	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		10/12/17 10:11	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/12/17 10:11	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		10/12/17 10:11	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		10/12/17 10:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		10/12/17 10:11	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		10/12/17 10:11	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		10/12/17 10:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		10/12/17 10:11	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		10/12/17 10:11	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		10/12/17 10:11	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		10/12/17 10:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		10/12/17 10:11	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		10/12/17 10:11	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		10/12/17 10:11	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		10/12/17 10:11	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		10/12/17 10:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		10/12/17 10:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		10/12/17 10:11	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		10/12/17 10:11	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		10/12/17 10:11	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		10/12/17 10:11	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		10/12/17 10:11	460-00-4	
1,2-Dichloroethane-d4 (S)	89	%	80-120		1		10/12/17 10:11	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		10/12/17 10:11	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/12/17 10:11		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, ARK
Pace Project No.: 60255260

QC Batch: 498320 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60255260001, 60255260002, 60255260003, 60255260004

METHOD BLANK: 2038356 Matrix: Water
Associated Lab Samples: 60255260001, 60255260002, 60255260003, 60255260004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	10/12/17 09:57	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	10/12/17 09:57	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	10/12/17 09:57	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	10/12/17 09:57	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	10/12/17 09:57	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	10/12/17 09:57	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	10/12/17 09:57	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	10/12/17 09:57	
2-Hexanone	ug/L	ND	10.0	1.2	10/12/17 09:57	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	10/12/17 09:57	
Acetone	ug/L	ND	10.0	1.9	10/12/17 09:57	
Benzene	ug/L	ND	1.0	0.060	10/12/17 09:57	
Bromodichloromethane	ug/L	ND	1.0	0.19	10/12/17 09:57	
Bromoform	ug/L	ND	1.0	0.070	10/12/17 09:57	
Bromomethane	ug/L	ND	5.0	0.16	10/12/17 09:57	
Carbon disulfide	ug/L	ND	5.0	0.12	10/12/17 09:57	
Carbon tetrachloride	ug/L	ND	1.0	0.18	10/12/17 09:57	
Chlorobenzene	ug/L	ND	1.0	0.21	10/12/17 09:57	
Chloroethane	ug/L	ND	1.0	0.15	10/12/17 09:57	
Chloroform	ug/L	ND	1.0	0.14	10/12/17 09:57	
Chloromethane	ug/L	ND	1.0	0.080	10/12/17 09:57	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	10/12/17 09:57	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	10/12/17 09:57	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/12/17 09:57	
Ethylbenzene	ug/L	ND	1.0	0.18	10/12/17 09:57	
Methylene chloride	ug/L	ND	1.0	0.15	10/12/17 09:57	
Styrene	ug/L	ND	1.0	0.12	10/12/17 09:57	
Tetrachloroethene	ug/L	ND	1.0	0.10	10/12/17 09:57	
Toluene	ug/L	ND	1.0	0.17	10/12/17 09:57	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	10/12/17 09:57	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	10/12/17 09:57	
Trichloroethene	ug/L	ND	1.0	0.17	10/12/17 09:57	
Vinyl chloride	ug/L	ND	1.0	0.13	10/12/17 09:57	
Xylene (Total)	ug/L	ND	3.0	0.42	10/12/17 09:57	
1,2-Dichloroethane-d4 (S)	%	95	80-120		10/12/17 09:57	
4-Bromofluorobenzene (S)	%	100	80-120		10/12/17 09:57	
Toluene-d8 (S)	%	101	80-120		10/12/17 09:57	

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, ARK
Pace Project No.: 60255260

LABORATORY CONTROL SAMPLE: 2038357

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.2	106	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	22.2	111	74-124	
1,1,2-Trichloroethane	ug/L	20	21.1	105	81-118	
1,1-Dichloroethane	ug/L	20	22.8	114	82-122	
1,1-Dichloroethene	ug/L	20	22.1	110	78-123	
1,2-Dichloroethane	ug/L	20	21.1	105	78-117	
1,2-Dichloropropane	ug/L	20	22.4	112	81-118	
2-Butanone (MEK)	ug/L	100	118	118	72-117	L1
2-Hexanone	ug/L	100	110	110	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	110	110	77-124	
Acetone	ug/L	100	118	118	66-127	
Benzene	ug/L	20	21.9	109	82-115	
Bromodichloromethane	ug/L	20	21.2	106	83-123	
Bromoform	ug/L	20	19.2	96	79-126	
Bromomethane	ug/L	20	20.5	102	39-146	
Carbon disulfide	ug/L	20	21.6	108	75-121	
Carbon tetrachloride	ug/L	20	20.1	101	82-117	
Chlorobenzene	ug/L	20	22.5	112	89-114	
Chloroethane	ug/L	20	21.3	107	71-133	
Chloroform	ug/L	20	21.1	105	78-117	
Chloromethane	ug/L	20	17.0	85	19-181	
cis-1,2-Dichloroethene	ug/L	20	22.0	110	78-119	
cis-1,3-Dichloropropene	ug/L	20	20.6	103	81-116	
Dibromochloromethane	ug/L	20	20.0	100	81-122	
Ethylbenzene	ug/L	20	21.8	109	83-112	
Methylene chloride	ug/L	20	22.8	114	78-127	
Styrene	ug/L	20	22.1	110	88-117	
Tetrachloroethene	ug/L	20	22.0	110	80-121	
Toluene	ug/L	20	22.2	111	78-113	
trans-1,2-Dichloroethene	ug/L	20	22.0	110	79-120	
trans-1,3-Dichloropropene	ug/L	20	21.7	108	81-119	
Trichloroethene	ug/L	20	20.0	100	78-118	
Vinyl chloride	ug/L	20	21.7	108	66-133	
Xylene (Total)	ug/L	60	66.3	110	83-114	
1,2-Dichloroethane-d4 (S)	%			95	80-120	
4-Bromofluorobenzene (S)	%			98	80-120	
Toluene-d8 (S)	%			102	80-120	

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: FORT SMITH, ARK
Pace Project No.: 60255260

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.

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-K Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: 498320

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

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.

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, ARK
Pace Project No.: 60255260

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60255260001	**TMW-25-201710**	EPA 5030B/8260	498320		
60255260002	**TMW-26-201710**	EPA 5030B/8260	498320		
60255260003	**TMW-27-201710**	EPA 5030B/8260	498320		
60255260004	**TB-02-201710**	EPA 5030B/8260	498320		

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Sample Condition Upon Receipt

WO# : 60255260

60255260

RHM

Client Name: Ramboll Environ

Courier: FedEx ☐ UPS ☐ VIA ☑ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☑ Foam ☐ None ☐ Other ☐

Thermometer Used: CF 0.0 T-266 / CF +0.3 T-239 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 1.6 **Corr. Factor** CF 0.0 CF +0.3 **Corrected** 1.6

Date and initials of person examining contents: PV 10/12/17

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☑Yes ☐No ☐N/A	sameday
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	☐Yes ☐No ☑N/A	
Cyanide water sample checks: ☑ N/A Lead acetate strip turns dark? (Record only) Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No ☐Yes ☐No	
Trip Blank present:	☑Yes ☐No ☐N/A	
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Required Client Information:

Company:	Ramboli Environ
Address:	7500 College Blvd., Ste. 925
	Overland Park, KS 66210
Email To:	~~wstonestreet@environcorp.com~~ nzurweller@ramboll.com
Phone:	~~913-559-5000~~ 636-579-6883
Fax:	
Requested Due Date/TAT:	same day TAT (ASAP)

Section B Required Project Information:

Report To:	~~Wendy Stonestreet~~ Nick Zurweller
Copy To:	~~Tamara Gleason~~ mellis@ramboll.com mwilson@ramboll.com
Purchase Order No.:	
Project Name:	Fort Smith, AR
Project Number:	34375005

Section C Invoice Information:

Attention:	~~Tamara Gleason~~ Tamara ~~Ho~~ Knight House
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Colleen Clyne (913) 563-1406
Pace Profile #:	7444 water, 7709 soil

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ADEQ

Site Location STATE: AR

Requested Analysis Filtered (Y/N)

Section D Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

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

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	8260 client specific list	9060 TOC in Soil	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60255260
1	TMW-25-201710	WT	G	10-11-17	1700				3				X						X			3D69H 001
2	TMW-26-201710	↓	↓	10-11-17	1205				3				X						X			002
3	TMW-27-201710	↓	↓	10-11-17	1620				3				X						X			↓ 003
4	~~Trip~~ TB-02-201710	WT	G						2				X						X			2D69H 004
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
same day TAT	Jo Pavlovsky/RE	10-11-17	1800	Renee Lee	10/11/17	6:10p				
				[signature]	10/12/17	0520	1.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Johanna Pavlovsky

SIGNATURE of SAMPLER: Jo Pavlovsky DATE Signed (MM/DD/YY): 10/11/2017

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

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

November 20, 2017

Nick Zurweller
Ramboll Environ
7500 College Blvd.
Ste. 295
Overland Park, KS 66210

RE: Project: WHIRLPOOL
Pace Project No.: 60255450

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on October 13, 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.

RV-1 - Revised report - Case Narrative added.

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

Sincerely,

Richard Mannz
richard.mannz@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: Tamara House-Knight, Ramboll Environ
M. Wilson

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: WHIRLPOOL
Pace Project No.: 60255450

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 17-016-0
Illinois Certification #: 200030
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212018-1
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587
Missouri Certification: 10070

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: WHIRLPOOL
Pace Project No.: 60255450

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60255450001	**TMW-28-201710**	Water	10/12/17 18:20	10/13/17 08:35
60255450002	**TMW-29-201710**	Water	10/12/17 17:05	10/13/17 08:35
60255450003	**TB-03-201710**	Water	10/12/17 17:05	10/13/17 08:35

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL
Pace Project No.: 60255450

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60255450001	**TMW-28-201710**	EPA 5030B/8260	PGH	38	PASI-K
60255450002	**TMW-29-201710**	EPA 5030B/8260	PGH	38	PASI-K
60255450003	**TB-03-201710**	EPA 5030B/8260	PGH	38	PASI-K

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PROJECT NARRATIVE

Project: WHIRLPOOL
Pace Project No.: 60255450

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: November 20, 2017

General Information:
3 samples were analyzed for EPA 5030B/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: 498726

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: 2040700)
  - 2-Butanone (MEK)

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

QC Batch: 498726

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

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

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ANALYTICAL RESULTS

Project: WHIRLPOOL
Pace Project No.: 60255450

Sample: TMW-28-201710 **Lab ID: 60255450001** Collected: 10/12/17 18:20 Received: 10/13/17 08:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	ND	ug/L	10.0	1		10/16/17 09:51	67-64-1	
Benzene	ND	ug/L	1.0	1		10/16/17 09:51	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		10/16/17 09:51	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/16/17 09:51	75-25-2	
Bromomethane	ND	ug/L	5.0	1		10/16/17 09:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		10/16/17 09:51	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	1		10/16/17 09:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/16/17 09:51	56-23-5	
Chlorobenzene	**1.8**	ug/L	1.0	1		10/16/17 09:51	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/16/17 09:51	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/16/17 09:51	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/16/17 09:51	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		10/16/17 09:51	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/16/17 09:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/16/17 09:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/16/17 09:51	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/16/17 09:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/16/17 09:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/16/17 09:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/16/17 09:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/16/17 09:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/16/17 09:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		10/16/17 09:51	591-78-6	
Methylene chloride	ND	ug/L	1.0	1		10/16/17 09:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		10/16/17 09:51	108-10-1	
Styrene	ND	ug/L	1.0	1		10/16/17 09:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/16/17 09:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/16/17 09:51	127-18-4	
Toluene	ND	ug/L	1.0	1		10/16/17 09:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/16/17 09:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/16/17 09:51	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/16/17 09:51	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		10/16/17 09:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		10/16/17 09:51	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	98	%	80-120	1		10/16/17 09:51	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120	1		10/16/17 09:51	17060-07-0	
Toluene-d8 (S)	102	%	80-120	1		10/16/17 09:51	2037-26-5	
Preservation pH	**1.0**		0.10	1		10/16/17 09:51		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: WHIRLPOOL
Pace Project No.: 60255450

Sample: TMW-29-201710 **Lab ID: 60255450002** Collected: 10/12/17 17:05 Received: 10/13/17 08:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	ND	ug/L	10.0	1		10/16/17 10:05	67-64-1	
Benzene	ND	ug/L	1.0	1		10/16/17 10:05	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		10/16/17 10:05	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/16/17 10:05	75-25-2	
Bromomethane	ND	ug/L	5.0	1		10/16/17 10:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		10/16/17 10:05	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	1		10/16/17 10:05	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/16/17 10:05	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/16/17 10:05	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/16/17 10:05	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/16/17 10:05	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/16/17 10:05	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		10/16/17 10:05	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/16/17 10:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/16/17 10:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/16/17 10:05	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/16/17 10:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/16/17 10:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/16/17 10:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/16/17 10:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/16/17 10:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/16/17 10:05	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		10/16/17 10:05	591-78-6	
Methylene chloride	ND	ug/L	1.0	1		10/16/17 10:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		10/16/17 10:05	108-10-1	
Styrene	ND	ug/L	1.0	1		10/16/17 10:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/16/17 10:05	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/16/17 10:05	127-18-4	
Toluene	ND	ug/L	1.0	1		10/16/17 10:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/16/17 10:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/16/17 10:05	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/16/17 10:05	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		10/16/17 10:05	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		10/16/17 10:05	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	97	%	80-120	1		10/16/17 10:05	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	80-120	1		10/16/17 10:05	17060-07-0	
Toluene-d8 (S)	101	%	80-120	1		10/16/17 10:05	2037-26-5	
Preservation pH	**1.0**		0.10	1		10/16/17 10:05		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: WHIRLPOOL
Pace Project No.: 60255450

Sample: TB-03-201710 **Lab ID: 60255450003** Collected: 10/12/17 17:05 Received: 10/13/17 08:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	ND	ug/L	10.0	1		10/16/17 09:37	67-64-1	
Benzene	ND	ug/L	1.0	1		10/16/17 09:37	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		10/16/17 09:37	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/16/17 09:37	75-25-2	
Bromomethane	ND	ug/L	5.0	1		10/16/17 09:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		10/16/17 09:37	78-93-3	L1
Carbon disulfide	ND	ug/L	5.0	1		10/16/17 09:37	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/16/17 09:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/16/17 09:37	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/16/17 09:37	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/16/17 09:37	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/16/17 09:37	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		10/16/17 09:37	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/16/17 09:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/16/17 09:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/16/17 09:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/16/17 09:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/16/17 09:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/16/17 09:37	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/16/17 09:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/16/17 09:37	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/16/17 09:37	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		10/16/17 09:37	591-78-6	
Methylene chloride	ND	ug/L	1.0	1		10/16/17 09:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		10/16/17 09:37	108-10-1	
Styrene	ND	ug/L	1.0	1		10/16/17 09:37	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/16/17 09:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/16/17 09:37	127-18-4	
Toluene	ND	ug/L	1.0	1		10/16/17 09:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/16/17 09:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/16/17 09:37	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/16/17 09:37	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		10/16/17 09:37	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		10/16/17 09:37	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	98	%	80-120	1		10/16/17 09:37	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120	1		10/16/17 09:37	17060-07-0	
Toluene-d8 (S)	103	%	80-120	1		10/16/17 09:37	2037-26-5	
Preservation pH	**1.0**		0.10	1		10/16/17 09:37		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: WHIRLPOOL
Pace Project No.: 60255450

QC Batch: 498726 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60255450001, 60255450002, 60255450003

METHOD BLANK: 2040699 Matrix: Water
Associated Lab Samples: 60255450001, 60255450002, 60255450003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	10/16/17 09:23	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	10/16/17 09:23	
1,1,2-Trichloroethane	ug/L	ND	1.0	10/16/17 09:23	
1,1-Dichloroethane	ug/L	ND	1.0	10/16/17 09:23	
1,1-Dichloroethene	ug/L	ND	1.0	10/16/17 09:23	
1,2-Dichloroethane	ug/L	ND	1.0	10/16/17 09:23	
1,2-Dichloropropane	ug/L	ND	1.0	10/16/17 09:23	
2-Butanone (MEK)	ug/L	ND	10.0	10/16/17 09:23	
2-Hexanone	ug/L	ND	10.0	10/16/17 09:23	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	10/16/17 09:23	
Acetone	ug/L	ND	10.0	10/16/17 09:23	
Benzene	ug/L	ND	1.0	10/16/17 09:23	
Bromodichloromethane	ug/L	ND	1.0	10/16/17 09:23	
Bromoform	ug/L	ND	1.0	10/16/17 09:23	
Bromomethane	ug/L	ND	5.0	10/16/17 09:23	
Carbon disulfide	ug/L	ND	5.0	10/16/17 09:23	
Carbon tetrachloride	ug/L	ND	1.0	10/16/17 09:23	
Chlorobenzene	ug/L	ND	1.0	10/16/17 09:23	
Chloroethane	ug/L	ND	1.0	10/16/17 09:23	
Chloroform	ug/L	ND	1.0	10/16/17 09:23	
Chloromethane	ug/L	ND	1.0	10/16/17 09:23	
cis-1,2-Dichloroethene	ug/L	ND	1.0	10/16/17 09:23	
cis-1,3-Dichloropropene	ug/L	ND	1.0	10/16/17 09:23	
Dibromochloromethane	ug/L	ND	1.0	10/16/17 09:23	
Ethylbenzene	ug/L	ND	1.0	10/16/17 09:23	
Methylene chloride	ug/L	ND	1.0	10/16/17 09:23	
Styrene	ug/L	ND	1.0	10/16/17 09:23	
Tetrachloroethene	ug/L	ND	1.0	10/16/17 09:23	
Toluene	ug/L	ND	1.0	10/16/17 09:23	
trans-1,2-Dichloroethene	ug/L	ND	1.0	10/16/17 09:23	
trans-1,3-Dichloropropene	ug/L	ND	1.0	10/16/17 09:23	
Trichloroethene	ug/L	ND	1.0	10/16/17 09:23	
Vinyl chloride	ug/L	ND	1.0	10/16/17 09:23	
Xylene (Total)	ug/L	ND	3.0	10/16/17 09:23	
1,2-Dichloroethane-d4 (S)	%	92	80-120	10/16/17 09:23	
4-Bromofluorobenzene (S)	%	99	80-120	10/16/17 09:23	
Toluene-d8 (S)	%	101	80-120	10/16/17 09:23	

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: WHIRLPOOL
Pace Project No.: 60255450

LABORATORY CONTROL SAMPLE: 2040700

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.4	107	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	22.6	113	74-124	
1,1,2-Trichloroethane	ug/L	20	21.3	107	81-118	
1,1-Dichloroethane	ug/L	20	23.4	117	82-122	
1,1-Dichloroethene	ug/L	20	21.7	109	78-123	
1,2-Dichloroethane	ug/L	20	20.9	104	78-117	
1,2-Dichloropropane	ug/L	20	22.5	113	81-118	
2-Butanone (MEK)	ug/L	100	121	121	72-117	L1
2-Hexanone	ug/L	100	114	114	78-118	
4-Methyl-2-pentanone (MIBK)	ug/L	100	111	111	77-124	
Acetone	ug/L	100	107	107	66-127	
Benzene	ug/L	20	22.4	112	82-115	
Bromodichloromethane	ug/L	20	20.5	103	83-123	
Bromoform	ug/L	20	20.4	102	79-126	
Bromomethane	ug/L	20	20.3	102	39-146	
Carbon disulfide	ug/L	20	21.6	108	75-121	
Carbon tetrachloride	ug/L	20	20.4	102	82-117	
Chlorobenzene	ug/L	20	22.9	114	89-114	
Chloroethane	ug/L	20	22.0	110	71-133	
Chloroform	ug/L	20	21.2	106	78-117	
Chloromethane	ug/L	20	14.0	70	19-181	
cis-1,2-Dichloroethene	ug/L	20	21.6	108	78-119	
cis-1,3-Dichloropropene	ug/L	20	21.1	105	81-116	
Dibromochloromethane	ug/L	20	20.9	105	81-122	
Ethylbenzene	ug/L	20	21.4	107	83-112	
Methylene chloride	ug/L	20	22.6	113	78-127	
Styrene	ug/L	20	22.4	112	88-117	
Tetrachloroethene	ug/L	20	22.6	113	80-121	
Toluene	ug/L	20	22.4	112	78-113	
trans-1,2-Dichloroethene	ug/L	20	22.6	113	79-120	
trans-1,3-Dichloropropene	ug/L	20	23.3	116	81-119	
Trichloroethene	ug/L	20	20.0	100	78-118	
Vinyl chloride	ug/L	20	20.9	104	66-133	
Xylene (Total)	ug/L	60	65.9	110	83-114	
1,2-Dichloroethane-d4 (S)	%			96	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			105	80-120	

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: WHIRLPOOL
Pace Project No.: 60255450

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.

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-K Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: 498726

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

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.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL
Pace Project No.: 60255450

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60255450001	**TMW-28-201710**	EPA 5030B/8260	498726		
60255450002	**TMW-29-201710**	EPA 5030B/8260	498726		
60255450003	**TB-03-201710**	EPA 5030B/8260	498726		

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Sample Condition Upon Receipt

WO# : 60255450

60255450

35

Client Name: Ramboll Environ

Courier: FedEx ☒ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: 788062451372 Pace Shipping Label Used? Yes ☒ No ☐

Custody Seal on Cooler/Box Present: Yes ☒ No ☐ Seals intact: Yes ☒ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☒ Foam ☐ None ☐ Other ☐

Thermometer Used: CF 0.0 T-266 / CF +0.3 T-239 **Type of Ice:** Wet Blue None

RH 10-13-17

Cooler Temperature (°C): **As-read** 4.7 **Corr. Factor** CF 0.0 CF +0.3 **Corrected** 4.7

Date and initials of person examining contents:

Temperature should be above freezing to 6°C

Chain of Custody present:	☒Yes ☐No ☐N/A	
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	
Samples arrived within holding time:	☒Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☒No ☐N/A	
Rush Turn Around Time requested:	☒Yes ☐No ☐N/A	24hr
Sufficient volume:	☒Yes ☐No ☐N/A	
Correct containers used:	☒Yes ☐No ☐N/A	
Pace containers used:	☒Yes ☐No ☐N/A	
Containers intact:	☒Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☒N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	
Sample labels match COC: Date / time / ID / analyses	☒Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☒No ☐N/A	
Containers requiring pH preservation in compliance? (HNO3, H2SO4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	☐Yes ☒No ☐N/A	
Cyanide water sample checks: ☒N/A		
Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☒Yes ☐No ☐N/A	2CD (GRO)
Headspace in VOA vials (>6mm):	☐Yes ☐No ☒N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☒N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☒N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

CHAIN-OF-CUSTODY / Analytical Request Document

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

Pace Analytical
www.pacelabs.com

Page: 1 of 1

Section A Required Client Information:

Company:	Ramboll Environ
Address:	1807 Park 270 Drive, Ste 320
	St. Louis, MO 63146
Email To:	~~dburge@ramboll.com~~ nzurweller@ramboll.com
Phone: ~~314-513-1973~~ 636-579-6887	Fax: 314-513-1951
Requested Due Date/TAT:	24 hr TAT

Section B Required Project Information:

Report To:	~~Doug Burge~~ Nick Zurweller
Copy To:	~~Nick Zurweller~~ mwilson@ramboll.com
Purchase Order No.:	
Project Name:	~~NCWS (List B)~~ Whirlpool
Project Number:	~~10937880A~~ 34375005

Section C Invoice Information:

Attention:	Tamara House-Knight
Company Name:	Ramboll Environ
Address:	
Pace Quote Reference:	
Pace Project Manager:	~~Jamie Church~~ Colleen Clyne
Pace Profile #:	~~1320~~

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: MO

Section D Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Analysis Test: VOCs Client Specific	Chloride	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TMW-28-201710	WT	G			10/12/17	1220		3				X						X			60255450 3C(Grab) 001
2	TMW-29-201710	WT	G			10/12/17	1405		3				X						X			& 002
3	TB-03-201710	WT	G																			2C(Grab) 003
4		WT	G																			
5		WT	G																			
6		WT	G																			
7		WT	G																			
8		WT	G																			
9		WT	G																			
10		WT	G																			
11		WT	G																			
12		WT	G																			

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
24 hr TAT	Ramboll Environ	10/12/17	1840	Pace	10-13	0825	4.7 4 4 4

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nick Zurweller

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10/12/17

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

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

F-ALL-Q-020rev.08, 12-Oct-2007

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

November 20, 2017

Nick Zurweller
Ramboll Environ
7500 College Blvd.
Ste. 295
Overland Park, KS 66210

RE: Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on October 14, 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.

RV-1 - Revised report - Case narrative added.

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

Sincerely,

Richard Mannz
richard.mannz@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: Tamara House-Knight, Ramboll Environ
M. Wilson

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 17-016-0
Illinois Certification #: 200030
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212018-1
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587
Missouri Certification: 10070

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60255559001	**TMW-22-201710**	Water	10/13/17 12:05	10/14/17 08:15
60255559002	**TMW-23-201710**	Water	10/13/17 12:40	10/14/17 08:15
60255559003	**TMW-30-201710**	Water	10/13/17 15:10	10/14/17 08:15
60255559004	**TB-04-201710**	Water	10/13/17 12:05	10/14/17 08:15

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SAMPLE ANALYTE COUNT

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60255559001	**TMW-22-201710**	EPA 5030B/8260	PGH	69	PASI-K
60255559002	**TMW-23-201710**	EPA 5030B/8260	PGH	69	PASI-K
60255559003	**TMW-30-201710**	EPA 5030B/8260	PGH	69	PASI-K
60255559004	**TB-04-201710**	EPA 5030B/8260	PGH	69	PASI-K

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: November 20, 2017

General Information:
4 samples were analyzed for EPA 5030B/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: 498729

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: 2040703)
  - 1,4-Dichlorobenzene
  - 2-Butanone (MEK)

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

QC Batch: 498956

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
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ANALYTICAL RESULTS

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

Sample: TMW-22-201710 **Lab ID: 60255559001** Collected: 10/13/17 12:05 Received: 10/14/17 08:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	ND	ug/L	10.0	1		10/16/17 12:27	67-64-1	
Benzene	ND	ug/L	1.0	1		10/16/17 12:27	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/16/17 12:27	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/16/17 12:27	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/16/17 12:27	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/16/17 12:27	75-25-2	
Bromomethane	ND	ug/L	5.0	1		10/16/17 12:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		10/16/17 12:27	78-93-3	L1
n-Butylbenzene	ND	ug/L	1.0	1		10/16/17 12:27	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		10/16/17 12:27	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		10/16/17 12:27	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		10/16/17 12:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/16/17 12:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/16/17 12:27	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/16/17 12:27	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/16/17 12:27	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/16/17 12:27	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/16/17 12:27	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/16/17 12:27	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		10/16/17 12:27	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/16/17 12:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/16/17 12:27	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/16/17 12:27	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/16/17 12:27	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/16/17 12:27	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/16/17 12:27	106-46-7	L1
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/16/17 12:27	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/16/17 12:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/16/17 12:27	107-06-2	
1,2-Dichloroethene (Total)	**13.9**	ug/L	1.0	1		10/16/17 12:27	540-59-0	
1,1-Dichloroethene	**1.5**	ug/L	1.0	1		10/16/17 12:27	75-35-4	
cis-1,2-Dichloroethene	**13.9**	ug/L	1.0	1		10/16/17 12:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/16/17 12:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/16/17 12:27	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/16/17 12:27	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/16/17 12:27	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/16/17 12:27	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/16/17 12:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/16/17 12:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/16/17 12:27	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/16/17 12:27	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		10/16/17 12:27	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/16/17 12:27	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/16/17 12:27	99-87-6	
Methylene chloride	ND	ug/L	1.0	1		10/16/17 12:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		10/16/17 12:27	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/16/17 12:27	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

Sample: TMW-22-201710 **Lab ID: 60255559001** Collected: 10/13/17 12:05 Received: 10/14/17 08:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Naphthalene	ND	ug/L	10.0	1		10/16/17 12:27	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/16/17 12:27	103-65-1	
Styrene	ND	ug/L	1.0	1		10/16/17 12:27	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/16/17 12:27	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/16/17 12:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/16/17 12:27	127-18-4	
Toluene	ND	ug/L	1.0	1		10/16/17 12:27	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/16/17 12:27	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/16/17 12:27	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/16/17 12:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/16/17 12:27	79-00-5	
Trichloroethene	**636**	ug/L	20.0	20		10/17/17 15:06	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/16/17 12:27	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		10/16/17 12:27	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/16/17 12:27	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/16/17 12:27	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		10/16/17 12:27	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		10/16/17 12:27	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	99	%	80-120	1		10/16/17 12:27	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	80-120	1		10/16/17 12:27	17060-07-0	
Toluene-d8 (S)	103	%	80-120	1		10/16/17 12:27	2037-26-5	
Preservation pH	**1.0**		0.10	1		10/16/17 12:27		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

Sample: TMW-23-201710 **Lab ID: 60255559002** Collected: 10/13/17 12:40 Received: 10/14/17 08:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	ND	ug/L	10.0	1		10/16/17 11:58	67-64-1	
Benzene	ND	ug/L	1.0	1		10/16/17 11:58	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/16/17 11:58	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/16/17 11:58	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/16/17 11:58	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/16/17 11:58	75-25-2	
Bromomethane	ND	ug/L	5.0	1		10/16/17 11:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		10/16/17 11:58	78-93-3	L1
n-Butylbenzene	ND	ug/L	1.0	1		10/16/17 11:58	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		10/16/17 11:58	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		10/16/17 11:58	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		10/16/17 11:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/16/17 11:58	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/16/17 11:58	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/16/17 11:58	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/16/17 11:58	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/16/17 11:58	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/16/17 11:58	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/16/17 11:58	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		10/16/17 11:58	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/16/17 11:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/16/17 11:58	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/16/17 11:58	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/16/17 11:58	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/16/17 11:58	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/16/17 11:58	106-46-7	L1
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/16/17 11:58	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/16/17 11:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/16/17 11:58	107-06-2	
1,2-Dichloroethene (Total)	**2.0**	ug/L	1.0	1		10/16/17 11:58	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/16/17 11:58	75-35-4	
cis-1,2-Dichloroethene	**2.0**	ug/L	1.0	1		10/16/17 11:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/16/17 11:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/16/17 11:58	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/16/17 11:58	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/16/17 11:58	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/16/17 11:58	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/16/17 11:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/16/17 11:58	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/16/17 11:58	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/16/17 11:58	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		10/16/17 11:58	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/16/17 11:58	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/16/17 11:58	99-87-6	
Methylene chloride	ND	ug/L	1.0	1		10/16/17 11:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		10/16/17 11:58	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/16/17 11:58	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

Sample: TMW-23-201710 **Lab ID: 60255559002** Collected: 10/13/17 12:40 Received: 10/14/17 08:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Naphthalene	ND	ug/L	10.0	1		10/16/17 11:58	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/16/17 11:58	103-65-1	
Styrene	ND	ug/L	1.0	1		10/16/17 11:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/16/17 11:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/16/17 11:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/16/17 11:58	127-18-4	
Toluene	ND	ug/L	1.0	1		10/16/17 11:58	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/16/17 11:58	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/16/17 11:58	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/16/17 11:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/16/17 11:58	79-00-5	
Trichloroethene	**131**	ug/L	1.0	1		10/16/17 11:58	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/16/17 11:58	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		10/16/17 11:58	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/16/17 11:58	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/16/17 11:58	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		10/16/17 11:58	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		10/16/17 11:58	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	100	%	80-120	1		10/16/17 11:58	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120	1		10/16/17 11:58	17060-07-0	
Toluene-d8 (S)	102	%	80-120	1		10/16/17 11:58	2037-26-5	
Preservation pH	**1.0**		0.10	1		10/16/17 11:58		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

Sample: TMW-30-201710 **Lab ID: 60255559003** Collected: 10/13/17 15:10 Received: 10/14/17 08:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	ND	ug/L	10.0	1		10/16/17 12:12	67-64-1	
Benzene	ND	ug/L	1.0	1		10/16/17 12:12	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/16/17 12:12	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/16/17 12:12	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/16/17 12:12	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/16/17 12:12	75-25-2	
Bromomethane	ND	ug/L	5.0	1		10/16/17 12:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		10/16/17 12:12	78-93-3	L1
n-Butylbenzene	ND	ug/L	1.0	1		10/16/17 12:12	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		10/16/17 12:12	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		10/16/17 12:12	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		10/16/17 12:12	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/16/17 12:12	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/16/17 12:12	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/16/17 12:12	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/16/17 12:12	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/16/17 12:12	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/16/17 12:12	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/16/17 12:12	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		10/16/17 12:12	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/16/17 12:12	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/16/17 12:12	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/16/17 12:12	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/16/17 12:12	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/16/17 12:12	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/16/17 12:12	106-46-7	L1
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/16/17 12:12	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/16/17 12:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/16/17 12:12	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		10/16/17 12:12	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/16/17 12:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/16/17 12:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/16/17 12:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/16/17 12:12	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/16/17 12:12	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/16/17 12:12	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/16/17 12:12	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/16/17 12:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/16/17 12:12	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/16/17 12:12	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/16/17 12:12	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		10/16/17 12:12	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/16/17 12:12	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/16/17 12:12	99-87-6	
Methylene chloride	ND	ug/L	1.0	1		10/16/17 12:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		10/16/17 12:12	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/16/17 12:12	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

Sample: TMW-30-201710 **Lab ID: 60255559003** Collected: 10/13/17 15:10 Received: 10/14/17 08:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Naphthalene	ND	ug/L	10.0	1		10/16/17 12:12	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/16/17 12:12	103-65-1	
Styrene	ND	ug/L	1.0	1		10/16/17 12:12	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/16/17 12:12	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/16/17 12:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/16/17 12:12	127-18-4	
Toluene	ND	ug/L	1.0	1		10/16/17 12:12	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/16/17 12:12	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/16/17 12:12	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/16/17 12:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/16/17 12:12	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/16/17 12:12	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/16/17 12:12	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		10/16/17 12:12	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/16/17 12:12	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/16/17 12:12	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		10/16/17 12:12	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		10/16/17 12:12	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	95	%	80-120	1		10/16/17 12:12	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	80-120	1		10/16/17 12:12	17060-07-0	
Toluene-d8 (S)	103	%	80-120	1		10/16/17 12:12	2037-26-5	
Preservation pH	**1.0**		0.10	1		10/16/17 12:12		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

Sample: TB-04-201710 **Lab ID: 60255559004** Collected: 10/13/17 12:05 Received: 10/14/17 08:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	ND	ug/L	10.0	1		10/16/17 11:02	67-64-1	
Benzene	ND	ug/L	1.0	1		10/16/17 11:02	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/16/17 11:02	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/16/17 11:02	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/16/17 11:02	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/16/17 11:02	75-25-2	
Bromomethane	ND	ug/L	5.0	1		10/16/17 11:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		10/16/17 11:02	78-93-3	L1
n-Butylbenzene	ND	ug/L	1.0	1		10/16/17 11:02	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		10/16/17 11:02	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		10/16/17 11:02	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		10/16/17 11:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		10/16/17 11:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/16/17 11:02	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/16/17 11:02	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/16/17 11:02	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/16/17 11:02	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/16/17 11:02	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/16/17 11:02	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		10/16/17 11:02	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/16/17 11:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/16/17 11:02	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/16/17 11:02	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/16/17 11:02	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/16/17 11:02	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/16/17 11:02	106-46-7	L1
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/16/17 11:02	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/16/17 11:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/16/17 11:02	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		10/16/17 11:02	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/16/17 11:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/16/17 11:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/16/17 11:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/16/17 11:02	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/16/17 11:02	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/16/17 11:02	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/16/17 11:02	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/16/17 11:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/16/17 11:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		10/16/17 11:02	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/16/17 11:02	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		10/16/17 11:02	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/16/17 11:02	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/16/17 11:02	99-87-6	
Methylene chloride	ND	ug/L	1.0	1		10/16/17 11:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		10/16/17 11:02	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/16/17 11:02	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

Sample: TB-04-201710 **Lab ID: 60255559004** Collected: 10/13/17 12:05 Received: 10/14/17 08:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Naphthalene	ND	ug/L	10.0	1		10/16/17 11:02	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/16/17 11:02	103-65-1	
Styrene	ND	ug/L	1.0	1		10/16/17 11:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/16/17 11:02	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/16/17 11:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/16/17 11:02	127-18-4	
Toluene	ND	ug/L	1.0	1		10/16/17 11:02	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/16/17 11:02	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/16/17 11:02	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/16/17 11:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/16/17 11:02	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/16/17 11:02	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/16/17 11:02	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		10/16/17 11:02	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/16/17 11:02	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/16/17 11:02	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		10/16/17 11:02	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		10/16/17 11:02	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	97	%	80-120	1		10/16/17 11:02	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	80-120	1		10/16/17 11:02	17060-07-0	
Toluene-d8 (S)	102	%	80-120	1		10/16/17 11:02	2037-26-5	
Preservation pH	**1.0**		0.10	1		10/16/17 11:02		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

QC Batch: 498729 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60255559001, 60255559002, 60255559003, 60255559004

METHOD BLANK: 2040702 Matrix: Water
Associated Lab Samples: 60255559001, 60255559002, 60255559003, 60255559004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	10/16/17 09:23	
1,1,1-Trichloroethane	ug/L	ND	1.0	10/16/17 09:23	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	10/16/17 09:23	
1,1,2-Trichloroethane	ug/L	ND	1.0	10/16/17 09:23	
1,1-Dichloroethane	ug/L	ND	1.0	10/16/17 09:23	
1,1-Dichloroethene	ug/L	ND	1.0	10/16/17 09:23	
1,1-Dichloropropene	ug/L	ND	1.0	10/16/17 09:23	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	10/16/17 09:23	
1,2,3-Trichloropropane	ug/L	ND	2.5	10/16/17 09:23	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	10/16/17 09:23	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	10/16/17 09:23	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.5	10/16/17 09:23	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	10/16/17 09:23	
1,2-Dichlorobenzene	ug/L	ND	1.0	10/16/17 09:23	
1,2-Dichloroethane	ug/L	ND	1.0	10/16/17 09:23	
1,2-Dichloroethene (Total)	ug/L	ND	1.0	10/16/17 09:23	
1,2-Dichloropropane	ug/L	ND	1.0	10/16/17 09:23	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	10/16/17 09:23	
1,3-Dichlorobenzene	ug/L	ND	1.0	10/16/17 09:23	
1,3-Dichloropropane	ug/L	ND	1.0	10/16/17 09:23	
1,4-Dichlorobenzene	ug/L	ND	1.0	10/16/17 09:23	
2,2-Dichloropropane	ug/L	ND	1.0	10/16/17 09:23	
2-Butanone (MEK)	ug/L	ND	10.0	10/16/17 09:23	
2-Chlorotoluene	ug/L	ND	1.0	10/16/17 09:23	
2-Hexanone	ug/L	ND	10.0	10/16/17 09:23	
4-Chlorotoluene	ug/L	ND	1.0	10/16/17 09:23	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	10/16/17 09:23	
Acetone	ug/L	ND	10.0	10/16/17 09:23	
Benzene	ug/L	ND	1.0	10/16/17 09:23	
Bromobenzene	ug/L	ND	1.0	10/16/17 09:23	
Bromochloromethane	ug/L	ND	1.0	10/16/17 09:23	
Bromodichloromethane	ug/L	ND	1.0	10/16/17 09:23	
Bromoform	ug/L	ND	1.0	10/16/17 09:23	
Bromomethane	ug/L	ND	5.0	10/16/17 09:23	
Carbon disulfide	ug/L	ND	5.0	10/16/17 09:23	
Carbon tetrachloride	ug/L	ND	1.0	10/16/17 09:23	
Chlorobenzene	ug/L	ND	1.0	10/16/17 09:23	
Chloroethane	ug/L	ND	1.0	10/16/17 09:23	
Chloroform	ug/L	ND	1.0	10/16/17 09:23	
Chloromethane	ug/L	ND	1.0	10/16/17 09:23	
cis-1,2-Dichloroethene	ug/L	ND	1.0	10/16/17 09:23	

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

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

METHOD BLANK: 2040702 Matrix: Water
Associated Lab Samples: 60255559001, 60255559002, 60255559003, 60255559004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,3-Dichloropropene	ug/L	ND	1.0	10/16/17 09:23	
Dibromochloromethane	ug/L	ND	1.0	10/16/17 09:23	
Dibromomethane	ug/L	ND	1.0	10/16/17 09:23	
Dichlorodifluoromethane	ug/L	ND	1.0	10/16/17 09:23	
Ethylbenzene	ug/L	ND	1.0	10/16/17 09:23	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	10/16/17 09:23	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	10/16/17 09:23	
Methyl-tert-butyl ether	ug/L	ND	1.0	10/16/17 09:23	
Methylene chloride	ug/L	ND	1.0	10/16/17 09:23	
n-Butylbenzene	ug/L	ND	1.0	10/16/17 09:23	
n-Propylbenzene	ug/L	ND	1.0	10/16/17 09:23	
Naphthalene	ug/L	ND	10.0	10/16/17 09:23	
p-Isopropyltoluene	ug/L	ND	1.0	10/16/17 09:23	
sec-Butylbenzene	ug/L	ND	1.0	10/16/17 09:23	
Styrene	ug/L	ND	1.0	10/16/17 09:23	
tert-Butylbenzene	ug/L	ND	1.0	10/16/17 09:23	
Tetrachloroethene	ug/L	ND	1.0	10/16/17 09:23	
Toluene	ug/L	ND	1.0	10/16/17 09:23	
trans-1,2-Dichloroethene	ug/L	ND	1.0	10/16/17 09:23	
trans-1,3-Dichloropropene	ug/L	ND	1.0	10/16/17 09:23	
Trichloroethene	ug/L	ND	1.0	10/16/17 09:23	
Trichlorofluoromethane	ug/L	ND	1.0	10/16/17 09:23	
Vinyl chloride	ug/L	ND	1.0	10/16/17 09:23	
Xylene (Total)	ug/L	ND	3.0	10/16/17 09:23	
1,2-Dichloroethane-d4 (S)	%	92	80-120	10/16/17 09:23	
4-Bromofluorobenzene (S)	%	99	80-120	10/16/17 09:23	
Toluene-d8 (S)	%	101	80-120	10/16/17 09:23	

LABORATORY CONTROL SAMPLE: 2040703

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	21.6	108	85-113	
1,1,1-Trichloroethane	ug/L	20	21.4	107	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	22.6	113	74-124	
1,1,2-Trichloroethane	ug/L	20	21.3	107	81-118	
1,1-Dichloroethane	ug/L	20	23.4	117	82-122	
1,1-Dichloroethene	ug/L	20	21.7	109	78-123	
1,1-Dichloropropene	ug/L	20	22.8	114	82-120	
1,2,3-Trichlorobenzene	ug/L	20	23.2	116	71-123	
1,2,3-Trichloropropane	ug/L	20	23.4	117	74-122	
1,2,4-Trichlorobenzene	ug/L	20	22.5	113	75-122	
1,2,4-Trimethylbenzene	ug/L	20	22.2	111	85-116	
1,2-Dibromo-3-chloropropane	ug/L	20	21.6	108	58-145	
1,2-Dibromoethane (EDB)	ug/L	20	21.9	109	83-118	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

LABORATORY CONTROL SAMPLE: 2040703

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichlorobenzene	ug/L	20	22.5	113	85-117	
1,2-Dichloroethane	ug/L	20	20.9	104	78-117	
1,2-Dichloroethene (Total)	ug/L	40	44.3	111	80-119	
1,2-Dichloropropane	ug/L	20	22.5	113	81-118	
1,3,5-Trimethylbenzene	ug/L	20	22.0	110	83-118	
1,3-Dichlorobenzene	ug/L	20	23.0	115	83-115	
1,3-Dichloropropane	ug/L	20	24.2	121	85-124	
1,4-Dichlorobenzene	ug/L	20	23.4	117	85-115	L1
2,2-Dichloropropane	ug/L	20	22.2	111	46-144	
2-Butanone (MEK)	ug/L	100	121	121	72-117	L1
2-Chlorotoluene	ug/L	20	21.2	106	82-116	
2-Hexanone	ug/L	100	114	114	78-118	
4-Chlorotoluene	ug/L	20	22.6	113	82-116	
4-Methyl-2-pentanone (MIBK)	ug/L	100	111	111	77-124	
Acetone	ug/L	100	107	107	66-127	
Benzene	ug/L	20	22.4	112	82-115	
Bromobenzene	ug/L	20	21.7	108	84-114	
Bromochloromethane	ug/L	20	23.6	118	76-122	
Bromodichloromethane	ug/L	20	20.5	103	83-123	
Bromoform	ug/L	20	20.4	102	79-126	
Bromomethane	ug/L	20	20.3	102	39-146	
Carbon disulfide	ug/L	20	21.6	108	75-121	
Carbon tetrachloride	ug/L	20	20.4	102	82-117	
Chlorobenzene	ug/L	20	22.9	114	89-114	
Chloroethane	ug/L	20	22.0	110	71-133	
Chloroform	ug/L	20	21.2	106	78-117	
Chloromethane	ug/L	20	14.0	70	19-181	
cis-1,2-Dichloroethene	ug/L	20	21.6	108	78-119	
cis-1,3-Dichloropropene	ug/L	20	21.1	105	81-116	
Dibromochloromethane	ug/L	20	20.9	105	81-122	
Dibromomethane	ug/L	20	21.6	108	79-120	
Dichlorodifluoromethane	ug/L	20	20.5	102	64-147	
Ethylbenzene	ug/L	20	21.4	107	83-112	
Hexachloro-1,3-butadiene	ug/L	20	21.6	108	72-122	
Isopropylbenzene (Cumene)	ug/L	20	21.9	109	87-117	
Methyl-tert-butyl ether	ug/L	20	21.2	106	73-118	
Methylene chloride	ug/L	20	22.6	113	78-127	
n-Butylbenzene	ug/L	20	21.9	109	79-117	
n-Propylbenzene	ug/L	20	21.3	106	82-117	
Naphthalene	ug/L	20	22.6	113	67-118	
p-Isopropyltoluene	ug/L	20	21.8	109	85-116	
sec-Butylbenzene	ug/L	20	20.2	101	82-112	
Styrene	ug/L	20	22.4	112	88-117	
tert-Butylbenzene	ug/L	20	21.1	105	85-115	
Tetrachloroethene	ug/L	20	22.6	113	80-121	
Toluene	ug/L	20	22.4	112	78-113	
trans-1,2-Dichloroethene	ug/L	20	22.6	113	79-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

LABORATORY CONTROL SAMPLE: 2040703

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
trans-1,3-Dichloropropene	ug/L	20	23.3	116	81-119	
Trichloroethene	ug/L	20	20.0	100	78-118	
Trichlorofluoromethane	ug/L	20	22.4	112	80-135	
Vinyl chloride	ug/L	20	20.9	104	66-133	
Xylene (Total)	ug/L	60	65.9	110	83-114	
1,2-Dichloroethane-d4 (S)	%			96	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			105	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

QC Batch: 498956
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60255559001

METHOD BLANK: 2041553 Matrix: Water
Associated Lab Samples: 60255559001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Trichloroethene	ug/L	ND	1.0	10/17/17 13:41	
1,2-Dichloroethane-d4 (S)	%	102	80-120	10/17/17 13:41	
4-Bromofluorobenzene (S)	%	100	80-120	10/17/17 13:41	
Toluene-d8 (S)	%	100	80-120	10/17/17 13:41	

LABORATORY CONTROL SAMPLE: 2041554

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/L	20	19.6	98	78-118	
1,2-Dichloroethane-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			98	80-120	

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

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

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.

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-K Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: 498956

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

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.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255559

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60255559001	**TMW-22-201710**	EPA 5030B/8260	498729		
60255559001	**TMW-22-201710**	EPA 5030B/8260	498956		
60255559002	**TMW-23-201710**	EPA 5030B/8260	498729		
60255559003	**TMW-30-201710**	EPA 5030B/8260	498729		
60255559004	**TB-04-201710**	EPA 5030B/8260	498729		

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Sample Condition Upon Receipt

WO# : 60255559

60255559

Client Name: Ramboll Environ JLS

Courier: FedEx ☑ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: 7880 7458 0055 Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☑ Foam ☐ None ☐ Other ☐

Thermometer Used: CF 0.0 T-266 / CF +0.3 T-239 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 3.6 **Corr. Factor** CF 0.0 CF +0.3 **Corrected** 3.6

Date and initials of person examining contents: PV 10/14/17

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☑Yes ☐No ☐N/A	24Hr
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	☐Yes ☐No ☑N/A	
Cyanide water sample checks: ☑ N/A Lead acetate strip turns dark? (Record only) Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No ☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: CBC Date: 10/16/17

CHAIN-OF-CUSTODY / Analytical Request Document

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

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Page: 1 of 1

Section A Required Client Information:

Company:	Ramboll Environ
Address:	1807 Park 270 Drive, Ste 320
	St. Louis, MO 63146
Email To:	~~rdburgett@ramboll.com~~ nzurweller@ramboll.com
Phone:	~~314-646-4575~~ Fax: 314-513-1951 (636-579-6823)
Requested Due Date/TAT:	24-Hr TAT

Section B Required Project Information:

Report To:	~~Doug Burgett~~ Nick Zurweller
Copy To:	~~Nick Zurweller~~ mwilson@ramboll.com; mellis@ramboll.com
Purchase Order No.:	
Project Name:	~~NSWS (List PM)~~ Whirlpool Fort Smith
Project Number:	~~1007686A~~ 34375005

Section C Invoice Information:

Attention:	Tamar House-Knight
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	~~Jamie Church~~ Colleen Clyne
Pace Profile #:	~~1520~~

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: MO

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	VOCs	Chloride	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TMW-22-201710	WT	G			10/13/17	1205		3				X						X			36025 5559 001
2	TMW-23-201710	WT	G			↓	1240		↓				↓						↓			002
3	TMW-30-201710	WT	G			↓	1510		↓				↓						↓			003
4	TB-04-201710	WT	G						2										↓			2D69H 004
5		WT	G																			
6		WT	G																			
7		WT	G																			
8		WT	G																			
9		WT	G																			
10		WT	G																			
11		WT	G																			
12		WT	G																			

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
24-Hr TAT	Ramboll Environ	10/13/17	1630		10/14/17	0815	3-6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nick Zurweller

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 10/13/17

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

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

F-ALL-Q-020rev.08, 12-Oct-2007

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

November 27, 2017

Nick Zurweller
Ramboll Environ
7500 College Blvd.
Ste. 295
Overland Park, KS 66210

RE: Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255617

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on October 14, 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.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

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

Sincerely,

Richard Mannz
richard.mannz@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: Tamara House-Knight, Ramboll Environ
M. Wilson

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: WHIRLPOOL FORT SMITH
Pace Project No.: 60255617

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60255617001	**TMW-20-SL (12.5-13.0FT)-101017**	Solid	10/10/17 08:30	10/14/17 08:15
60255617002	**TMW-21-SL (14.0-14.5FT)-101017**	Solid	10/10/17 10:10	10/14/17 08:15
60255617003	**TMW-24-SL (15.0-15.5FT)-101017**	Solid	10/10/17 11:30	10/14/17 08:15
60255617004	**TMW-26-SL (23.0-23.5FT)-101017**	Solid	10/10/17 15:35	10/14/17 08:15
60255617005	**TMW-27-SL (24.5-25.0FT)-101017**	Solid	10/11/17 08:20	10/14/17 08:15
60255617006	**TMW-25-SL (28.0-28.5FT)-101017**	Solid	10/11/17 14:50	10/14/17 08:15
60255617007	**TMW-22-SL (15.5-16.0FT)-101017**	Solid	10/11/17 18:15	10/14/17 08:15
60255617008	**TMW-23-SL (15.0-15.5FT)-101017**	Solid	10/12/17 09:05	10/14/17 08:15
60255617009	**TMW-29-SL (11.5-12.0FT)-101017**	Solid	10/12/17 10:15	10/14/17 08:15
60255617010	**TMW-28-SL (24.0-24.5FT)-101017**	Solid	10/12/17 13:00	10/14/17 08:15
60255617011	**TMW-30-SL (25.5-26.0FT)-101017**	Solid	10/13/17 08:10	10/14/17 08:15

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project:
Pace Project No.:

Method:
Description:
Client:
Date:

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

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Sample Condition Upon Receipt

WO# : 60255617

60255617

Client Name: Ramboll Environ

Courier: FedEx ☑ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: 7880 7458 0055 Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☑ Foam ☐ None ☐ Other ☐

Thermometer Used: CF 0.0 T-266 / CF +0.3 T-239 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 3.6 **Corr. Factor** CF 0.0 CF +0.3 **Corrected** 3.6

Date and initials of person examining contents: PM 10/14/17

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested: PM 10/14	☑Yes ☐No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: SL	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	☐Yes ☐No ☑N/A	
Cyanide water sample checks: ☑ N/A Lead acetate strip turns dark? (Record only) Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No ☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State: MD	☐Yes ☑No ☐N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N RHm

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Required Client Information:

Company:	Ramboll Environ
Address:	1807 Park 270 Drive, Ste 320
	St. Louis, MO 63146
Email To:	~~dburae@ramboll.com~~ nzurweller@ramboll.com
Phone: ~~314-513-1951~~ 636-579-6827	Fax: 314-513-1951
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To: ~~Doug Burge~~	Nick Zurweller
Copy To: ~~Nick Zurweller~~	mwilson@ramboll.com
Purchase Order No.:	
Project Name: ~~NOWS (List B)~~	Whirlpool Fort Smith
Project Number: ~~1937600~~	34375005

Section C Invoice Information:

Attention:	Tamara House-Knight
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager: ~~Jamie Church~~	Colleen Clyne
Pace Profile #: ~~1320~~	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: MO

Section D Required Client Information

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	VOCs	Chloride	TOC	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TMW-20-SL(12.5-13.0FT)101017	SL	G			10/10/17	0830		1	X											X		60255617
2	TMW-21-SL(14.0-14.5FT)-101017	WT	G				1010																001
3	TMW-24-SL(15.0-15.5FT)-101017	WT	G				1130																002
4	TMW-26-SL(23.0-23.5FT)-101017	WT	G				1535																003
5	TMW-27-SL(24.5-25.0FT)-101117	WT	G			10/11/17	0820																004
6	TMW-25-SL(28.0-28.5FT)-101117	WT	G				1450																005
7	TMW-22-SL(15.5-16.0FT)-101117	WT	G				1215																006
8	TMW-23-SL(15.0-15.5FT)-101217	WT	G			10/12/17	0905																007
9	TMW-29-SL(11.5-12.0FT)-101217	WT	G				1015																008
10	TMW-28-SL(24.0-24.5FT)-101217	WT	G				1300																009
11	TMW-30-SL(25.5-26.0FT)-101317	WT	G			10/13/17	0810																010
12		WT	G																				011

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
TOC = Total Organic Carbon	Ramboll Environ	10/13/17	1630		10/14/17	0895	3.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nick Zurweller

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10/13/17

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-138962-1
Client Project/Site: Whirlpool Fort Smith

For:
Pace Analytical Services, LLC
9608 Loiret Boulevard
Lenexa, Kansas 66219

Attn: Richard Mannz

Roxanne Cisneros

Authorized for release by:
11/24/2017 10:42:17 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@testamericainc.com

Table of Contents

Sample Summary

Client: Pace Analytical Services, LLC
Project/Site: Whirlpool Fort Smith

TestAmerica Job ID: 490-138962-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-138962-1	TMW-20-SL (12.5-13.0FT)-101017	Solid	10/10/17 08:30	10/18/17 09:55
490-138962-2	TMW-21-SL (14.0-14.5FT)-101017	Solid	10/10/17 10:10	10/18/17 09:55
490-138962-3	TMW-24-SL (15.0-15.5FT)-101017	Solid	10/10/17 11:30	10/18/17 09:55
490-138962-4	TMW-26-SL (23.0-23.5FT)-101017	Solid	10/10/17 15:35	10/18/17 09:55
490-138962-5	TMW-27-SL (24.5-25.0FT)-101017	Solid	10/11/17 08:20	10/18/17 09:55
490-138962-6	TMW-25-SL (28.0-28.5FT)-101017	Solid	10/11/17 14:50	10/18/17 09:55
490-138962-7	TMW-22-SL (15.5-16.0FT)-101017	Solid	10/11/17 18:15	10/18/17 09:55
490-138962-8	TMW-23-SL (15.0-15.5FT)-101017	Solid	10/12/17 09:50	10/18/17 09:55
490-138962-9	TMW-29-SL (11.5-12.0FT)-101017	Solid	10/12/17 10:15	10/18/17 09:55
490-138962-10	TMW-28-SL (24.0-24.5FT)-101017	Solid	10/12/17 13:00	10/18/17 09:55
490-138962-11	TMW-30-SL (25.5-26.0FT)-101017	Solid	10/13/17 08:10	10/18/17 09:55

Case Narrative

Client: Pace Analytical Services, LLC
Project/Site: Whirlpool Fort Smith

TestAmerica Job ID: 490-138962-1

Job ID: 490-138962-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-138962-1

Comments
No additional comments.

Receipt
The samples were received on 10/18/2017 9:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.2º C.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Qualifiers

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Pace Analytical Services, LLC
Project/Site: Whirlpool Fort Smith

TestAmerica Job ID: 490-138962-1

Client Sample ID: TMW-20-SL (12.5-13.0FT)-101017
Date Collected: 10/10/17 08:30
Date Received: 10/18/17 09:55

Lab Sample ID: 490-138962-1
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1000	600	mg/Kg			11/06/17 15:09	1

Client: Pace Analytical Services, LLC
Project/Site: Whirlpool Fort Smith

TestAmerica Job ID: 490-138962-1

Client Sample ID: TMW-21-SL (14.0-14.5FT)-101017
Date Collected: 10/10/17 10:10
Date Received: 10/18/17 09:55

Lab Sample ID: 490-138962-2
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	682	J	1000	600	mg/Kg			11/06/17 15:09	1

Client: Pace Analytical Services, LLC
Project/Site: Whirlpool Fort Smith

TestAmerica Job ID: 490-138962-1

Client Sample ID: TMW-24-SL (15.0-15.5FT)-101017
Date Collected: 10/10/17 11:30
Date Received: 10/18/17 09:55

Lab Sample ID: 490-138962-3
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1000	600	mg/Kg			11/06/17 15:09	1

Client: Pace Analytical Services, LLC
Project/Site: Whirlpool Fort Smith

TestAmerica Job ID: 490-138962-1

Client Sample ID: TMW-26-SL (23.0-23.5FT)-101017
Date Collected: 10/10/17 15:35
Date Received: 10/18/17 09:55

Lab Sample ID: 490-138962-4
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1000	600	mg/Kg			11/06/17 15:09	1

Client: Pace Analytical Services, LLC
Project/Site: Whirlpool Fort Smith

TestAmerica Job ID: 490-138962-1

Client Sample ID: TMW-27-SL (24.5-25.0FT)-101017 — **Lab Sample ID: 490-138962-5**
Date Collected: 10/11/17 08:20 — **Matrix: Solid**
Date Received: 10/18/17 09:55

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1000	600	mg/Kg			11/06/17 15:09	1

Client: Pace Analytical Services, LLC
Project/Site: Whirlpool Fort Smith

TestAmerica Job ID: 490-138962-1

Client Sample ID: TMW-25-SL (28.0-28.5FT)-101017
Date Collected: 10/11/17 14:50
Date Received: 10/18/17 09:55

Lab Sample ID: 490-138962-6
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1000	600	mg/Kg			11/06/17 15:09	1

Client: Pace Analytical Services, LLC
Project/Site: Whirlpool Fort Smith

TestAmerica Job ID: 490-138962-1

Client Sample ID: TMW-22-SL (15.5-16.0FT)-101017 — **Lab Sample ID: 490-138962-7**
Date Collected: 10/11/17 18:15 — **Matrix: Solid**
Date Received: 10/18/17 09:55

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1000	600	mg/Kg			11/06/17 15:09	1

Client: Pace Analytical Services, LLC
Project/Site: Whirlpool Fort Smith

TestAmerica Job ID: 490-138962-1

Client Sample ID: TMW-23-SL (15.0-15.5FT)-101017
Date Collected: 10/12/17 09:50
Date Received: 10/18/17 09:55

Lab Sample ID: 490-138962-8
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	660	J	1000	600	mg/Kg			11/06/17 15:09	1

Client: Pace Analytical Services, LLC
Project/Site: Whirlpool Fort Smith

TestAmerica Job ID: 490-138962-1

Client Sample ID: TMW-29-SL (11.5-12.0FT)-101017 — **Lab Sample ID: 490-138962-9**
Date Collected: 10/12/17 10:15 — **Matrix: Solid**
Date Received: 10/18/17 09:55

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	728	J	1000	600	mg/Kg			11/06/17 07:06	1

Client: Pace Analytical Services, LLC
Project/Site: Whirlpool Fort Smith

TestAmerica Job ID: 490-138962-1

Client Sample ID: TMW-28-SL (24.0-24.5FT)-101017
Date Collected: 10/12/17 13:00
Date Received: 10/18/17 09:55

Lab Sample ID: 490-138962-10
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1000	600	mg/Kg			11/06/17 07:06	1

Client: Pace Analytical Services, LLC
Project/Site: Whirlpool Fort Smith

TestAmerica Job ID: 490-138962-1

Client Sample ID: TMW-30-SL (25.5-26.0FT)-101017
Date Collected: 10/13/17 08:10
Date Received: 10/18/17 09:55

Lab Sample ID: 490-138962-11
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1000	600	mg/Kg			11/06/17 07:06	1

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 490-477861/3
Matrix: Solid
Analysis Batch: 477861

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1000	600	mg/Kg			11/06/17 15:09	1

Lab Sample ID: LCS 490-477861/2
Matrix: Solid
Analysis Batch: 477861

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon - Duplicates			29900	31140		mg/Kg		104	80 - 120		

Lab Sample ID: 480-126772-A-2 DU
Matrix: Solid
Analysis Batch: 477861

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Organic Carbon - Duplicates	441000			483900		mg/Kg				9	20

QC Association Summary

Client: Pace Analytical Services, LLC
Project/Site: Whirlpool Fort Smith

TestAmerica Job ID: 490-138962-1

General Chemistry

Analysis Batch: 477861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-138962-1	TMW-20-SL (12.5-13.0FT)-101017	Total/NA	Solid	9060A	
490-138962-2	TMW-21-SL (14.0-14.5FT)-101017	Total/NA	Solid	9060A	
490-138962-3	TMW-24-SL (15.0-15.5FT)-101017	Total/NA	Solid	9060A	
490-138962-4	TMW-26-SL (23.0-23.5FT)-101017	Total/NA	Solid	9060A	
490-138962-5	TMW-27-SL (24.5-25.0FT)-101017	Total/NA	Solid	9060A	
490-138962-6	TMW-25-SL (28.0-28.5FT)-101017	Total/NA	Solid	9060A	
490-138962-7	TMW-22-SL (15.5-16.0FT)-101017	Total/NA	Solid	9060A	
490-138962-8	TMW-23-SL (15.0-15.5FT)-101017	Total/NA	Solid	9060A	
490-138962-9	TMW-29-SL (11.5-12.0FT)-101017	Total/NA	Solid	9060A	
490-138962-10	TMW-28-SL (24.0-24.5FT)-101017	Total/NA	Solid	9060A	
490-138962-11	TMW-30-SL (25.5-26.0FT)-101017	Total/NA	Solid	9060A	
MB 490-477861/3	Method Blank	Total/NA	Solid	9060A	
LCS 490-477861/2	Lab Control Sample	Total/NA	Solid	9060A	
480-126772-A-2 DU	Duplicate	Total/NA	Solid	9060A	

Lab Chronicle

Client: Pace Analytical Services, LLC
Project/Site: Whirlpool Fort Smith

TestAmerica Job ID: 490-138962-1

Client Sample ID: TMW-20-SL (12.5-13.0FT)-101017 — Lab Sample ID: 490-138962-1

Date Collected: 10/10/17 08:30 — **Matrix: Solid**
Date Received: 10/18/17 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		1			477861	11/06/17 15:09	CLJ	TAL NSH

Client Sample ID: TMW-21-SL (14.0-14.5FT)-101017 — Lab Sample ID: 490-138962-2

Date Collected: 10/10/17 10:10 — **Matrix: Solid**
Date Received: 10/18/17 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		1			477861	11/06/17 15:09	CLJ	TAL NSH

Client Sample ID: TMW-24-SL (15.0-15.5FT)-101017 — Lab Sample ID: 490-138962-3

Date Collected: 10/10/17 11:30 — **Matrix: Solid**
Date Received: 10/18/17 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		1			477861	11/06/17 15:09	CLJ	TAL NSH

Client Sample ID: TMW-26-SL (23.0-23.5FT)-101017 — Lab Sample ID: 490-138962-4

Date Collected: 10/10/17 15:35 — **Matrix: Solid**
Date Received: 10/18/17 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		1			477861	11/06/17 15:09	CLJ	TAL NSH

Client Sample ID: TMW-27-SL (24.5-25.0FT)-101017 — Lab Sample ID: 490-138962-5

Date Collected: 10/11/17 08:20 — **Matrix: Solid**
Date Received: 10/18/17 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		1			477861	11/06/17 15:09	CLJ	TAL NSH

Client Sample ID: TMW-25-SL (28.0-28.5FT)-101017 — Lab Sample ID: 490-138962-6

Date Collected: 10/11/17 14:50 — **Matrix: Solid**
Date Received: 10/18/17 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		1			477861	11/06/17 15:09	CLJ	TAL NSH

Lab Chronicle

Client: Pace Analytical Services, LLC
Project/Site: Whirlpool Fort Smith

TestAmerica Job ID: 490-138962-1

Client Sample ID: TMW-22-SL (15.5-16.0FT)-101017 — Lab Sample ID: 490-138962-7

Date Collected: 10/11/17 18:15 — **Matrix: Solid**
Date Received: 10/18/17 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		1			477861	11/06/17 15:09	CLJ	TAL NSH

Client Sample ID: TMW-23-SL (15.0-15.5FT)-101017 — Lab Sample ID: 490-138962-8

Date Collected: 10/12/17 09:50 — **Matrix: Solid**
Date Received: 10/18/17 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		1			477861	11/06/17 15:09	CLJ	TAL NSH

Client Sample ID: TMW-29-SL (11.5-12.0FT)-101017 — Lab Sample ID: 490-138962-9

Date Collected: 10/12/17 10:15 — **Matrix: Solid**
Date Received: 10/18/17 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		1			477861	11/06/17 07:06	CLJ	TAL NSH

Client Sample ID: TMW-28-SL (24.0-24.5FT)-101017 — Lab Sample ID: 490-138962-10

Date Collected: 10/12/17 13:00 — **Matrix: Solid**
Date Received: 10/18/17 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		1			477861	11/06/17 07:06	CLJ	TAL NSH

Client Sample ID: TMW-30-SL (25.5-26.0FT)-101017 — Lab Sample ID: 490-138962-11

Date Collected: 10/13/17 08:10 — **Matrix: Solid**
Date Received: 10/18/17 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		1			477861	11/06/17 07:06	CLJ	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Pace Analytical Services, LLC
Project/Site: Whirlpool Fort Smith

TestAmerica Job ID: 490-138962-1

Method	Method Description	Protocol	Laboratory
9060A	Organic Carbon, Total (TOC)	SW846	TAL NSH

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Accreditation/Certification Summary

Client: Pace Analytical Services, LLC
Project/Site: Whirlpool Fort Smith

TestAmerica Job ID: 490-138962-1

Laboratory: TestAmerica Nashville

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Kansas	NELAP	7	E-10229	12-31-17

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
9060A		Solid	Total Organic Carbon - Duplicates

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

490-138962 Chain of Custody

COOLER RECEIPT FORM

Cooler Received/Opened On 10/18/2017 @0955

Time Samples Removed From Cooler 1642 Time Samples Placed In Storage 1654 (2 Hour Window)

1. Tracking # 2606 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17960358 pH Strip Lot NA Chlorine Strip Lot NA

2. Temperature of rep. sample or temp blank when opened: 4.2 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO..NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: _____

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) ES

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

● ⬅ Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) JJ

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) ADF

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) ADF

I certify that I attached a label with the unique LIMS number to each container (intial) ADF

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment

Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: 60255617 **Workorder Name:** WHIRLPOOL FORT SMITH **Results Requested By:** 10/26/2017

Report / Invoice To	Subcontract To
Richard Mannz Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone (913)599-5665 Email: richard.mannz@pacelabs.com	P.O. 8731

State of Sample Origin: MO

Loc: 490
138962

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	TOC	LAB USE ONLY
1	TMW-20-SL (12.5-13.0FT)-101017	10/10/2017 08:30	60255617001	Solid	1	X	
2	TMW-21-SL (14.0-14.5FT)-101017	10/10/2017 10:10	60255617002	Solid	1	X	
3	TMW-24-SL (15.0-15.5FT)-101017	10/10/2017 11:30	60255617003	Solid	1	X	
4	TMW-26-SL (23.0-23.5FT)-101017	10/10/2017 15:35	60255617004	Solid	1	X	
5	TMW-27-SL (24.5-25.0FT)-101017	10/11/2017 08:20	60255617005	Solid	1	X	
6	TMW-25-SL (28.0-28.5FT)-101017	10/11/2017 14:50	60255617006	Solid	1	X	
7	TMW-22-SL (15.5-16.0FT)-101017	10/11/2017 18:15	60255617007	Solid	1	X	
8	TMW-23-SL (15.0-15.5FT)-101017	10/12/2017 09:05	60255617008	Solid	1	X	
9	TMW-29-SL (11.5-12.0FT)-101017	10/12/2017 10:15	60255617009	Solid	1	X	
10	TMW-28-SL (24.0-24.5FT)-101017	10/12/2017 13:00	60255617010	Solid	1	X	
11	TMW-30-SL (25.5-26.0FT)-101017	10/13/2017 08:10	60255617011	Solid	1	X	

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	10/17/17 1700	[signature]	10/18/17 0855
2				
3				

Comments: 4.2°C

Cooler Temperature on Receipt °C | Custody Seal Y or N | Received on Ice Y or N | Samples Intact Y or N

SUBOUT SAMPLES

Completed by Project Manager:

Loc: 490
138962

_____ Sub out within Pace Office: _____

Containers to be sent: _____

X Sub out outside of Pace

Laboratory: Test America

Shipping Address: 2960 Foster Creighton Drive
Nashville, TN 37204

Containers to be sent: _____

Pace Purchase Order Number: 8731

Project Number 60255617

Project Due Date: 10/26/2017 PM Initials: RHM

Sample #	Quanti	Matrix	Test (Description)	Unit Price	Containers to send
60255617001-011	11	soil	TOC 9060A	$50.00	
			Total	$550.00	

Initials of Person Placing Work: syw

Initials of Person Sending Samples: _____

Contact in other Lab: John Overbey

Phone Number: Phone:(501) 224-5060

Date Sent: 10/17/2017

Courier Used: Fed Ex

Tracking Number: _____

Login Sample Receipt Checklist

Client: Pace Analytical Services, LLC

Job Number: 490-138962-1

Login Number: 138962
List Number: 1
Creator: Huskey, Adam

List Source: TestAmerica Nashville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

SITE LOGIC Report

Abiotic Potential

Contact: Nick Zurweller

Phone:

Address: Ramboll Environ - St. Louis, MO
1807 Park 270 Drive, Suite 450
St. Louis, MO 63146

Email: nzurweller@ramboll.com

MI Identifier: 037OJ

Report Date: 10-18-2017

Project Name: Whirlpool Fort Smith

Comments:

Overview

Although not always fully considered, abiotic degradation can be a substantial or even the primary process for chlorinated hydrocarbon destruction at sites undergoing or transitioning to monitored natural attenuation (MNA). A variety of iron-bearing minerals including iron sulfides (mackinawite and pyrite), iron oxides (magnetite), green rust, and iron-bearing clays are capable of complete or nearly complete degradation of PCE, TCE, and carbon tetrachloride (He et al. 2009). Some iron-bearing minerals also catalyze the degradation of chlorinated ethanes and the lesser chlorinated ethenes cis-dichloroethene (DCE) and vinyl chloride. While the quantities and types will vary, these reactive iron minerals are frequently identified in subsurface environments under iron reducing and sulfate reducing conditions.

Brown et al. (2007) recommend four avenues for evaluating the role of abiotic processes in contaminant attenuation. First, examining contaminant concentrations along the flow path - decreasing parent compound concentrations with no evidence of accumulation of chlorinated transformation products like cis-DCE and vinyl chloride suggest abiotic degradation. Performing compound specific isotope analysis (CSIA) or monitoring for products unique to abiotic reactions such as acetylene can also provide a strong line of evidence. Microcosm studies with native sediment and killed controls can also be performed. Finally, Brown et al. (2007) suggest performing mineralogical analyses on aquifer sediment to characterize reactive minerals such as magnetite or iron monosulfides

Magnetic Susceptibility - Magnetite

Magnetite (Fe_3O_4) is a mixed valence iron mineral shown to react with PCE, TCE, and carbon tetrachloride. Furthermore, Ferrey et al. (2004) conclusively linked the observed degradation of cis-DCE at a former ammunition plant to magnetite in the subsurface. No direct chemical test is available for quantification of magnetite. However, magnetite is the most abundant mineral in natural sediments that exhibits magnetic behavior. Therefore, magnetic susceptibility provides an inexpensive and valuable estimate of the quantity of magnetite in environmental samples.

X-ray Diffraction (XRD) - Mackinawite, Pyrite, Magnetite and Green Rust

XRD is one of the primary techniques used to identify unknown crystalline materials. Most minerals are crystalline and will scatter X-rays in a regular, characteristic manner dependent on their crystal structure.

- Mackinawite is the most reactive of the iron-bearing minerals and a crystalline form (tetragonal FeS) can be detected by XRD. Mackinawite will transform PCE and TCE primarily by elimination to acetylene. Carbon tetrachloride is transformed mainly to chloroform but carbon dioxide, formate, and carbon disulfide have also been detected. Finally, the more heavily chlorinated ethanes including hexachloroethane, pentachloroethane, and tetrachloroethanes react to form chlorinated ethenes which can be further degraded.
- Pyrite (FeS_2) catalyzes beta elimination transforming PCE, TCE, and cis-DCE to acetylene and ethene. Vinyl chloride is transformed to ethene and ethane. Pyrite is also capable of degradation of carbon tetrachloride potentially forming a number of products including chloroform, carbon dioxide, carbon disulfide, and formate depending on reaction conditions.
- While not quantitative like the magnetic susceptibility test, XRD can also detect magnetite when present at between 2% and 5% on a weight basis.
- Green rusts have been reported to transform a number of common chlorinated contaminants including cis-DCE, vinyl chloride, trichloroethanes, and tetrachloroethanes. While special sample care to prevent oxidation would be needed, XRD can be used to detect green rust.

Percent Clay

Clays have large surface areas, balanced by exchangeable cations, which can bind a large number of both organic and inorganic molecules impacting their availability and reactivity in the subsurface. While less well studied than the other iron-bearing minerals, various phyllosilicate clays have been shown to be capable of degradation of PCE, TCE, cis-DCE, vinyl chloride, and carbon tetrachloride

Sample Location	TMW-20-SL(12.5-13.0FT) -101017	TMW-21-SL(14.0-14.5FT) -101017	TMW-24-SL(15.0-15.5FT) -101017
Date Sampled	10/10/17	10/10/17	10/10/17
Magnetic Susceptibility Analysis			
Magnetic Susceptibility (m3/kg)	8.77E-8 ± 2.39E-9	1.95E-7 ± 3.28E-8	1.36E-7 ± 2.88E-9

Sample Location	TMW-26-SL(23.0-23.5FT) -101017	TMW-27-SL(24.5-25.0FT) -101117	TMW-25-SL(28.0-28.5FT) -101117
Date Sampled	10/10/17	10/10/17	10/10/17
Magnetic Susceptibility Analysis			
Magnetic Susceptibility (m3/kg)	3.04E-7 ± 3.87E-8	1.36E-7 ± 8.85E-9	1.89E-7 ± 1.71E-8

Sample Location	TMW-22-SL(15.5-16.0FT) -101117	TMW-23-SL(15.0-15.5FT) -101217	TMW-29-SL(11.5-12.0FT) -101217
Date Sampled	10/10/17	10/10/17	10/10/17
Magnetic Susceptibility Analysis			
Magnetic Susceptibility (m3/kg)	2.13E-7 ± 5.10E-9	1.46E-7 ± 9.55E-9	1.52E-7 ± 1.08E-8

Sample Location	TMW-28-SL(24.0-24.5FT) -101217	TMW-30-SL(25.5-26.0FT) -101317
Date Sampled	10/10/17	10/13/17
Magnetic Susceptibility Analysis		
Magnetic Susceptibility (m3/kg)	1.01E-7 ± 1.48E-8	1.16E-7 ± 1.41E-8

* Analysis performed in triplicate and results reported as the mean followed by +/- standard deviation.

References

Brown, R. A., J. T. Wilson and M. Ferrey (2007). "Monitored natural attenuation forum: The case for abiotic MNA." Remediation Journal **17**(2): 127-137.

Ferrey, M. L., R. T. Wilkin, R. G. Ford and J. T. Wilson (2004). "Nonbiological Removal of cis-Dichloroethylene and 1,1-Dichloroethylene in Aquifer Sediment Containing Magnetite." Environmental Science & Technology **38**(6): 1746-1752.

He, Y., C. Su, J. T. Wilson, R. T. Wilkin, C. Adair, T. Lee, P. Bradley and M. Ferrey (2009). Identification and characterization of methods for reactive minerals respnsible for natural attenuation of chlorinated organic compounds in ground water, US EPA.

Liu, Y., S. A. Majetich, R. D. Tilton, D. S. Sholl and G. V. Lowry (2005). "TCE Dechlorination Rates, Pathways, and Efficiency of Nanoscale Iron Particles with Different Properties." Environmental Science & Technology **39**(5): 1338-1345.

Song, H. and E. R. Carraway (2005). "Reduction of Chlorinated Ethanes by Nanosized Zero-Valent Iron: Kinetics, Pathways, and Effects of Reaction Conditions." Environmental Science & Technology **39**(16): 6237-6245.

Abiotic Reactions of Chlorinated Compounds with Iron Bearing Minerals and Zero Valent Iron (ZVI). Summaries for iron bearing minerals are based on He et al. (2009) and references therein. He et al. available at http://nepis.epa.gov/. Summary of ZVI based on Liu et al. (2005) and Song et al. (2005).

Contaminant	Mineral	Degradation	Reported Degradation Intermediates and Products[1]
PCE	FeS	Yes	Acetylene, TCE, cis-DCE, 1,1-DCE, ethene
	Pyrite	Yes	TCE, acetylene, ethene
	Magnetite	Yes	Unknown[2]
	[3]GR(SO_4)	Reports Differ	
	phyllosilicate clays	Yes	TCE, 1,1-DCE, vinyl chloride, 1,1,2-TCA, 1,1-DCA, chloroacetylene, acetylene, ethene, ethane
	ZVI	Yes	Ethene and ethane
TCE	FeS	Yes	Acetylene, cis-DCE, vinyl chloride, 1,1-DCE
	Pyrite	Yes	Acetylene, ethene, cis-DCE, (organic acids with DO present)
	Magnetite	Yes	Unknown[1]
	GR(SO_4), GR(CO_3)	No	Only observed degradation when Cu(II) added
	phyllosilicate clays	Yes	cDCE, vinyl chloride, acetylene, ethene, ethane
	ZVI	Yes	Ethane, ethene, acetylene with minor amounts of DCE, VC depending on conditions
cis-DCE	FeS	No	None detected
	Pyrite	Yes	Acetylene, ethene
	Magnetite	Yes	Unknown[2]
	GR(SO_4)	Yes	
	phyllosilicate clays	Yes	
	ZVI	Yes	Primarily acetylene and ethene but also much lesser amounts of ethane and VC and traces of methane, propane, propene, butane and butene
Vinyl chloride	FeS	Unknown	
	Pyrite	Yes	Ethene, ethane
	Magnetite	Yes	Unknown[2]
	GR(SO_4)	Yes	
	phyllosilicate clays	Yes	
	ZVI	Yes	Ethene, ethane, (no evidence of acetylene)

Contaminant	Mineral	Degradation	Reported Degradation Intermediates and Products[1]
1,1-DCA	FeS	Not Significant	None detected
1,1-DCA	GR(SO_4)	Low conversion	Ethene and ethane (w/ Cu or Ag)
1,1-DCA	ZVI	Yes (low)	Ethane
1,2-DCA	FeS	Not Significant	None detected
1,2-DCA	FeS (Biogenic)	Yes	Not monitored
1,2-DCA	GR(SO_4)	No	
1,2-DCA	ZVI	No	
1,1,1-TCA	FeS	Yes	1,1-DCA, ethene, 2-butyne
1,1,1-TCA	GR(SO_4)	Yes	1,1-DCA, CA, ethene ethane
1,1,1-TCA	ZVI	Yes	1,1-DCA, ethane
1,1,2-TCA	FeS	Rate not significant	Small amounts of 1,1-DCE and vinyl chloride but rate not significant
1,1,2-TCA	GR(SO_4)	Yes	Vinyl chloride, 1,1-DCE, ethene, ethane
1,1,2-TCA	ZVI	Yes	Ethane
1,1,1,2-TeCA	FeS	Yes	1,1-DCE
1,1,1,2-TeCA	GR(SO_4)	Yes	1,1-DCE and minor (<1%) vinyl chloride, ethene, ethane
1,1,1,2-TeCA	phyllosilicate clays	Yes	1,1-DCE
1,1,1,2-TeCA	ZVI	Yes	TCE, 1,1-DCE
1,1,2,2-TeCA	FeS	Yes	TCE, cis-DCE, trans-DCE, acetylene
1,1,2,2-TeCA	GR(SO_4)	Yes	TCE (major), cis-DCE, trans-DCE
1,1,2,2-TeCA	phyllosilicate clays	Yes	TCE
1,1,2,2-TeCA	ZVI	Yes	TCE, trans-DCE, cis-DCE
Carbon Tetrachloride	FeS	Yes	Chloroform, carbon disulfide, possibly methane, ethene, ethane
CT	Pyrite	Yes	Chloroform , CO_2, carbon disulfide, formate (highly dependent on conditions)
CT	Magnetite	Yes	Chloroform , carbon monoxide, methane, formate (highly dependent on conditions)
CT	GR(SO_4)	Yes	Chloroform and hexachloroethane; Chloroform, DCM, methane, ethene
CT	phyllosilicate clays	Yes	Chloroform
CT	ZVI	Yes	Chloroform, dichloromethane, methane (depending on conditions)

Notes: GR(SO_4) sulfate green rust. GR(CO_3) carbonate green rust. ZVI zero valent iron

[1]Compilation of reported degradation products. Mass recovery of products typically low --- additional undetected and unreported products are likely. Reported reaction products or proportions of reaction products were often a function of environmental conditions.

[2]No published studies that identify the transformation products of PCE, TCE, cis-DCE or vinyl chloride with magnetite. Ferrey et al (2004) analyzed for products of cis-DCE dechlorination including vinyl chloride, ethene, and ethane and did not find them. If Fe^{2+} sorbed to magnetite stabilizes carbene ions, the ultimate degradation product of cis-DCE on magnetite would be CO_2.