

2018 Semi-Annual Report

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1 Introduction

Ramboll US Corporation (Ramboll), on behalf of Whirlpool Corporation (Whirlpool), is submitting this 2018 Semi-Annual Report (Report) for the Fort Smith, Arkansas, Site (Site). The work was performed and the report prepared in accordance with the Revised Groundwater Monitoring Plan (RGWMP) approved by ADEQ in September 2016; the Remedial Action Decision Document (RADD) issued by the Arkansas Department of Environmental Quality (ADEQ) on December 27, 2013, and revised in November 2015 (Revised RADD); and ADEQ comment letters and Ramboll/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 semi-annual groundwater monitoring event performed during the week of April 16, 2018. One temporary well (TMW-32) was installed prior to the groundwater monitoring event during the week of April 2, 2018 and was sampled during this semi-annual event. The temporary well was installed as described in the Revised Action Plan provided in Section 3 of the 2017 Annual Report (the results for the investigation work outlined in the January 2018 Action Plan are included as Appendix F in this 2018 Semi-Annual Report).

This semi-annual event included well inspections and measuring water levels on April 17, 2018 from 122 wells followed by the collection of groundwater samples from 49 wells identified on Table 1 of the RGWMP (including four shallow wells MW-175, MW-176, MW-178 and MW-179 and temporary monitoring wells TMW-10 and TMW-11), plus collection of groundwater samples from MW-182 and 14 temporary monitoring wells (TMWs) consisting of TMW-12, TMW-14, TMW-16, TMW-19, TMW-20, TMW-21, TMW-22, TMW-23, TMW-24, TMW-25, TMW-26, TMW-27, TMW-29 and TMW-32 to support the evaluation of the source area, plume boundary and shallow groundwater (64 wells total). Since the previous semi-annual sampling event conducted in April 2017, additional temporary monitoring wells were installed along the northeast and southwest plume boundaries (see Appendix F).

2 Groundwater Sample Collection and Onsite Activities

Groundwater monitoring activities performed during the week of April 16, 2018, included inspecting monitoring wells, measuring water levels, monitoring field parameters, 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 semi-annual event (64 wells are included in the semi-annual groundwater monitoring event). Samples from all wells were analyzed for VOCs via EPA Method 8260. Additional geochemical parameters were measured in the field during monitoring activities 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 semi-annual event.

2.1 Well Inspection and Static Water Level Measurements

April 16-17, 2018, monitoring wells were visually inspected and static water levels and well depths were measured in a total of 122 monitoring wells. The results of the monitoring well inspection are included in Table 2B. 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 the well inspection on April 16, 2018, monitoring wells were opened to allow water levels to equilibrate to atmospheric conditions prior to their measurement using an electronic water level meter the following morning. 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 semi-annual event static water level measurements are presented in Table 3, along with the previous four semi-annual water level measurements recorded from the respective 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 United States Environmental Protection Agency (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-through 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 Appendix 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°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 2018 semi-annual event.

The groundwater samples were obtained by directly filling the laboratory provided sampling bottles from the peristaltic pump discharge. The VOC samples 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.

A total of 64 groundwater samples, seven field duplicate samples, four matrix spike/matrix spike duplicate (MS/MSD) samples and five equipment blanks were collected during the 2018 semi-annual event (a total of 80 water samples were analyzed). Duplicate samples were taken at a frequency of one duplicate sample per 10 groundwater monitoring samples. Duplicate samples were collected from MW-63R, MW-195, MW-55R, MW-182, TMW-14, MW-185 and MW-188.

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 each of the five 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-68 (EB-01-201804 at 16:10) MW-40R (EB-02-201804 at 16:30), TMW-21 (EB-03-201804 at 17:00), TMW-27 (EB-04-201804 at 17:15), and MW-86 (EB-05-201804 at 16:00). 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 to Pace Analytical Services in Lenexa, Kansas (for VOCs). 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-179; therefore, the well was purged dry once, allowed to recover prior to collection of the sample within 24 hours of purging dry. See Section 3.2.3 Groundwater Data Quality Assessment for additional information.

The data from these shallow wells is presented in Appendix B, Semi-Annual 2018 Soil Vapor Monitoring and Vapor Intrusion Assessment Report.

3 Semi-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 122 wells at the Site were collected during the semi-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 1.88 feet below top of the well casing (btwc) in the northeast (MW-57R) to 26.10 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 in April 2018. 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 facility building. In the vicinity of the hydraulic divide, 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 facility building, the hydraulic gradient is directed to the southeast. At the southwest corner of the building there is a localized hydraulic divide resulting in a southwest gradient to the southwest property boundary.

The installation of one additional temporary well (TMW-32) to the south in April 2018 (January 2018 Revised Action Plan) was consistent with the current understanding of the flow regime. The groundwater data collected since installation of the additional well 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 of the former manufacturing building (towards MW-183) and southwest beyond the extent of the former manufacturing building (from MW-182 to TMW-32).

A linear interpolation of the gradient between three sets of south plume wells, one set of northeast plume wells and two sets of north plume wells was completed in order to assess the groundwater flow directions and gradients. A summary of the results is as follows:

- South plume southeast flow direction from MW-25 to MW-185 results in a gradient of 0.002 feet/foot;
- South plume southwest flow direction from ITMW-7 to MW-186 results in a gradient of 0.007 feet/foot;
- South plume southwest flow direction from MW-182 to TMW-32 results in a gradient of 0.008 feet/foot;

- Northeast plume (at the northeast corner of the former Whirlpool property) northeast flow direction from MW-87 to MW-183 results in a gradient of 0.011 feet/foot;
- North plume, north-northeast flow direction from MW-57R to MW-61R results in a gradient of 0.019 feet/foot; and
- North plume easterly flow direction from MW-57R to MW-194 results in a gradient of 0.008 feet/foot.

The variations in the potentiometric surface orientation and changes in gradient towards the outer edges of the monitoring well field have remained relatively consistent over the last several monitoring events.

Shallow Monitoring Wells

Groundwater elevations from shallow groundwater wells (MW-174 through MW-177) located along the north side of Jacobs Avenue and MW-178 (located immediately south of Ingersoll Avenue) were used to evaluate shallow horizontal gradient. Static water elevations along Jacobs Avenue decrease from west to east; from a high of 467.56 feet at MW-177 to a low of 458.04 feet at MW-174. The calculated shallow groundwater gradient west to east based on these two wells is 0.012 feet/foot. Static water elevations in the nearby deeper groundwater wells also generally decrease from west (MW-70, 462.85 feet) to east (MW-63R, 458.22 feet) with a resulting gradient of 0.006 feet/foot. The highest shallow groundwater elevations were measured in MW-178 and adjacent shallow well MW-180 (471.54 feet and 471.08 feet, respectively). These results continue to 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-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 (-0.52 feet/foot) at the south western well grouping MW-178/MW-83;
- Downward gradient (-0.45 feet/foot) at MW-177/MW-70;
- Slight upward gradient (0.01 feet/foot) at MW-176/MW-46R;
- Slight downward gradient (-0.07 feet/foot) at MW-175/MW-46R and MW-56R; and
- Slight upward gradient (0.03 feet/foot) at the eastern most well pairing, MW-174/MW-63.

A comparison of gradients based upon the October 2017 and April 2018 water level measurements is shown on Figure 1B. A difference in vertical gradients changed at two well pairings in particular (MW-176/MW-46R and MW-175/MW-46R/MW-56R). The vertical gradient changed from downward in October 2017, to slightly upward in April 2018 in MW-176/MW-46R

and from upward to slightly downward in MW-175/MW-46R/MW-56R. The difference in vertical gradient in MW-174/MW-63R decreased from 1.21 feet/foot to 0.03 feet/foot. Precipitation was at the low range of normal in October 2017 and slightly below normal during April 2018[1]. The potentiometric surface increased in most of the shallow wells ranging from 0.23 feet (MW-178) to 5.65 feet (MW-175) with one decrease of 0.44 feet (MW-176). The potentiometric surface decreased in most of the deeper wells ranging from decreases of 0.02 feet (MW-46R) to 1.70 feet (MW-63R) with one increase of 0.13 feet (MW-56R).

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 Appendix C. Summaries of analytical results (i.e. detected compounds) for samples collected during the Semi-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 semi-annual event. TCE results for the semi-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-seven monitoring wells are identified as plume boundary wells to be sampled during the semi-annual monitoring event (Table 2A) at the Site. VOC concentrations were detected above the RADD RALs (Table 1) in six of the 27 samples collected from the plume boundary wells. Tabulated VOC concentrations measured in these wells during the semi-annual event are presented in Table 6.

Notable results from the semi-annual sampling event include:

- ITMW-21: TCE concentrations of 13.2 micrograms per liter (µg/L) (vs. RAL of 5 µg/L);
- MW-55R: TCE concentrations of 17.0 µg/L (vs. RAL of 5 µg/L);
- MW-185: TCE concentration of 12.0 µg/L (vs. RAL of 5 µg/L);
- MW-186: TCE concentration of 14.2 µg/L (vs. RAL of 5 µg/L);
- MW-189: TCE concentration of 385 µg/L (vs. RAL of 5 µg/L) (TMW-19 is downgradient of MW-189 and the TCE concentration was 0.41 µg/L); and
- MW-194: TCE concentration of 9.4 µg/L (vs. RAL of 5 µg/L).

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

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

Eight monitoring wells are identified as offsite wells to be sampled during the semi-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 eight offsite monitoring wells during the semi-annual event are presented in Table 6.

During the semi-annual event, the highest concentration of TCE detected in groundwater samples from the offsite wells was 520 µg/L collected from MW-46R. This a decrease from a high of 680 µg/L at MW-46R in March 2011.

Onsite Wells

Nine monitoring wells are identified as onsite wells to be sampled during the semi-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 semi-annual event are presented in Table 6.

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

- TCE in all onsite wells except for MW-84;
- 1,1-dichloroethane (1,1-DCA) in one well;
- 1,1-dichloroethene (1,1-DCE) in four wells;
- cis-1,2-dichloroethene (cis-1,2-DCE) in four wells;
- trans-1,2-dichloroethene (trans-1,2-DCE) in one well;
- 1,1,2,2-tetrachloroethane (1,1,2,2-TCA) in three wells;
- Tetrachloroethene (PCE) in two wells; and
- VC in four wells.

During the semi-annual event, the maximum onsite TCE concentration measured was 61,200 µg/L at MW-86. MW-86 is located near the former linear drainage feature within the source area. The current TCE concentration at MW-86 (61,200 µg/L) is similar to the TCE concentration detected in October 2017 (61,300 µg/L). However, the TCE concentration at MW-86 has decreased substantially from the highest detected concentration of 533,000 µg/L detected in May of 2014.

The TCE concentration has varied since remedial activities were performed in 2014 consisting of soil removal within the former linear drainage feature and in-situ chemical oxidation (ISCO) efforts within this area. The continuing decrease of TCE concentrations at MW-86 within the

source area further documents the successful remedial efforts performed at the Site (see the Two Year Technical Review Report dated January 2016 for further discussion of remedial efforts).

Northeast Corner Wells

Seven wells were monitored during the semi-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 557 µg/L which is comparable to the concentration of 534 µg/L identified during the 2017 Annual event. TCE concentrations in MW-96, MW-97 and MW-98 on the Boys and Girls Club property were below detection limits and MW-99 contained very low concentrations of 1.3 µg/L. The TCE concentration at MW-183 during the semi-annual event was 1.9 µg/L which is less than the 5.3 µg/L concentration during the 2016 annual event. The TCE concentration at MW-184 was below the detection limit.

Temporary Wells

In accordance with the Action Plan presented in the 2016 Annual Report and subsequent Revised Action Plans, fourteen (14) temporary monitoring wells (consisting of TMW-12, TMW-14, TMW-16, TMW-19, TMW-20, TMW-21, TMW-22, TMW-23, TMW-24, TMW-25, TMW-26, TMW-27, TMW-29 and TMW-32) have been installed on the southern portion of the former Whirlpool property and in the north plume area. The temporary wells have been installed as permanent wells and the last well installed (TMW-32) is summarized in Appendix F. As shown on Figure 2A, TCE concentrations in temporary wells TMW-12, TMW-14, TMW-20, TMW-21, TMW-22, TMW-23, TMW-24 and TMW-29 in the north plume area ranged from below detection limits (less than 0.17 µg/L) at TMW-20 and TMW-29 to 601 µg/L at TMW-24 (further discussion of the TCE concentrations detected in these wells is provided in Appendix F). As shown on Figure 2B, TCE concentrations in temporary wells TWM-16, TMW-19, TMW-25, TMW-26, TMW-27 and TMW-32 on the southern portion of the former Whirlpool property ranged from 0.41 µg/L at TMW-19 to 1,030 µg/L at TWM-16 (further discussion of the TCE concentrations detected in these wells is provided in Appendix F).

3.2.2 MNA Results

This section presents the evaluation of the VOC results as they relate to monitored natural attenuation field data collected from the Site during the 2018 semi-annual sampling event. Tabulated results of the field parameters collected at 57 monitoring wells (which includes the eight temporary monitoring wells TMW-12 through TMW-19) are presented in Table 4. The discussion of monitored natural attenuation is limited during the semi-annual event since only VOC analysis is performed during the semi-annual event. Additional discussion of monitored natural attenuation will be presented in the 2018 Annual Report after assessment of data collected during the annual event.

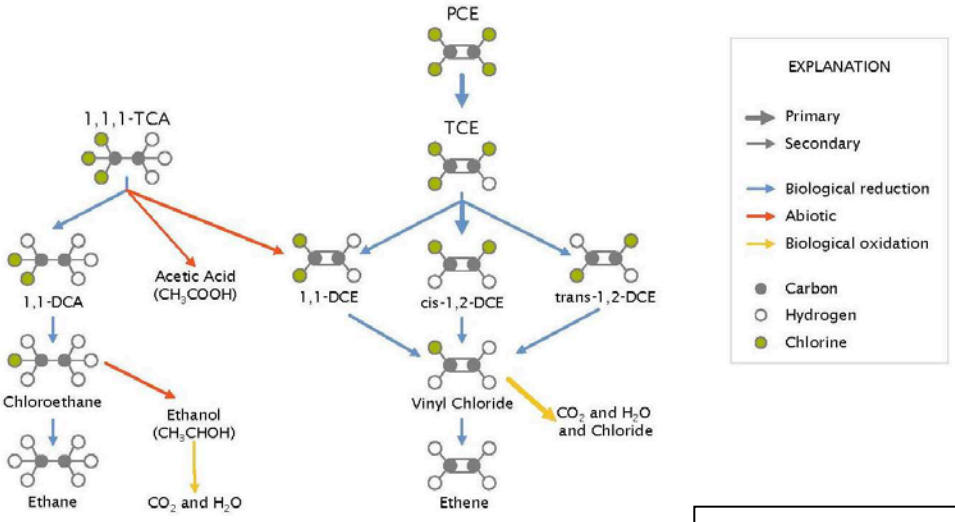
The USEPA documents Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Groundwater (USEPA, 1998) and An Approach for Evaluating the Progress of Natural Attenuation in Groundwater (USEPA, 2011) provides a framework for presenting the lines of evidence that natural attenuation 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).

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. 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 abiotic or biotic 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 30% of the wells displayed the presence of vinyl chloride (Table 7).

The chemical data from the 2018 semi-annual event are similar to the previous monitoring events from 2014 through 2017. The VOC results demonstrate that reductive dechlorination is occurring in multiple locations within the plume.

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 semi-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 41 of the 64 wells sampled 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 sampling rounds.
- The ORP of the groundwater samples ranged from a low of -181.0 mV in IW-77 to a high of 452.1 mV in ITMW-10. In all wells, the measured ORP levels were less than 500 mV which indicates that the groundwater is under manganese to iron reducing conditions.
- The pH of the groundwater ranged from a low of 2.95 in MW-86 to a high of 11.98 in MW-176, which is generally 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 13.64° to 27.38° Celsius (C), with many of the temperatures around 17-23°C, which is a range that would support microbial growth in groundwater.

The geochemical data from the 2018 semi-annual event supports the chemical findings discussed previously and are similar to the previous monitoring events from 2014 through 2017. The VOC results demonstrate that reductive dechlorination is occurring in multiple locations within the plume.

3.2.2.3 Abiotic Degradation

Magnetic susceptibility is an estimate of the amount of magnetite in a soil sample available to react abiotically with chlorinated compounds such as TCE. The USEPA Biological Pathway Identification Criteria (BioPIC) screening tool 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 (the BioPIC tool plot has been presented in previous Action Plans and in the Monitoring Well Installation Letter Report dated November 11, 2016). The degradation rate constant calculated for the south plume for the Whirlpool site is -0.15 yr^{-1} based upon the regression analysis of groundwater data from the south plume presented in the Two Year Technical Review Report dated January 2016. The BioPIC tool plot for a degradation rate constant of -0.15 yr^{-1} indicates that mass magnetic susceptibility can help explain the apparent in situ rate of TCE degradation if the magnetic susceptibility results range from 3E-08 m^3 kg^{-1} to 1E-06 m^3 kg^{-1}. The magnetic susceptibility values for soil collected at TMW-32 and TMW-33 locations (see Appendix F) at the Whirlpool Fort Smith site fall within this range suggesting “the mass magnetic susceptibility can explain the apparent in situ rate of TCE degradation” (ESTCP Project ER-201129). These results are comparable to the range of magnetic susceptibility values for soil samples collected during previous investigations for the northern and southern plume boundaries performed in September 2016, April 2017 and October 2017.

These results indicate the potential for abiotic transformation processes to occur at the site given the limited daughter products in some wells. During the next annual sampling event slated to occur in November 2018, MNA data will be collected including dehalococcoides population counts which will allow for further discussion of the biological and abiotic degradation pathways occurring at the site.

3.2.3 Groundwater Data Quality Assessment

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

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 as well as the temporary monitoring wells (TMW-12, TMW-14, TMW-16, TMW-19, TMW-20, TMW-21, TMW-22, TMW-23, TMW-24, TMW-25, TMW-26, TMW-27, TMW-29 and TMW-32).

- 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 field procedures.

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 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 2009 (when installation of the last of the current wells used for monitoring in accordance with the RADD was complete) through the 2018 semi-annual event are summarized in Table 8. Only monitoring wells included in the RGWMP are included in the temporal trend analysis[2]. The following is the list of wells in each category (this list is only presented for evaluation of plume stability):

[2] 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 (19 wells).** MW-39/39R, MW-40/40R, MW-46R, MW-50, MW-55/55R, MW-60, MW-61/61R, MW-62/62R, MW-63/63R, MW-68, RW-69, IW-73, IW-77, MW-84, MW-194, MW-195, MW-186, TMW-10 and TMW-11.
- **Northeast Corner Wells (seven wells).** MW-91, MW-96, MW-97, MW-98, MW-99, MW-183 and MW-184.
- **Southern Plume Wells (20 wells)**. ITMW-5, ITMW-7, ITMW-10, ITMW-20, ITMW-21, 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 (four wells).** MW-38, MW-86, MW-93 and MW-95.

Contaminant concentration trends as established during the 2018 semi-annual event are summarized below:

- **Northern Plume Wells (19 wells).** The Mann-Kendall trend analysis utilizes data from all wells associated with the 2018 semi-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% (16 of 19 wells) of these wells exhibit either little or no TCE or a decreasing or stable TCE concentration trend.

  The trend analysis for the 19 wells associated with monitoring the northern plume during the semi-annual event indicates the following:

  - Three wells exhibit a stable trend for TCE concentrations.
  - Seven wells exhibit a decreasing trend for TCE concentrations.
  - Three wells exhibit no trend regarding TCE concentrations. TCE concentrations in these wells consisting of MW-39/39R, MW-62 and MW-68, have been non-detect or detected at very low concentrations (less than an estimated concentration of 0.79 µg/L since October 2012).
  - Three wells exhibit TCE concentrations below detection limits or below reporting limits.
  - Three wells (MW-50R, MW-60R and MW-61R) exhibit an increasing trend for TCE concentrations (each of which is discussed below).

  TCE concentrations in six of the 19 northern plume wells (32%) have been non-detect or less than an estimated concentration of 0.79 µg/L since October 2012 and 10 of the 19 wells (53%) have exhibited decreasing or stable trends; therefore, 16 of the 19 northern plume wells (84%) 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 three of the wells (MW-50R, MW-60R and MW-61R); however, these increasing trends are not a concern as discussed below:

  - One well (MW-61R) had a concentration during the 2018 semi-annual event that was within low historical ranges of detected values. The TCE concentration of 2.4

µg/L at MW-61R is the fifth lowest TCE concentration detected at this well during previous monitoring events. The current concentration represents a substantial decrease in TCE concentration over the last two years and five months as a result of the in-situ chemical reduction (ISCR) effort within this area. Further monitoring is necessary to confirm continued downward or possibly stable trends in TCE concentrations as a result of ISCR.

- The TCE concentrations at MW-60R have been non-detect or TCE has been detected at very low concentrations since 2012 (less than an estimated concentration of 1.0 µg/L since October 2012).
- The TCE concentrations at MW-50R have been non-detect or TCE has been detected at low concentrations since 2012 (less than an estimated concentration of 1.6 µg/L since October 2012).

- **Northeast Corner Wells (seven wells).** One well (MW-91) located on Whirlpool property near the northeast corner of the former Whirlpool building and the six wells located on Boys and Girls Club property further to the northeast (MW-96 through MW-99, MW-183 and MW-184) have been sampled at least seven times between June 2014 and April 2018.

  The overall TCE concentration trends are increasing at MW-91 with concentrations ranging from 234 µg/L to 605 µg/L. TCE concentrations and trends will continue to be monitored at this well.

  TCE concentrations in MW-96 through MW-98 and MW-184 on the Boys and Girls Club property continue to be below detection limits (i.e. less than 0.17 µg/L)[3]. The TCE concentrations at MW-99 have been non-detect or detected at very low concentrations (an estimated TCE concentration of 0.21 µg/L in January 2016 and 1.3 µg/L in April 2018). TCE concentrations and trends will continue to be monitored at MW-99. The TCE concentration trend is stable at MW-183 with concentrations ranging from 1.9 µg/L in April 2018 to 5.3 µg/L in November 2016 (first and only exceedance of 5 µg/L).

- **Southern Plume Wells (20 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 15 of 20 (75%) of the southern wells exhibit either little or no TCE or a decreasing or stable TCE concentration trend. The trend analysis for the 20 wells associated with monitoring the southern plume indicates the following:
  - Four wells exhibit a stable trend for TCE concentrations;
  - Three wells exhibit a decreasing trend for TCE concentrations;

[3] Except for estimated TCE concentrations of 0.59 µg/L in January 2015 at MW-96, 0.21 µg/L in April 2017 at MW-98 and 0.45 µg/L in April 2017 at MW-184).

- Four wells, consisting of ITMW-20, MW-26, MW-191 and MW-192 exhibit no trend regarding TCE concentrations; although TCE concentrations at these wells have been non-detect or less than 5 µg/L since October 2011;
- Four wells exhibit TCE concentrations below reporting limits; and
- Five wells (ITMW-5 and ITMW-10 located south of the former manufacturing building, MW-185 at the southeast portion of the site and MW-186 and MW-189 located in the southwest portion of the site) exhibit increasing TCE concentration trends (see further discussion below).

As noted, TCE concentration trends are statistically increasing in five of the 20 (25%) southern plume wells (ITMW-5, ITMW-10, MW-185, MW-186 and MW-189) and of these wells the following observations can be made:

- The TCE concentration in ITMW-10 is currently 65.4 µg/L which is the lowest concentration since April 2008 and significantly lower than the previous 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 12.0 µg/L in MW-185 is slightly lower than the historical maximum concentration of 12.7 µg/L in October 2017. TCE trends will continue to be monitored at this well. ISCR remediation is planned to be conducted in the vicinity of this well in 2018 (see Appendix F).
- The TCE concentration of 14.2 µg/L at MW-186 is the historical maximum concentration at this well exceeding the previous historical maximum of 7.8 µg/L during October 2017. TCE concentrations and trends will continue to be monitored at this well. ISCR remediation is planned to be conducted in the vicinity of this well in 2018 (see Appendix F).
- The TCE concentration of 385 µg/L in MW-189 exceeded the historical maximum concentration of 195 µg/L. TCE concentrations in this well have increased since installation in September 2015. It is bordered on the south at the property line by TMW-19 (0.41J µg/L) where concentrations continue to be well below 5 µg/L. TCE concentrations and trends will continue to be monitored at this well.

- **Source Area Wells (four wells).** Only four source area wells were sampled during the April 2018 semi-annual event (MW-38, MW-86, MW-95 and MW-93). MW-86 has a decreasing TCE concentration trend and MW-38, MW-93 and MW-95 have stable TCE concentration trends.

4.1.2 Isoconcentration Maps

Figures 2A and 2B show isoconcentration lines at the northern, northeastern and southern plumes for the 2018 semi-annual event. Notable changes in the north and northeast plume boundaries on Figure 2A consist of:

- TCE concentration reductions continue in wells at the south end of the north plume (generally on the Bost property) and separation of the north and south plumes continues to be evident;
- A TCE concentration of 1.9 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 85 µg/L at TMW-10 restricting the 100 µg/L TCE isoconcentration line from extending to TMW-10 since the April 2017 event when the concentration was 102 µg/L;
- TCE concentration of 125 µg/L in TMW-23 causing the 100 µg/L TCE isoconcentration line to extend slightly further north; and
- TCE concentration of 4.9 µg/L in MW-63R causing the inferred 5 µg/L TCE isoconcentration line to extend slightly further southeast.

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

- A TCE concentration of 1,030 µg/L at TMW-16 (temporary well installed during April 2017) causing a separate 1,000 µg/L TCE isoconcentration line to exist further south and southwest toward the site boundary; and
- A TCE concentration of 101 µg/L at TMW-32 (temporary well installed during April 2018) causing the TCE isoconcentration line to extend slightly further west beyond the site boundary.

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 65.4 µg/L during this semi-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 through April 2018 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 in TMW-21 through TMW-24 redefined the 100 µg/L TCE isoconcentration line north and northeast based upon the October 2017 and April 2018 data

compared to the previous 100 µg/L TCE isoconcentration line based upon earlier data. Using the Mann-Kendall statistic test, temporal trend increases in TCE concentrations observed in MW-61R remain within low historical ranges and continue to be reported at levels below or near the RAL.

A TCE concentration of 101 µg/L at TMW-32 has caused TCE isoconcentration lines to extend slightly further southwest beyond the site boundary.

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 1,251,350 square feet (ft^2) (predominately located under the footprint of the former 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 800 µg/L;
- An aerial extent of approximately 472,300 ft^2 generally located north of Ingersoll Avenue (north of the former Whirlpool property) 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 246,900 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 semi-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 Appendix E.

Northern plume parameters:

- Plume area of approximately 472,300 ft^2 consisting of 222,400 ft^2 for the portion of the plume with TCE concentrations ranging from 5 µg/L to 100 µg/L; 249,900 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, TMW-14, TMW-20, TMW-21, 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 1,251,350 ft^2 consisting of approximately 484,200 ft^2 for the portion of the plume with TCE concentrations ranging from 5 µg/L to 100 µg/L; 486,900 ft^2 for the portion of the plume with TCE concentrations ranging from 100 µg/L to 1,000 µg/L; 251,000 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 TWM-16, TMW-19, TMW-25, TMW-26, TMW-27 and TMW-32);
- 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 246,900 ft^2 consisting of an estimated 161,400 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 39 gallons of TCE.

Estimated quantities of TCE adsorbed to soil were presented in the 2016 Annual Report and these estimated quantities will be assessed further in the 2018 Annual Report.

5 ISCR Remedial Effectiveness

This section includes discussion of results for the ISCR Pilot Study being conducted at the northeast corner of the north plume in the vicinity of MW-61R (see Figure 2A). The semi-annual event represents approximately 30 months post-injection monitoring.

Observations regarding the field water quality data collected are as follows:

- At MW-61R semi-annual results indicate sustained negative ORP beginning 20 days post-injection (–152 mV) through April 2018 (-125.5 mV), very low DO over the same period (0 to 0.12 mg/L) and elevated specific conductance [2,190 to 1,077 microsiemens per centimeters (µS/cm)]. The field pH reading of 6.89 standard unit (SU) is within the range considered optimal (6 to 8 SU) and exceeds the baseline value of 6.22.
- At TMW-11 the ORP continues to be negative (-130.9 mV), DO continues to be effectively zero and the specific conductance is elevated (1,332 µS/cm). The field pH reading of 7.16 SU exceeds the baseline value of 6.52 SU.
- At TMW-10, DO has continued to decrease and is near zero (0.11 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, recovered to slightly oxidative at 55.1 mV in October 2017, and has increased to 155.8 mV in April 2018.

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 ISCR reagent (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.

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 76% and 98% reductions 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.
- The TCE concentration reduction at TMW-10 is approximately 55% since ISCR injection 30 months ago, and this TCE concentration reduction appears to be due to a combination of abiotic and biological reactions.
- The TCE concentration reduction at TMW-11 is approximately 98% since ISCR injection 30 months ago, and this TCE concentration reduction appears to be due to a combination of abiotic and biological reactions.
- The TCE concentration reduction at MW-61R is approximately 76% since ISCR injection 30 months ago, and this TCE concentration reduction appears to be due to a combination of abiotic and biological reactions.
- The sum of the TCE concentrations for MW-61R, TMW-10 and TMW-11, approximately 30 months post-injection, decreased from a baseline of approximately 238 µg/L to 90 µg/L (an approximately 58% decrease).

6 Summary and Conclusions

Ramboll performed the 2018 Semi-Annual Groundwater Monitoring Event on behalf of Whirlpool during the week of April 16, 2018. The monitoring was conducted for collection of groundwater samples for analysis of VOCs in accordance with the RGWMP.

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

- The groundwater potentiometric surface observed during April 2017 is fairly consistent with that historically observed at the Site; however, based upon the new wells south of the former Whirlpool building it appears that an additional groundwater divide may exist trending southeast and southwest, south of the former manufacturing building, although additional monitoring is necessary to confirm the groundwater divides along the south portion of the site.
- 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.
    - Onsite well data continue to show generally decreasing to stable TCE concentration trends; although, the data has been influenced by the ISCO injections;
    - Offsite well data are similar to previous monitoring events and continue to show generally decreasing to stable TCE concentration trends;
    - Plume boundary well data continue to show results generally consistent with historical TCE concentrations although trends in the northern portion of the plume near MW-61R have decreased due to ISCR injections and concentrations near the eastern plume boundary in the vicinity of MW-194 appear to have increased (see Appendix F); and
    - 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-32, at the southwestern property boundary, TCE impacted groundwater has been characterized west of the southwestern property boundary and further investigation is proposed as discussed in Appendix F;
- The combination of chemical and geochemical data from 2018 are similar to the data generated from 2014 through 2017. 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 the reduction of TCE concentrations as follows:
  - The TCE concentration in MW-61R has been reduced by 86% and the TCE concentration in TMW-11 has been reduced by 97% approximately 30 months 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 106 µg/L (~56% 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 (see Appendix 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 continuing and indoor air and sub-slab vapor monitoring may occur in November 2018, if building renovations are complete.

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 November 2018.

7 References

2014 - Dissolved Gas Sampling Guidance; Microseeps Inc; http://www.microseeps.com/html/dissolved_gas.html

ADEQ (2013). Remedial Action Decision Document for Corrective Action. Whirlpool Corporation, Sebastian County, Arkansas, AFIN 66-00048. December 27.

EPA, 1998. "Technical protocol for evaluating natural attenuation of chlorinated solvents in groundwater" Office of Research and Development, EPA/600/R-98/128.

EPA, 2011. "An approach for evaluating the progress of natural attenuation in groundwater", Office of Research and Development, EPA/600/R-11/204.

Löffler, F, Yan, J., Ritalahti, K., Adrian, L., Edwards, E., Konstantinidis, K... Muller, J., Fullerton, H., Zinder, S. and Spormann, A., 2013. Dehalococcoides mccartyi gen. nov., sp. nov., obligately organohalide-respiring anaerobic bacteria relevant to halogen cycling and bioremediation, belong to a novel bacterial class, Dehalococcoidia classis nov., order Dehalococcoidales ord. nov. and family Dehalococcoidaceae fam. nov., within the phylum Chloroflexi. International Journal of Systematic and Evolutionary Microbiology, 63, 625–635.

Ramboll Environ, 2015. 2014 Remedial Action Effectiveness Report, January.

Ramboll Environ, 2015. Whirlpool Ft. Smith Sentinel Wells, November.

Ramboll Environ, 2016. Onsite Indoor Air and Sub-slab Soil Vapor Data Report, April 27.

Ramboll Environ, 2016. First Quarter 2016 Progress Report, May.

Ramboll Environ, 2016. Second Quarter 2016 Progress Report, August.

Ramboll Environ, 2016. Two Year Technical Review Report, January.

Ramboll Environ, 2017. 2016 Annual Report, February.

Sublette, K., Peacock, A., White, D., Davis, G., Ogles, D., Cook, D., Kolhatkar, R., Beckmann, D. and Yang, X., 2006. Monitoring Subsurface Microbial Ecology in a Sulfate-Amended, Gasoline-Contaminated Aquifer. Groundwater Monitoring & Remediation, 26: 70–78.

Sutton, N., Grotenhuis, T., Langenhoff, A. and H. Rijnaarts. 2011."Efforts to improve coupled in situ chemical oxidation with bioremediation: a review of optimization strategies", Journal of Soils and Sediments 11 (1), 129-140.

Vogel, T., Criddle, C. and McCarty, P., 1987. "ES Critical Reviews: Transformations of halogenated aliphatic compounds", Environmental Science & Technology 21 (8), 722-736

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

Plume Boundary Wells				
ITMW-20	MW-26	MW-29	MW-39R	MW-40R
MW-50R	MW-60R	MW-61R	MW-62R	MW-63R
MW-68	MW-96	MW-97	MW-98	MW-99
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				
IW-73	IW-77	MW-46R	MW-55R	MW-175
MW-176	MW-183	RW-69		
Onsite Wells				
ITMW-5	ITMW-7	ITMW-10	ITMW-21	MW-38
MW-84	MW-86	MW-91	MW-93	MW-95
MW-178	MW-179			

TABLE 2B
MONITORING WELL INSPECTION (April 2018)
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Well Condition & Notes
ITMW-01	No Issues
ITMW-02	Missing bolts
ITMW-03	Difficult to open/crowbar required
ITMW-04	No issues
ITMW-05	Half of well pad missing, lid broken
ITMW-06	Damaged
ITMW-07	No Issues
ITMW-09	Missing lock
ITMW-10	Missing lock, needs new cover
ITMW-11	No Issues
ITMW-12	No Issues
ITMW-13	No Issues
ITMW-14	No issues
ITMW-15	No lid
ITMW-16	No Issues
ITMW-17	No Issues
ITMW-18	No Issues
ITMW-19	No Issues
ITMW-20	Well box lid separated/severed
ITMW-21	No Issues
IW-72	Water in well box
IW-73	Water in well box
IW-74	Water in well box
IW-75	Water in well box
IW-76	Water in well box
IW-77	No Issues
IW-78	One crooked bolt
IW-79	Water in well box
IW-80	No issues
MW-22	No issues
MW-23	No Issues
MW-24	Missing bolts
MW-25	Bumper post crooked
MW-26	No Issues
MW-27	Well cap stained black
MW-28	Missing bolts
MW-29	No issues
MW-30	No Issues
MW-34R	No Issues
MW-35R	Missing bolts
MW-36R	No issues
MW-37	No Issues
MW-38	No Issues
MW-39R	One bolt missing
MW-40R	No Issues
MW-41R	Water in well box
MW-46R	Missing one bolt
MW-50R	No Issues
MW-55R	No Issues
MW-56R	Water in well casing
MW-57R	Missing one bolt
MW-58R	No Issues
MW-60R	No Issues
MW-61R	No issues
MW-62R	No Issues
MW-63R	Missing all bolts
MW-65R	Missing all bolts, Water in wellbox
MW-68	Missing all bolts, Water in wellbox
MW-70	Missing all bolts
MW-71	Missing all bolts
RW-69	No Issues
MW-81	Water in well box

Well ID	Well Condition & Notes
MW-82	Missing all bolts
MW-83	No Issues
MW-84	No Issues
MW-85	No Issues
MW-86	No Issues
MW-87	Water in well box
MW-88	Missing two bolts
MW-89	Water in well box
MW-90	Missing one bolt
MW-91	Water in well box
MW-92	No Issues
MW-93	No lid
MW-94	Broken lid
MW-95	Missing one bolt
MW-96	No Issues
MW-97	No Issues
MW-98	No Issues
MW-99	No Issues
MW-172	Missing all bolts
MW-173	Water in well box, missing one bolt
MW-174	Water in well box
MW-175	Missing one bolt
MW-176	Missing one bolt
MW-177	No issues
MW-178	Water in well box
MW-179	Water in well box
MW-180	Water in well box
MW-181	No issues
MW-182	No issues
MW-183	Well box destroyed
MW-184	No Issues
MW-185	No issues
MW-186	No Issues
MW-187	No Issues
MW-188	No issues
MW-189	No issues
MW-190	No Issues
MW-191	No issues
MW-192	No Issues
MW-193	No Issues
MW-194	No issues
MW-195	No Issues
MW-196	No issues
IW-115	Likely surface water leak
TMW-10	No Issues
TMW-11	No Issues
TMW-12	No cap, water in well box
TMW-14	No Issues
TMW-16	No Issues
TMW-19	Lid does not fit, missing all bolts
TMW-20	No issues
TMW-21	No issues
TMW-22	Pad filled with water
TMW-23	Pad filled with water
TMW-24	Pad filled with water
TMW-25	No issues
TMW-26	No issues
TMW-27	Cement around pad
TMW-29	Well casing set into cement
TMW-30	No Issues
TMW-32	No Issues

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	DTW	4/25/2017	DTW - 11-2017	10/23/2017	DTW	4/17/2018
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	460.26	4/17/2018	463.82	463.92	463.04	462.74	461.21	16.40	460.53	15.93	461.00	16.67	460.26
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	13.10	461.87	12.61	462.36	12.97	462.00
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	13.47	461.25	NA	NA	13.59	461.13
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	459.50	4/17/2018	463.38	463.41	462.76	462.53	460.01	18.33	459.86	18.50	459.69	18.69	459.50
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	19.14	459.79	19.28	459.65	19.40	459.53
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	23.37	459.67	23.55	459.49	23.53	459.51
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	20.52	461.43	20.91	461.04	20.31	461.64
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	22.20	459.70	22.37	459.53	22.54	459.36
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	21.05	459.79	21.20	459.64	21.31	459.53
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	11.71	462.36	11.81	462.26	11.33	462.74
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	14.60	462.07	13.93	462.74	14.22	462.45
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	15.70	462.09	15.14	462.65	15.38	462.41
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	15.31	461.99	14.76	462.54	15.03	462.27
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	12.14	462.36	11.50	463.00	11.70	462.80
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	16.27	462.52	16.12	462.67	16.06	462.73
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	15.73	462.17	15.62	462.28	15.31	462.59
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	11.52	462.03	11.96	461.59	11.17	462.38
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	14.10	462.15	13.43	462.82	13.73	462.52
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	14.92	462.95	14.97	462.90	14.47	463.40
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	13.78	462.74	13.70	462.82	13.35	463.17
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	460.57	4/17/2018	464.19	464.24	463.37	463.09	461.56	12.75	461.18	12.63	461.30	13.36	460.57
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	13.40	462.40	12.83	462.97	12.97	462.83
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	13.98	462.41	13.42	462.97	13.57	462.82
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	14.43	462.46	13.94	462.95	14.04	462.85
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	14.95	463.10	14.76	463.29	14.48	463.57
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	13.03	462.39	12.72	462.70	12.67	462.75
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	8.33	462.16	7.77	462.72	8.10	462.39
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	11.97	462.94	12.73	462.18	11.57	463.34
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	16.90	462.09	17.11	461.88	16.58	462.41
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	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	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	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	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	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	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	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	11.75	462.48	11.21	463.02	11.35	462.88
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	11.54	462.33	10.96	462.91	11.22	462.65
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	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	10.73	462.25	10.12	462.86	10.35	462.63
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	11.20	462.37	10.50	463.07	10.83	462.74
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	12.25	462.35	11.64	462.96	11.86	462.74
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	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	12.29	462.43	11.69	463.03	11.88	462.84
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	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	10.78	462.31	10.17	462.92	10.33	462.76
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	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	10/23/2017	465.13	465.10	464.63	464.41	462.64	9.63	462.21	9.67	462.17	9.22	462.62
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	3.76	462.03	2.15	463.64	3.26	462.53
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	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	9.98	452.67	7.70	454.95	9.68	452.97
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	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	3.28	462.02	2.60	462.70	2.78	462.52
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	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	2.43	460.74	3.24	459.93	2.95	460.22
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	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	2.19	460.73	3.22	459.70	1.88	461.04
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	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	4.34	461.64	3.82	462.16	3.77	462.21
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	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	454.55	4/17/2018	458.19	458.55	456.36	456.02	457.96	5.55	455.11	3.27	457.39	6.11	454.55
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	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	7.46	451.85	6.55	452.76	7.14	452.17
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	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	6.70	457.49	5.35	458.84	5.97	458.22
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	NA	NA	NA	NA

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	DTW	4/25/2017	DTW - 11-2017	10/23/2017	DTW	4/17/2018
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	458.22	4/17/2018	462.29	462.08	460.93	460.79	460.05	5.38	458.56	4.02	459.92	5.72	458.22
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	11.53	462.38	11.04	462.87	11.18	462.73
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	NA	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	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	NA	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	7.45	462.36	6.87	462.94	6.89	462.92
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	8.89	462.00	8.36	462.53	8.42	462.47
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	9.15	462.38	8.60	462.93	8.68	462.85
MW-71	591170	369695	471.35	NA	NA	NA	NA	NA	NA	NA	465.35	7/20/2015	461.93	10/23/2017	465.35	465.17	464.79	464.56	462.70	8.99	462.36	9.42	461.93	8.51	462.84
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	9.43	462.22	8.88	462.77	9.11	462.54
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	9.10	462.38	8.56	462.92	8.70	462.78
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	9.76	462.30	9.21	462.85	9.39	462.67
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	9.80	462.37	9.22	462.95	9.38	462.79
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	10.05	462.21	9.48	462.78	9.68	462.58
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	10.60	462.41	10.03	462.98	10.24	462.77
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	11.12	462.37	10.62	462.87	10.73	462.76
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	11.45	462.39	10.90	462.94	11.06	462.78
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	11.02	462.28	10.47	462.83	10.65	462.65
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	NA	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	11.00	462.41	10.92	462.49	10.93	462.48
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	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	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	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	11.19	462.35	10.63	462.91	10.79	462.75
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	11.24	462.36	10.70	462.90	10.83	462.77
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	13.16	462.32	12.62	462.86	12.79	462.69
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	13.30	462.23	12.73	462.80	12.88	462.65
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	12.17	462.24	11.66	462.75	11.74	462.67
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	11.00	462.19	10.42	462.77	10.60	462.59
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	457.53	4/17/2018	460.74	460.91	460.48	460.00	458.21	12.53	458.25	12.74	458.04	13.25	457.53
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	457.39	4/17/2018	461.49	462.85	461.49	459.97	461.27	10.42	458.47	8.48	460.41	11.50	457.39
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	456.47	4/17/2018	459.05	459.23	458.98	458.44	457.01	9.96	456.95	10.11	456.80	10.44	456.47
MW-90	592157	369157	466.71	NA	451.71	441.71	10.00	15.00	25.00	15.00-25.00	464.46	10/23/2017	458.73	4/13/2015	460.67	463.26	462.13	460.73	462.66	7.98	458.73	2.25	464.46	7.95	458.76
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	456.92	4/17/2018	460.11	460.19	459.79	459.32	457.60	11.19	457.71	11.39	457.51	11.98	456.92
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	11.44	462.30	10.92	462.82	11.03	462.71
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	15.71	462.10	15.12	462.69	15.30	462.51
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	15.93	461.93	15.39	462.47	15.63	462.23
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	15.68	461.95	15.09	462.54	15.32	462.31
MW-96	592775	369354	457.83	NA	447.83	442.83	5.00	10.00	15.00	10.00-15.00	451.72	10/23/2017	449.11	4/13/2015	449.73	449.84	450.60	451.69	449.24	8.72	449.11	6.11	451.72	6.71	451.12
MW-97	592687	369527	459.43	NA	447.93	442.93	5.00	11.50	16.50	11.50-16.50	451.23	10/23/2017	445.65	10/22/2014	449.53	450.55	450.84	450.70	450.47	8.21	451.22	8.20	451.23	8.70	450.73
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	10.23	451.39	16.35	445.27	10.85	450.77
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	9.31	457.49	9.57	457.23	10.09	456.71
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	11.68	461.26	10.10	462.84	10.28	462.66
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	1.16	462.40	2.43	461.13	1.24	462.32
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	10/23/2017	459.92	461.75	459.71	460.01	459.77	5.58	457.87	10.35	453.10	5.41	458.04
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	10/23/2017	463.71	463.47	463.37	463.42	462.22	3.43	460.74	8.11	456.06	2.46	461.71
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	3.25	461.99	NA	NA	2.75	462.49
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	9.72	461.78	NA	NA	3.94	467.56
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	3.90	471.50	4.09	471.31	3.86	471.54
MW-179	590984	369232	475.39	NA	463.39	462.39	1.00	12.00	13.00	12.00-13.00	467.80	10/23/2017	462.70	4/13/2015	467.66	464.23	465.93	NA	466.80	12.25	463.14	7.59	467.80	10.90	464.49
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	4.43	470.89	4.20	471.12	4.24	471.08
MW-181	591156	369695	471.87	NA	465.87	464.87	1.00	6.00	7.00	6.00-7.00	471.25	4/17/2018	456.87	11/7/2016	468.35	456.87	469.37	468.27	NA	DRY	NA	NA	NA	0.62	471.25
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	10/23/2017	NA	461.60	461.51	461.44	459.39	15.17	459.47	15.98	458.66	15.29	459.35
MW-183	592664	369246	462.42	NA	447.42	442.42	5.00	15.00	20.00	15.00-20.00	453.47	10/23/2017	450.11	10/5/2015	NA	450.11	450.50	451.36	450.20	10.20	452.22	8.95	453.47	11.66	450.76
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	10/23/2017	NA	458.42	458.38	457.77	456.59	8.90	456.68	17.55	448.03	9.76	455.82
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	458.96	4/17/2018	NA	463.49	462.66	462.53	459.29	14.55	459.31	14.56	459.30	14.90	458.96
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	10/23/2017	NA	457.18	457.33	457.44	455.78	13.20	456.60	14.04	455.76	13.38	456.42
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	10/23/2017	NA	459.06	459.15	459.21	457.42	19.53	457.89	20.12	457.30	19.61	457.81
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	10/23/2017	NA	462.10	461.91	461.72	459.62	21.68	459.46	22.07	459.07	21.85	459.29
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	10/23/2017	NA	462.83	462.44	462.26	459.98	25.92	459.67	26.14	459.45	26.10	459.49
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	459.40	4/17/2018	NA	463.27	462.70	462.46	460.00	21.52	459.77	21.77	459.52	21.89	459.40
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	459.36	4/17/2018	NA	463.37	462.72	462.47	459.92	17.11	459.74	17.34	459.51	17.49	459.36
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	459.23	4/17/2018	NA	463.42	462.69	462.50	459.73	15.68	459.65	15.88	459.45	16.10	459.23
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	NA	NA	NA	NA
MW-194	592161	369791	462.47	NA	451.47	441.47	10.00	11.00	21.00	11.00-12.00	457.88	10/23/2017	457.10	11/7/2016	NA	NA	NA	NA	457.10	5.25	457.22	4.59	457.88	5.23	457.24
MW-195	592185	370025	459.36	NA	446.36	441.36	5.00	13.00	18.00	13.00-18.00	457.18	10/23/2017	455.78	11/7/2016	NA	NA	NA	NA	456.94	3.58	455.78	2.18	457.18	3.35	456.01

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	DTW	4/25/2017	DTW - 11-2017	10/23/2017	DTW	4/17/2018
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	5.33	452.30	3.77	453.86	4.26	453.37
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	453.51	4/17/2018	NA	NA	455.53	454.95	456.19	7.22	453.53	4.76	455.99	7.24	453.51
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	453.61	4/17/2018	NA	NA	455.49	454.95	456.50	6.48	453.72	4.01	456.19	6.59	453.61
TMW-12	591873	369860	461.77	461.63	451.77	441.77	10.00	10.00	20.00	10.00-20.00	459.66	4/17/2018	458.33	10/23/2017	NA	NA	NA	NA	NA	2.34	459.43	3.44	458.33	2.11	459.66
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	4/25/2017	NA	NA	NA	NA	NA	2.51	457.59	NA	NA	NA	NA
TMW-14	591873	369736	461.89	462.46	450.89	440.89	10.00	11.00	21.00	11.00-21.00	459.24	4/17/2018	458.14	10/23/2017	NA	NA	NA	NA	NA	3.11	458.78	3.75	458.14	2.65	459.24
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	4/25/2017	NA	NA	NA	NA	NA	7.74	457.58	NA	NA	NA	NA
TMW-16	590180	367791	469.87	469.54	451.87	441.87	10.00	18.00	28.00	18.00-28.00	457.36	4/17/2018	456.78	10/23/2017	NA	NA	NA	NA	NA	12.69	457.18	13.09	456.78	12.51	457.36
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	4/25/2017	NA	NA	NA	NA	NA	24.52	459.53	NA	NA	NA	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	4/25/2017	NA	NA	NA	NA	NA	19.34	459.45	NA	NA	NA	NA
TMW-19	590841	367571	485.35	485.26	452.35	442.35	10.00	33.00	43.00	33.00-43.00	459.72	4/17/2018	459.54	4/25/2017	NA	NA	NA	NA	NA	25.81	459.54	25.73	459.62	25.63	459.72
TMW-20	592210	369929	460.57	460.27	449.07	442.07	7.00	11.50	18.50	11.50-18.50	457.33	10/23/2017	456.25	4/17/2018	NA	NA	NA	NA	NA		NA	3.24	457.33	4.32	456.25
TMW-21	592082	369959	460.01	460.26	450.01	440.01	10.00	10.00	20.00	10.00-20.00	457.62	4/17/2018	456.68	10/23/2017	NA	NA	NA	NA	NA		NA	3.33	456.68	2.39	457.62
TMW-22	591985	369997	460.82	461.05	448.82	441.82	7.00	12.00	19.00	12.00-19.00	457.63	4/17/2018	456.57	10/23/2017	NA	NA	NA	NA	NA		NA	4.25	456.57	3.19	457.63
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	455.31	4/17/2018	NA	NA	NA	NA	NA		NA	4.73	457.21	6.63	455.31
TMW-24	592006	369808	461.23	461.46	449.23	442.23	7.00	12.00	19.00	12.00-19.00	458.14	4/17/2018	457.33	10/23/2017	NA	NA	NA	NA	NA		NA	3.90	457.33	3.09	458.14
TMW-25	590283	367848	473.14	473.41	452.64	442.64	10.00	20.50	30.50	20.50-30.50	457.35	4/17/2018	456.76	10/23/2017	NA	NA	NA	NA	NA		NA	16.38	456.76	15.79	457.35
TMW-26	590115	367763	472.10	469.47	454.10	444.10	10.00	18.00	28.00	18.00-28.00	456.73	10/23/2017	456.31	4/17/2018	NA	NA	NA	NA	NA		NA	15.37	456.73	15.79	456.31
TMW-27	590091	367871	467.45	468.03	451.45	441.45	10.00	16.00	26.00	16.00-26.00	456.68	4/17/2018	456.03	10/23/2017	NA	NA	NA	NA	NA		NA	11.42	456.03	10.77	456.68
TMW-28	590092	367956	468.27	468.85	451.27	441.27	10.00	17.00	27.00	17.00-27.00	NA	NA	0.00	NA	NA	NA	NA	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	452.30	4/17/2018	NA	NA	NA	NA	NA		NA	9.06	453.13	9.89	452.30
TMW-30	590113	367737	469.37	469.77	450.87	448.87	10.00	18.50	20.50	18.50-20.50	456.03	4/17/2018	455.54	10/23/2017	NA	NA	NA	NA	NA		NA	13.83	455.54	13.34	456.03
TMW-32	590048	367787	466.9	467.07	450.40	440.40	10.00	16.50	26.50	16.50-26.50	456.21	4/17/2018	456.21	4/17/2018	NA	NA	NA	NA	NA	25.81	NA	NA	NA	10.69	456.21

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 (April 2018)
Whirlpool Facility - Fort Smith, Arkansas

Location	Well Casing Diameter (in)	Date Sampled	Depth to Water prior to Purging (ft btoc)	Total Depth of Well (ft)	Set Tubing Depth (ft)	Time Sampled	Depth to Water after Purging (ft btoc)	Purge Volume (Gallons)	Purge Rate (ml/min)	Temperature (^{o}C)	Specific Conductivity (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Ferrous Iron (mg/L)	Persulfate (mg/L)	Color
ITMW-1	4	NS	NS	NS	NS	NS	NS	NS	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS
ITMW-2	4	NS	NS	NS	NS	NS	NS	NS	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS
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	4/19/2018	19.87	39.29	34.3	15:25	20.00	1.2	100	20.11	698	1.16	5.91	401.80	1.37	0.04	NM	Clear
ITMW-6	4	NS	NS	NS	NS	NS	NS	NS	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS
ITMW-7	4	4/19/2018	20.82	36.98	32.0	9:30	20.97	2.1	100	18.23	885	0.22	5.03	228.70	1.50	0.00	NM	Clear
ITMW-9	4	NS	NS	NS	NS	NS	NS	NS	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS
ITMW-10	4	4/19/2018	21.86	36.82	31.3	11:15	21.94	2.3	100	18.64	993	1.28	5.85	452.10	0.33	0.04	NM	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	NS	NS	NS	NS	NS	NS	NS	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS
ITMW-17	4	NS	NS	NS	NS	NS	NS	NS	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS
ITMW-18	4	NS	NS	NS	NS	NS	NS	NS	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS
ITMW-19	4	NS	NS	NS	NS	NS	NS	NS	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS
ITMW-20	4	4/18/2018	14.41	31.03	26.0	8:50	14.79	1.0	100	18.77	497	4.69	6.05	180.1	2.00	0.00	NM	Clear
ITMW-21	4	4/19/2018	13.84	32.99	28.0	14:10	14.03	1.5	100	18.62	2062	3.19	5.19	279.1	1.12	0.00	NM	Clear
MW-22	4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-23	4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-24	4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-25	4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-26	4	4/18/2018	14.54	35.14	29.9	13:50	14.92	2.0	100	20.00	1098	0.72	5.52	197.6	1.23	0.00	NM	Clear
MW-27	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-28	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-29	2	4/19/2018	12.73	30.32	25.3	11:40	12.19	1.5	100	17.13	540	0.42	5.08	244.5	2.11	0.00	NM	Clear
MW-30^	4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-31R	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-32R	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-33R	2	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	4/19/2018	12.35	29.83	24.8	13:35	12.47	1.2	100	21.31	747	1.35	6.19	156.1	5.76	0.13	NM	Clear with trace black specs
MW-39R	2	4/18/2018	11.85	29.69	27.2	9:40	12.03	1.5	100	18.40	1235	1.19	5.12	256.3	5.12	0.21	NM	Clear
MW-40R	2	4/17/2018	10.12	28.30	23.3	16:18	10.18	1.8	100	20.25	879	0.72	5.35	83.2	3.75	2.57	NM	Clear
MW-41R	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-46R	2	4/18/2018	3.30	21.51	19.0	13:25	3.71	2.0	100	19.30	821	0.01	4.96	288.9	1.23	0.00	NM	Clear
MW-50R	2	4/17/2018	10.70	18.24	15.7	14:45	11.48	1.5	100	19.98	1166	0.23	6.51	75.4	3.98	0.20	NM	Clear
MW-55R	2	4/18/2018	2.70	20.96	20.0	11:22	4.12	2.5	100	18.45	969	0.15	5.57	186.8	2.90	0.28	NM	Clear
MW-56R	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-57R	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-58R	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-60R	2	4/17/2018	5.89	15.86	12.4	12:55	10.60	2.7	100	19.72	1279	0.43	6.75	11.8	9.76	0.35	NM	Clear
MW-61R	2	4/17/2018	7.05	15.28	12.8	14:00	8.25	1.6	100	17.86	1077	0.12	6.89	-125.5	5.23	>3.5	NM	Clear
MW-62R	2	4/17/2018	5.90	20.01	17.5	15:10	7.32	1.7	100	18.35	743	0.61	5.57	136.4	4.98	0.01	NM	Clear

TABLE 4
SUMMARY OF FINAL WELL GROUNDWATER FIELD PARAMETERS MEASUREMENTS (April 2018)
Whirlpool Facility - Fort Smith, Arkansas

Location	Well Casing Diameter (in)	Date Sampled	Depth to Water prior to Purging (ft btoc)	Total Depth of Well (ft)	Set Tubing Depth (ft)	Time Sampled	Depth to Water after Purging (ft btoc)	Purge Volume (Gallons)	Purge Rate (ml/min)	Temperature (^{o}C)	Specific Conductivity (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Ferrous Iron (mg/L)	Persulfate (mg/L)	Color
MW-63R	2	4/17/2018	5.64	19.72	17.2	16:20	7.82	1.7	100	19.91	560	2.36	5.70	257.5	26.10	0.02	NM	Slight yellow tint
MW-65	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-66	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-67R	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-68	2	4/17/2018	6.73	20.35	15.4	15:15	6.84	1.2	100	19.76	985	0.52	5.06	193.1	20.90	0.16	NM	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	4/18/2018	8.48	28.11	23.1	12:50	8.57	2.7	100	18.16	914	2.52	5.42	194.9	0.70	0.02	NM	Clear
IW-72	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
IW-73	2	4/18/2018	8.65	26.82	21.8	9:20	8.68	2.5	100	16.89	1014	0.36	5.31	171.4	3.11	0.25	NM	Clear
IW-74	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
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	4/18/2018	10.20	28.7	23.7	10:50	10.28	2.6	100	17.27	2877	0.72	10.05	-181.0	2.69	0	160	Clear
IW-78	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
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	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-83	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-84	2	4/18/2018	12.97	25.19	22.8	16:55	13.08	1.8	100	22.27	6563	3.12	6.93	219.9	1.09	0.00	1680	Clear
MW-85	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-86	2	4/19/2018	11.01	27.78	25.3	15:35	11.25	3.0	100	19.29	5195	0.19	2.95	296.5	3.23	0.07	100	Clear
MW-87	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-88	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-89	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-90	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-91	2	4/19/2018	12.58	25.70	20.7	12:35	12.80	1.5	100	20.82	443	0.90	5.77	128.0	3.13	0.00	NM	Clear
MW-92	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-93	2	4/19/2018	15.75	34.21	31.7	16:45	15.79	1.3	100	17.35	12	0.89	5.25	327.1	6.87	0.00	NM	Clear
MW-94	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-95	2	4/19/2018	15.78	34.14	29.1	15:12	15.94	1.5	100	17.71	1291	1.29	5.05	136.4	4.53	0.00	NM	Clear
MW-96	2	4/19/2018	7.55	14.53	12.0	10:15	7.99	1.6	100	15.08	186	0.34	5.47	130.8	6.14	1.18	NS	Clear with red/brown flakes
MW-97	2	4/19/2018	9.16	15.20	12.7	9:05	11.45	1.6	100	13.90	252	2.29	6.22	171.9	11.91	0.00	NM	Clear
MW-98	2	4/18/2018	11.11	22.74	20.3	12:40	15.52	1.8	100	19.15	212	1.98	6.41	118.9	2.47	0.07	NM	Clear
MW-99	2	4/18/2018	10.15	22.74	20.3	9:30	10.30	2.1	100	17.55	182	2.07	6.36	142.1	8.43	0.00	NM	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	4/18/2018	2.49	14.51	14.0	9:40	9.44 (dry)	2.0	100	17.79	2364	5.14	11.81	92.0	1.93	0.26	NM	Clear
MW-176	2	4/17/2018	2.70	14.00	13.5	13:50	5.87	3.0	100	18.63	3121	0.40	11.98	34.9	154	0.10	NM	Turbid/Cloudy
MW-177	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-178	2	4/18/2018	3.85	7.97	7.5	14:15	5.44 (dry)	1.5	100	21.10	387	4.10	7.27	146.1	7.23	0.00	NM	Clear
MW-179	2	4/19/2018	10.87	12.79	12.3	15:55	11.89 (dry)	0.1	100	22.98	166	7.05	6.00	170.8	NM	0.00	NM	Clear
MW-180	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

RAMBOLL

TABLE 4
SUMMARY OF FINAL WELL GROUNDWATER FIELD PARAMETERS MEASUREMENTS (April 2018)
Whirlpool Facility - Fort Smith, Arkansas

Location	Well Casing Diameter (in)	Date Sampled	Depth to Water prior to Purging (ft btoc)	Total Depth of Well (ft)	Set Tubing Depth (ft)	Time Sampled	Depth to Water after Purging (ft btoc)	Purge Volume (Gallons)	Purge Rate (ml/min)	Temperature (^{o}C)	Specific Conductivity (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Ferrous Iron (mg/L)	Persulfate (mg/L)	Color
MW-181	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-182	2	4/19/2018	15.80	31.09	26.1	9:25	15.87	2.0	100	13.64	737	0.49	5.60	122.0	1.72	0.00	NM	Clear
MW-183	2	4/18/2018	11.92	18.59	16.0	15:25	13.70	1.5	100	18.98	239	2.07	6.42	119.4	12.30	NM	NM	Clear
MW-184	2	4/18/2018	9.90	23.55	18.6	11:05	10.80	2.0	100	18.89	105	0.54	6.39	128.9	249.00	0.50	NM	Pale yellow
MW-185	2	4/19/2018	15.36	29.28	24.3	12:55	15.35	1.5	100	20.56	245	0.54	6.23	146.0	2.86	0.00	NM	Clear
MW-186	2	4/19/2018	13.93	27.80	22.8	10:35	14.57	2.5	100	16.00	789	0.26	6.03	149.7	1.16	0.00	NM	Clear
MW-187	2	4/18/2018	19.68	30.25	25.3	15:15	19.83	2.3	100	18.58	603	0.57	6.02	222.2	6.09	0.03	NM	Clear
MW-188	2	4/19/2018	22.33	34.58	29.6	9:15	22.38	2.0	100	14.85	702	0.58	6.19	121.9	2.64	0.00	NM	Clear
MW-189	2	4/19/2018	26.52	40.85	35.9	14:45	26.52	1.6	100	19.01	965	0.12	5.86	162.2	0.52	0.00	NM	Clear
MW-190	2	4/18/2018	22.04	36.10	31.1	13:50	22.53	6.0	100	25.45	1753	2.57	11.91	93.6	13.10	0.26	NM	Clear
MW-191	2	4/18/2018	17.63	33.20	30.7	15:10	17.68	1.5	100	24.50	163	1.43	6.88	109.3	56.40	0.11	NM	Clear
MW-192	2	4/18/2018	16.29	30.19	27.7	16:40	16.32	2.2	100	22.68	203	2.07	5.63	142.8	13.50	0.02	NM	Clear
MW-193	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-194	2	4/17/2018	5.00	21.30	16.3	16:00	5.13	2.0	100	19.16	721	0.19	5.89	119.6	7.66	0.00	NM	Clear
MW-195	2	4/17/2018	3.37	17.13	14.5	13:50	7.49	1.2	100	20.70	868	1.30	6.70	97.7	8.97	0.18	NM	Clear
MW-196	2	4/17/2018	4.36	15.00	12.5	12:10	10.01	1.6	100	19.92	1742	0.94	6.81	271.6	5.94	0.00	NM	Clear
TMW-10	2	4/18/2018	7.30	15.19	12.7	13:10	8.51	3.4	100	18.36	864	0.11	6.33	155.8	5.72	0.03	NM	Clear
TMW-11	2	4/17/2018	6.58	15.13	12.6	12:50	9.58	2.4	100	19.29	1332	0.06	7.16	-130.9	12.20	>3.5	NM	Clear, slight organic odor
TMW-12	2	4/18/2018	2.20	20.00	14.8	10:42	2.35	2.0	100	16.50	551	0.32	5.47	127.4	58.60	0.06	NM	Light brown
TMW-13	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TMW-14	2	4/18/2018	2.72	21.00	15.4	9:30	3.79	2.0	90	17.37	212	0.97	6.04	99.5	42.80	0.31	NM	Light brown
TMW-15	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TMW-16	2	4/19/2018	12.99	28.00	25.5	15:18	12.99	1.4	100	17.67	2134	0.07	5.89	294.6	5.90	0.00	NM	Clear
TMW-17	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TMW-18	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TMW-19	2	4/19/2018	25.94	43.00	38.0	12:40	26.78	2.8	100	20.17	573	0.11	6.32	-24.1	700.00	1.78	NM	Pale orangish tan
TMW-20	2	4/17/2018	4.26	17.90	14.0	12:45	5.08	2.4	100	21.22	1621	1.97	6.79	49.9	8.53	0.00	NM	Clear
TMW-21	2	4/19/2018	2.84	19.70	14.7	10:48	3.63	1.5	90	14.30	873	6.15	118.10	9.4	2.91	0.02	NM	Clear
TMW-22	2	4/18/2018	3.34	20.00	17.5	14:50	5.84	1.7	100	18.40	986	0.41	6.59	231.6	4.26	0.00	NM	Clear
TMW-23	2	4/18/2018	6.67	20.00	17.5	11:25	9.05	1.6	100	17.51	987	0.63	6.51	222.9	5.86	0.00	NM	Clear
TMW-24	2	4/18/2018	3.19	19.50	16.0	14:00	3.41	1.6	100	19.04	803	0.51	5.96	122.7	19.10	0.02	NM	Clear
TMW-25	2	4/19/2018	16.30	30.50	25.5	14:10	16.43	1.6	100	17.61	1022	0.14	5.89	440.7	7.01	0.22	NM	Clear
TMW-26	2	4/19/2018	16.23	28.60	23.6	13:00	16.90	1.6	100	16.26	941	0.08	6.05	328.8	1.07	0.01	NM	Clear
TMW-27	2	4/18/2018	10.90	26.40	21.4	16:10	11.26	2.0	100	18.21	313	0.17	5.57	217.1	4.52	0.03	NM	Clear
TMW-29	2	4/17/2018	9.87	19.00	15.5	15:00	12.23	1.5	50	27.38	1258	0.45	6.78	37.1	12.40	0.02	NM	Clear
TMW-30	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TMW-32	2	4/18/2018	10.81	26.10	21.1	16:30	10.84	1.8	100	17.75	653	0.11	5.58	173.8	3.00	0.00	NM	Clear

Notes:

ft btoc = Feet below top of casing
in = Inches
ORP = Oxidation reduction potential
DO = Dissolved oxygen
(^{o}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[2,3] (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	4/17/2018	4/13/2015	7/20/2015	10/5/2015	1/6/2016	5/2/2016	11/7/2016	4/25/2017	10/23/2017	4/17/2018
Shallow Well MW-70 and MW-177																			
MW-177	462.00	466.94	469.09	465.34	469.97	469.00	465.19	461.78	NM	467.56									
MW-70	451.53	464.17	465.33	465.15	464.77	464.59	462.70	462.38	462.93	462.85									
MW-177/MW-70											-0.26	-0.36	-0.02	-0.50	-0.42	-0.24	0.06	NM	-0.45
Shallow Well MW-176 and MW46R[4]																			
MW-176	451.74	463.81	464.66	464.49	464.38	464.18	462.30	461.99	462.93	462.49									
MW-46R	446.69	462.85	464.88	464.67	464.40	464.21	462.34	462.03	462.55	462.53									
MW-176/MW-46R											-0.19	0.04	0.04	0.004	0.005	0.01	0.01	-0.08	0.01
Shallow Well MW-175																			
MW-175	450.17	460.25	463.71	463.47	463.37	463.42	462.22	460.74	456.06	461.71									
Ave. of MW-46R & MW-56/56R	446.46	461.54	463.68	463.15	463.26	463.21	460.68	461.38	461.24	461.37									
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	-0.07
Shallow Wells MW-173 and MW-174																			
MW-174	451.95	457.67	459.92	461.75	459.71	460.01	459.77	457.87	453.10	458.04									
MW-63/MW-63R	445.37	459.36	462.29	462.08	460.93	460.79	460.05	458.56	459.92	458.22									
MW-174/MW-63											0.26	0.43	0.06	0.22	0.14	0.05	0.13	1.24	0.03
Shallow Wells MW-178, MW-179 and MW-180																			
MW-178	467.90	472.29	471.94	471.48	471.93	472.05	470.38	471.50	471.31	471.54									
MW-83	450.98	464.02	465.25	465.01	464.72	464.47	462.64	462.32	462.86	462.69									
MW-178/MW-83											-0.49	-0.40	-0.38	-0.43	-0.45	-0.46	-0.54	-0.50	-0.52

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.
NM = Measurement not completed

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(Semi-Annual Event 2018)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	ITMW-5	ITMW-7	ITMW-10	MW-38	MW-84	MW-86	MW-91	MW-93
Field Sample ID		ITMW-5-201804	ITMW-7-201804	ITMW-10-201804	MW-38-201804	MW-84-201804	MW-86-201804	MW-91-201804	MW-93-201804
Lab Sample ID		60268614016	60268614010	60268614015	60268614023	60268532028	60268614013	60268614022	60268614027
Sample Date		04/19/2018	04/19/2018	04/19/2018	04/19/2018	04/18/2018	04/19/2018	04/19/2018	04/19/2018
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments									
Volatile Organic Compounds									
Acetone	12000	2.5 J (1.9)	U (1.9)	4.4 J (1.9)	U (1.9)	7.0 J (1.9)	9.5 J (1.9)	4.4 J (1.9)	U (1.9)
Benzene	5.0	U (0.060)	0.13 J (0.060)	U (0.060)	0.18 J (0.060)	U (0.060)	0.38 J (0.060)	U (0.060)	0.14 J (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	2.9 (0.19)	U (0.19)	0.22 J (0.19)
Bromoform	80	U (0.070)	U (0.070)	U (0.070)	U (0.070)	5.1 (0.070)	6.5 (0.070)	U (0.070)	U (0.070)
Bromomethane	7.0	U (0.16)	U (0.16)	U (0.16)	U (0.16)	1.2 J (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)	3.5 J (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	720	U (0.12)	U (0.12)	U (0.12)	UJ (0.12)	U (0.12)	3.0 J (0.12)	U (0.12)	UJ (0.12)
Carbon Tetrachloride	5	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	0.91 J (0.18)	U (0.18)	0.24 J (0.18)
Chlorobenzene	100	U (0.21)	2.6 (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)
Chloroform	80	0.55 J (0.14)	U (0.14)	U (0.14)	0.50 J (0.14)	0.24 J (0.14)	23.0 (0.14)	0.26 J (0.14)	3.8 (0.14)
Chloromethane	190	U (0.080)	U (0.080)	U (0.080)	U (0.080)	1.6 (0.080)	2.9 (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)	1.2 (0.21)	U (0.21)	U (0.21)
1,1-Dichloroethane	2.4	1.6 (0.050)	U (0.050)	0.78 J (0.050)	U (0.050)	U (0.050)	2.9 (0.050)	1.7 (0.050)	0.28 J (0.050)
1,2-Dichloroethane	5.0	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	4.9 (0.20)	U (0.20)	1.1 (0.20)	9.8 (0.20)	U (0.20)	49.8 (0.20)	4.3 (0.20)	19.6 (0.20)
cis-1,2-Dichloroethene	70	34.2 (0.080)	8.3 (0.080)	12.2 (0.080)	777 (4.0)	U (0.080)	2450 (80.0)	38.6 (0.080)	97.9 (0.080)
trans-1,2-Dichloroethene	100	0.37 J (0.20)	U (0.20)	U (0.20)	10.5 (0.20)	U (0.20)	304 J (200)	0.76 J (0.20)	6.9 (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)
Methylene Chloride	5.0	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	4.0 (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)	104 (0.15)	U (0.15)	0.40 J (0.15)
Tetrachloroethene	5.0	1.3 (0.10)	U (0.10)	0.27 J (0.10)	0.42 J (0.10)	U (0.10)	41.5 (0.10)	4.1 (0.10)	5.0 (0.10)
Toluene	1000	U (0.17)	U (0.17)	1.3 (0.17)	0.32 J (0.17)	U (0.17)	3.4 (0.17)	U (0.17)	0.18 J (0.17)
1,1,1-Trichloroethane	200	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	87.7 (0.11)	U (0.11)	0.30 J (0.11)
1,1,2-Trichloroethane	5.0	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	2.8 (0.20)	U (0.20)	1.1 (0.20)
Trichloroethene	5.0	1590 (3.4)	24.2 (0.17)	65.4 (0.17)	2560 (8.5)	0.54 J (0.17)	61200 (170)	557 (1.7)	17000 (34.0)
Vinyl Chloride	2.0	1.4 (0.13)	0.13 J (0.13)	0.65 J (0.13)	23.6 (0.13)	U (0.13)	171 (0.13)	0.21 J (0.13)	4.5 (0.13)

Notes:
1 All concentrations are presented in µg/L (ppb).
2 Only compounds with at least one detection are
3 Concentrations that exceed the Remedial Action Levels per ADEQ RADD Issued Dec 2013 are double underlined.

Abbreviations:
U = Not detected
J = Estimated concentration
B = Analyte was detected in the associated method blank.
( ) = 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

Color Key
Onsite Wells
Offsite Wells
Plume Boundary Wells

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TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(Semi-Annual Event 2018)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-95	TMW-16	TMW-19	TMW-25	TMW-26	TMW-27	ITMW-20	ITMW-21
Field Sample ID		MW-95-201804	TMW-16-201804	TMW-19-201804	TMW-25-201804	TMW-26-201804	TMW-27-201804	ITMW-20-201804	ITMW-21-201804
Lab Sample ID		60268614024	60268614018	60268614011	60268614014	60268614012	60268532017	60268532011	60268614017
Sample Date		04/19/2018	04/19/2018	04/19/2018	04/19/2018	04/19/2018	04/18/2018	04/18/2018	04/19/2018
Sample Method		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)	2.0 J (1.9)	6.5 J (1.9)	2.0 J (1.9)	2.5 J (1.9)	U (1.9)	U (1.9)	1.9 J (1.9)
Benzene	5.0	0.11 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)
Bromodichloromethane	80	0.37 J (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	7.0	U (0.16)	U (0.16)	U (0.16)	U (0.16)	1.4 J (0.16)	U (0.16)	1.4 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)	U (0.59)
Carbon Disulfide	720	UJ (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	0.28 J (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)	0.31 J (0.21)	U (0.21)	3.5 (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)	UJ (0.15)	UJ (0.15)	U (0.15)
Chloroform	80	5.0 (0.14)	1.7 (0.14)	0.22 J (0.14)	0.26 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)	0.086 J (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)
1,1-Dichloroethane	2.4	0.36 J (0.050)	0.42 J (0.050)	U (0.050)	U (0.050)	0.19 J (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	5.0	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	36.3 (0.20)	1.4 (0.20)	U (0.20)	0.31 J (0.20)	0.21 J (0.20)	U (0.20)	U (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	153 (0.080)	13.6 (0.080)	0.32 J (0.080)	10.9 (0.080)	1.1 (0.080)	U (0.080)	U (0.080)	0.38 J (0.080)
trans-1,2-Dichloroethene	100	5.0 (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)
Methylene Chloride	5.0	1.2 (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	0.19 J (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	5.0	7.7 (0.10)	0.35 J (0.10)	U (0.10)	0.14 J (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)
1,1,1-Trichloroethane	200	0.46 J (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	5.0	1.7 (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
Trichloroethene	5.0	24100 (34.0)	1030 (1.7)	0.41 J (0.17)	240 (0.85)	28.3 (0.17)	U (0.17)	U (0.17)	13.2 (0.17)
Vinyl Chloride	2.0	13.1 (0.13)	0.90 J (0.13)	U (0.13)	0.29 J (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 compounds with at least one detection are
3 Concentrations that exceed the Remedial Action Levels per ADEQ RADD Issued Dec 2013 are double underlined.

Abbreviations:
U = Not detected
J = Estimated concentration
B = Analyte was detected in the associated method blank.
( ) = 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

Color Key
Onsite Wells
Offsite Wells
Plume Boundary Wells

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(Semi-Annual Event 2018)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-26	MW-29	MW-39R	MW-40R	MW-50R	MW-55R	MW-55R	MW-60R
Field Sample ID		MW-26-201804	MW-29-201804	MW-39R-201804	MW-40R-201804	MW-50R-201804	MW-55R-201804	DUP-05-201804	MW-60R-201804
Lab Sample ID		60268532009	60268614003	60268532018	60268487017	60268487012	60268532013	60268532014	60268487007
Sample Date		04/18/2018	04/19/2018	04/18/2018	04/17/2018	04/17/2018	04/18/2018	04/18/2018	04/17/2018
Sample Method		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)
Benzene	5.0	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)
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	7.0	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)	1.4 J (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)
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)
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)	1.7 (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
Chloroethane	12000	UJ (0.15)	U (0.15)	UJ (0.15)	UJ (0.15)	U (0.15)	UJ (0.15)	UJ (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)
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)
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)	U (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	5.0	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	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	0.28 J (0.20)	0.28 J (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	U (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	0.77 J (0.080)	0.82 J (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	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	5.0	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	5.0	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)
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	5.0	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	5.0	1.0 (0.17)	U (0.17)	U (0.17)	U (0.17)	0.61 J (0.17)	17.0 (0.17)	18.1 (0.17)	U (0.17)
Vinyl Chloride	2.0	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	0.16 J (0.13)	U (0.13)

Notes:
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Abbreviations:
U = Not detected
J = Estimated concentration
B = Analyte was detected in the associated method blank.
( ) = 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

Color Key
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TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(Semi-Annual Event 2018)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-61R	MW-63R	MW-63R	MW-68	MW-96	MW-97	MW-98	MW-99
Field Sample ID		MW-61R-201804	MW-63R-201804	DUP-01-201804	MW-68-201804	MW-96-201804	MW-97-201804	MW-98-201804	MW-99-201804
Lab Sample ID		60268487008	60268487015	60268487016	60268487004	60268614002	60268614001	60268532003	60268532001
Sample Date		04/17/2018	04/17/2018	04/17/2018	04/17/2018	04/19/2018	04/19/2018	04/18/2018	04/18/2018
Sample Method		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)
Benzene	5.0	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)	0.41 J (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	7.0	U (0.16)	1.4 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)	U (0.59)	U (0.59)
Carbon Disulfide	720	0.46 J (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)
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)
Chloroethane	12000	U (0.15)	UJ (0.15)	UJ (0.15)	U (0.15)	U (0.15)	U (0.15)	UJ (0.15)	UJ (0.15)
Chloroform	80	U (0.14)	U (0.14)	0.15 J (0.14)	U (0.14)	0.36 J (0.14)	U (0.14)	U (0.14)	U (0.14)
Chloromethane	190	U (0.080)	U (0.080)	0.13 J (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)
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)
1,2-Dichloroethane	5.0	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	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	1.9 (0.080)	0.44 J (0.080)	0.38 J (0.080)	U (0.080)	U (0.080)	U (0.080)	U (0.080)	0.12 J (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	0.93 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	5.0	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	5.0	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)
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	5.0	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	5.0	4.0 (0.17)	4.8 (0.17)	4.9 (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	1.3 (0.17)
Vinyl Chloride	2.0	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.13)

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

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SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(Semi-Annual Event 2018)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-183	MW-184	MW-185	MW-185	MW-186	MW-187	MW-188	MW-188
Field Sample ID		MW-183-201804	MW-184-201804	MW-185-201804	DUP-07-201804	MW-186-201804	MW-187-201804	MW-188-201804	DUP-04-201804
Lab Sample ID		60268532005	60268532002	60268614004	60268614005	60268614009	60268532010	60268614007	60268614008
Sample Date		04/18/2018	04/18/2018	04/19/2018	04/19/2018	04/19/2018	04/18/2018	04/19/2018	04/19/2018
Sample Method		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)	U (1.9)	U (1.9)	U (1.9)
Benzene	5.0	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)
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	7.0	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)
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)
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)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)
Chloroethane	12000	UJ (0.15)	UJ (0.15)	U (0.15)	U (0.15)	U (0.15)	UJ (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)
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)
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)	1.2 (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	5.0	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	U (0.20)	U (0.20)	U (0.20)	U (0.20)	0.60 J (0.20)	U (0.20)	U (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	0.14 J (0.080)	U (0.080)	1.4 (0.080)	1.4 (0.080)	4.8 (0.080)	0.77 J (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	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	5.0	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	5.0	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)
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	5.0	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	5.0	1.9 (0.17)	U (0.17)	12.0 (0.17)	11.1 (0.17)	14.2 (0.17)	U (0.17)	0.20 J (0.17)	0.18 J (0.17)
Vinyl Chloride	2.0	U (0.13)	U (0.13)	U (0.13)	U (0.13)	0.23 J (0.13)	U (0.13)	U (0.13)	U (0.13)

Notes:
1 All concentrations are presented in µg/L (ppb).
2 Only compounds with at least one detection are
3 Concentrations that exceed the Remedial Action Levels per ADEQ RADD Issued Dec 2013 are double underlined.

Abbreviations:
U = Not detected
J = Estimated concentration
B = Analyte was detected in the associated method blank.
( ) = 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

Color Key
Onsite Wells
Offsite Wells
Plume Boundary Wells

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(Semi-Annual Event 2018)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-189	MW-190	MW-191	MW-192	MW-194	MW-195	MW-195	MW-196	IW-73
Field Sample ID		MW-189-201804	MW-190-201804	MW-191-201804	MW-192-201804	MW-194-201804	MW-195-201804	DUP-02-201804	MW-196-201804	IW-73-201804
Lab Sample ID		60268614006	60268532025	60268532026	60268532027	60268487010	60268487002	60268487003	60268487001	60268532006
Sample Date		04/19/2018	04/18/2018	04/18/2018	04/18/2018	04/17/2018	04/17/2018	04/17/2018	04/17/2018	04/18/2018
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)	3.4 J (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	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	7.0	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)	1.4 J (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)	UJ (0.15)	UJ (0.15)	UJ (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	UJ (0.15)
Chloroform	80	0.18 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)	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	1.6 (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	5.0	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	1.8 (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	0.51 J (0.20)
cis-1,2-Dichloroethene	70	11.1 (0.080)	U (0.080)	U (0.080)	U (0.080)	0.57 J (0.080)	U (0.080)	U (0.080)	U (0.080)	4.0 (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)	1.1 J (0.42)	U (0.42)	U (0.42)	U (0.42)
Methylene Chloride	5.0	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	5.0	0.19 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)
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	5.0	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	5.0	385 (0.85)	0.58 J (0.17)	U (0.17)	U (0.17)	9.4 (0.17)	U (0.17)	U (0.17)	U (0.17)	176 (0.17)
Vinyl Chloride	2.0	0.48 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)

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

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U = Not detected
J = Estimated concentration
B = Analyte was detected in the associated method blank.
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RADD = Remedial action decision document
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RAMBOLL

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(Semi-Annual Event 2018)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	IW-77	MW-46R	MW-62R	MW-175	MW-176	MW-178	MW-179	MW-182
Field Sample ID		IW-77-201804	MW-46R-201804	MW-62R-201804	MW-175-201804	MW-176-201804	MW-178-201804	MW-179-201804	MW-182-201804
Lab Sample ID		60268532007	60268532015	60268487009	60268532012	60268487013	60268532016	60268614025	60268614019
Sample Date		04/18/2018	04/18/2018	04/17/2018	04/18/2018	04/17/2018	04/18/2018	04/19/2018	04/19/2018
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Comments									
Volatile Organic Compounds									
Acetone	12000	5.3 J (1.9)	U (1.9)	U (1.9)	U (1.9)	33.2 (1.9)	U (1.9)	2.9 J (1.9)	2.5 J (1.9)
Benzene	5.0	0.10 J (0.060)	U (0.060)	U (0.060)	U (0.060)	0.27 J (0.060)	0.21 J (0.060)	U (0.060)	0.16 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)
Bromoform	80	0.43 J (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	U (0.16)	1.4 J (0.16)	U (0.16)	U (0.16)	1.5 J (0.16)	1.4 J (0.16)	U (0.16)	U (0.16)
2-Butanone	4900	U (0.59)	U (0.59)	U (0.59)	U (0.59)	1.7 J (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)
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)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	5.3 (0.21)
Chloroethane	12000	U (0.15)	UJ (0.15)	U (0.15)	UJ (0.15)	0.31 J (0.15)	UJ (0.15)	U (0.15)	U (0.15)
Chloroform	80	0.20 J (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	0.091 J (0.080)	U (0.080)	U (0.080)	0.14 J (0.080)	0.16 J (0.080)	0.11 J (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)
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)
1,2-Dichloroethane	5.0	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	U (0.20)	1.4 (0.20)	U (0.20)	0.55 J (0.20)	2.8 (0.20)	0.22 J (0.20)	0.27 J (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	3.6 (0.080)	12.6 (0.080)	U (0.080)	1.9 (0.080)	105 (0.080)	1.4 (0.080)	0.85 J (0.080)	3.9 (0.080)
trans-1,2-Dichloroethene	100	0.50 J (0.20)	0.40 J (0.20)	U (0.20)	U (0.20)	1.6 (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)
Methylene Chloride	5.0	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	5.0	U (0.10)	0.13 J (0.10)	U (0.10)	U (0.10)	0.17 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)	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	5.0	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	5.0	181 (0.17)	520 (1.7)	U (0.17)	117 (0.17)	426 (1.7)	5.3 (0.17)	21.7 (0.17)	58.3 (0.17)
Vinyl Chloride	2.0	U (0.13)	0.56 J (0.13)	U (0.13)	0.15 J (0.13)	1.1 (0.13)	U (0.13)	U (0.13)	U (0.13)

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

Abbreviations:
U = Not detected
J = Estimated concentration
B = Analyte was detected in the associated method blank.
( ) = Method detection limit for VOCs.
RADD = Remedial action decision document
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µg/L = Micrograms per Liter

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RAMBOLL

TABLE 6
SUMMARY OF MONITORING WELL GROUNDWATER SAMPLE ANALYTICAL RESULTS
(Semi-Annual Event 2018)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-182	RW-69	TMW-10	TMW-11	TMW-12	TMW-14	TMW-14	TMW-20
Field Sample ID		DUP-06-201804	RW-69-201804	TMW-10-201804	TMW-11-201804	TMW-12-201804	TMW-14-201804	DUP-03-201804	TMW-20-201804
Lab Sample ID		60268614020	60268532008	60268532020	60268487011	60268532024	60268532022	60268532023	60268487005
Sample Date		04/19/2018	04/18/2018	04/18/2018	04/17/2018	04/18/2018	04/18/2018	04/18/2018	04/17/2018
Sample Method		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	3.3 J (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	0.17 J (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)
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	7.0	U (0.16)	U (0.16)	1.4 J (0.16)	U (0.16)	U (0.16)	1.4 J (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)
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)
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	5.2 (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)	UJ (0.15)	UJ (0.15)	U (0.15)	UJ (0.15)	UJ (0.15)	UJ (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)
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)
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)	U (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	5.0	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	U (0.20)	0.70 J (0.20)	U (0.20)	U (0.20)	1.8 (0.20)	U (0.20)	U (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	4.1 (0.080)	5.0 (0.080)	5.2 (0.080)	1.2 (0.080)	12.0 (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)	0.22 J (0.20)	0.21 J (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)
Methylene Chloride	5.0	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	5.0	U (0.10)	U (0.10)	U (0.10)	U (0.10)	0.15 J (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	1000	U (0.17)	U (0.17)	U (0.17)	0.43 J (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	5.0	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	5.0	59.3 (0.17)	110 (0.17)	85.0 (0.17)	0.67 J (0.17)	563 (1.7)	2.1 (0.17)	2.0 (0.17)	U (0.17)
Vinyl Chloride	2.0	U (0.13)	0.19 J (0.13)	0.46 J (0.13)	0.59 J (0.13)	0.37 J (0.13)	U (0.13)	U (0.13)	U (0.13)

Notes:
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J = Estimated concentration
B = Analyte was detected in the associated method blank.
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(Semi-Annual Event 2018)
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	TMW-21	TMW-22	TMW-23	TMW-24	TMW-29	TMW-32
Field Sample ID		TMW-21-201804	TMW-22-201804	TMW-23-201804	TMW-24-201804	TMW-29-201804	TMW-32-201804
Lab Sample ID		60268532029	60268532021	60268532019	60268532004	60268487006	60268532030
Sample Date		04/18/2018	04/18/2018	04/18/2018	04/18/2018	04/17/2018	04/18/2018
Sample Method		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)
Benzene	5.0	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	0.12 J (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	7.0	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)
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	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	4.4 (0.21)
Chloroethane	12000	UJ (0.15)	UJ (0.15)	UJ (0.15)	UJ (0.15)	U (0.15)	UJ (0.15)
Chloroform	80	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)
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)	U (0.050)	U (0.050)	U (0.050)	U (0.050)	U (0.050)
1,2-Dichloroethane	5.0	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	7.0	0.86 J (0.20)	0.61 J (0.20)	0.26 J (0.20)	1.4 (0.20)	U (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	7.4 (0.080)	20.1 (0.080)	1.5 (0.080)	11.9 (0.080)	U (0.080)	3.7 (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)
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	5.0	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)
Tetrachloroethene	5.0	U (0.10)	U (0.10)	U (0.10)	0.12 J (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	5.0	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)
Trichloroethene	5.0	340 (0.85)	224 (0.85)	125 (0.17)	601 (1.7)	U (0.17)	101 (0.17)
Vinyl Chloride	2.0	U (0.13)	U (0.13)	U (0.13)	0.25 J (0.13)	U (0.13)	U (0.13)

Notes:
1 All concentrations are presented in µg/L (ppb).
2 Only compounds with at least one detection are
3 Concentrations that exceed the Remedial Action Levels per ADEQ RADD Issued Dec 2013 are double underlined.

Abbreviations:
U = Not detected
J = Estimated concentration
B = Analyte was detected in the associated method blank.
( ) = 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

Color Key
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	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
ITMW-1	11/1/1989	ND	NT	ND
ITMW-1	1/1/1990	ND	NT	ND
ITMW-1	11/1/1993	10	NT	ND
ITMW-1	12/1/1996	21	NT	ND
ITMW-1	2/1/1999	37	ND	ND
ITMW-1	3/1/2000	125	8	ND
ITMW-1	9/19/2000	30.7	7.45	< 10 U
ITMW-1	3/27/2001	30	6	< 10 U
ITMW-1	9/11/2001	27	9	< 10 U
ITMW-1	9/10/2002	35	9	< 10 U
ITMW-1	2/27/2003	29.6	7.14	< 10 U
ITMW-1	9/23/2003	25	12	< 10 U
ITMW-1	4/13/2004	42.2	11.1	< 10 U
ITMW-1	9/21/2004	26	16.7	< 10 U
ITMW-1	9/21/2004	26.1	15.8	< 10 U
ITMW-1	9/28/2005	34.7	11.3	< 10 U
ITMW-1	10/14/2006	20	11	< 10 UJ
ITMW-1	9/20/2007	18	13	< 10 U
ITMW-1	12/9/2008	14	7.3	< 5 U
ITMW-1	10/27/2011	17	8.2	< 5 U
ITMW-1	4/18/2012	32	13	< 5 U
ITMW-1	10/19/2012	10	8.3	< 0.11 U
ITMW-1	4/24/2013	26	9.1	< 0.11 U
ITMW-1	10/15/2013	7.2	5.8	< 0.11 U
ITMW-1	3/8/2014	23.4	8.9	< 0.13 U
ITMW-1	5/13/2014	21.3	8.7	< 0.13 U
ITMW-1	7/30/2014	9.2	5.7	< 0.50 U
ITMW-1	7/30/2014	8.9	5.4	< 0.50 U
ITMW-1	10/15/2014	6.1	4.5 J	< 0.50 U
ITMW-2	10/1/1989	ND	NT	ND
ITMW-2	11/1/1989	ND	NT	ND
ITMW-2	1/1/1990	ND	NT	ND
ITMW-2	1/1/1990	ND	NT	ND
ITMW-2	3/1/1991	ND	NT	ND
ITMW-2	11/1/1993	4	NT	ND
ITMW-2	12/1/1996	3.4	NT	ND
ITMW-2	3/1/2000	ND	ND	ND
ITMW-2	9/19/2000	< 5 U	< 5 U	< 10 U
ITMW-2	3/27/2001	< 5 U	< 5 U	< 10 U
ITMW-2	9/13/2001	< 5 U	< 5 U	< 10 U
ITMW-2	9/11/2002	< 5 U	< 5 U	< 10 U
ITMW-2	2/27/2003	< 5 U	< 5 U	< 10 U
ITMW-2	9/23/2003	< 5 U	< 5 U	< 10 U
ITMW-2	4/13/2004	< 5 U	< 5 U	< 10 U
ITMW-2	4/13/2004	< 5 U	< 5 U	< 10 U
ITMW-2	9/21/2004	< 5 U	< 5 U	< 10 U
ITMW-2	9/21/2004	< 5 U	< 5 U	< 10 U
ITMW-2	9/29/2005	< 5 U	< 5 U	< 10 U
ITMW-2	10/14/2006	4 J	< 5 U	< 10 U
ITMW-2	9/20/2007	< 5 U	< 5 U	< 10 U
ITMW-2	12/9/2008	< 5 U	< 5 U	< 5 U
ITMW-2	11/3/2010	< 5 U	< 5 U	< 5 U
ITMW-2	10/26/2011	< 5 U	< 5 U	< 5 U
ITMW-2	4/17/2012	< 5 U	< 5 U	< 5 U
ITMW-2	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-2	4/24/2013	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-2	10/14/2013	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-2	3/6/2014	0.23 J	0.40 J	< 0.13 U
ITMW-2	3/6/2014	0.28 J	0.51 J	< 0.13 U
ITMW-2	5/13/2014	< 0.17 U	< 0.080 U	< 0.13 U
ITMW-2	7/30/2014	< 0.50 U	< 0.50 U	< 0.50 U
ITMW-2	10/15/2014	< 0.50 U	< 0.50 U	< 0.50 U
ITMW-3	10/1/1989	ND	NT	ND
ITMW-3	1/1/1990	ND	NT	ND
ITMW-3	11/1/1993	3	NT	ND
ITMW-3	12/1/1996	1.7	NT	ND
ITMW-3	2/1/1999	ND	ND	ND
ITMW-3	3/1/2000	ND	ND	ND
ITMW-3	3/1/2000	ND	ND	ND
ITMW-3	9/19/2000	< 5 U	< 5 U	< 10 U
ITMW-3	3/27/2001	< 5 U	< 5 U	< 10 U
ITMW-3	9/11/2001	< 5 U	< 5 U	< 10 U
ITMW-3	9/10/2002	15	< 5 U	< 10 U
ITMW-3	2/27/2003	< 5 U	< 5 U	< 10 U
ITMW-3	9/23/2003	< 5 U	< 5 U	< 10 U
ITMW-3	4/13/2004	< 5 U	< 5 U	< 10 U
ITMW-3	9/21/2004	< 5 U	< 5 U	< 10 U
ITMW-3	9/28/2005	< 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	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
ITMW-3	10/14/2006	< 5 U	< 5 U	< 10 UJ
ITMW-3	9/20/2007	< 5 U	< 5 U	< 10 U
ITMW-3	12/9/2008	< 5 U	< 5 U	< 5 U
ITMW-3	11/4/2010	190	3.9 J	< 5 U
ITMW-3	10/27/2011	4.1 J	< 5 U	< 5 U
ITMW-3	4/17/2012	< 5 U	< 5 U	< 5 U
ITMW-3	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-3	4/23/2013	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-3	10/15/2013	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-4	10/1/1989	ND	NT	ND
ITMW-4	11/1/1989	ND	NT	ND
ITMW-4	1/1/1990	ND	NT	ND
ITMW-4	11/1/1993	ND	NT	ND
ITMW-4	12/1/1996	75	NT	ND
ITMW-4	2/1/1999	93	54	ND
ITMW-4	3/1/2000	22	16	ND
ITMW-4	9/20/2000	13.9	10.6	< 10 U
ITMW-4	3/28/2001	9	< 5 U	< 10 U
ITMW-4	9/13/2001	6	8	< 10 U
ITMW-4	9/10/2002	9	< 5 U	< 10 U
ITMW-4	2/28/2003	< 5 U	< 5 U	< 10 U
ITMW-4	9/23/2003	< 5 U	< 5 U	< 10 U
ITMW-4	4/14/2004	< 5 U	< 5 U	< 10 U
ITMW-4	9/22/2004	< 5 U	< 5 U	< 10 U
ITMW-4	9/27/2005	< 5 U	< 5 U	< 10 U
ITMW-4	10/11/2006	6	8	< 10 U
ITMW-4	9/20/2007	5 J	5 J	< 10 U
ITMW-4	12/9/2008	< 5 U	3.2 J	< 5 U
ITMW-4	10/25/2011	4.8 J	5.1	< 5 U
ITMW-4	10/17/2012	3.3 J	4.5 J	7.9
ITMW-4	10/14/2013	3.7 J	6.1	< 0.11 U
ITMW-4	3/6/2014	1.4 J	2.0 J	0.19 J
ITMW-4	5/13/2014	2.0 J	2.1 J	0.18 J
ITMW-4	7/30/2014	2.8 J	4.6 J	< 0.50 U
ITMW-4	10/16/2014	3.4 J	4.9 J	< 0.50 U
ITMW-5	10/1/1989	ND	NT	ND
ITMW-5	1/1/1990	ND	NT	ND
ITMW-5	12/1/1996	21	NT	ND
ITMW-5	2/1/1999	86	39	ND
ITMW-5	3/1/2000	73	59	ND
ITMW-5	9/20/2000	85	64.4	< 10 U
ITMW-5	3/28/2001	100	46	< 10 U
ITMW-5	9/13/2001	72	64	< 10 U
ITMW-5	9/10/2002	108	72	< 10 U
ITMW-5	2/28/2003	90.4	68.7	< 10 U
ITMW-5	9/24/2003	97.3	73.7	< 10 U
ITMW-5	4/14/2004	83.9	55.4	< 10 U
ITMW-5	9/22/2004	105	75.8	< 10 U
ITMW-5	4/6/2005	93.2	72.6	< 10 U
ITMW-5	4/6/2005	87	71	< 10 U
ITMW-5	9/28/2005	79	53.5	< 10 U
ITMW-5	9/28/2005	82.1	54.4	< 10 U
ITMW-5	3/14/2006	92	66.1	< 10 U
ITMW-5	3/14/2006	98.4	66.1	< 10 U
ITMW-5	10/10/2006	110	51	4 J
ITMW-5	4/18/2007	115	39.3	< 10 U
ITMW-5	9/20/2007	120	49	4 J
ITMW-5	4/29/2008	120	43	< 10 U
ITMW-5	12/9/2008	200 E	42	< 5 U
ITMW-5	4/27/2009	160	34	< 5 U
ITMW-5	5/11/2010	190 EF	40	< 5 U
ITMW-5	11/6/2010	350	50	< 5 U
ITMW-5	3/22/2011	370	39	< 5 U
ITMW-5	10/25/2011	150	35	< 5 U
ITMW-5	4/17/2012	290	26	< 5 U
ITMW-5	10/18/2012	260	33	0.64 J
ITMW-5	4/25/2013	220	20	0.50 J
ITMW-5	10/16/2013	260	27	0.55 J
ITMW-6	10/1/1989	ND	NT	ND
ITMW-6	1/1/1990	ND	NT	ND
ITMW-6	12/1/1996	6.8	NT	ND
ITMW-6	5/1/1997	7	ND	ND
ITMW-6	2/1/1999	25	ND	ND
ITMW-6	2/1/1999	6	ND	ND
ITMW-6	3/1/2000	ND	ND	ND
ITMW-6	9/20/2000	< 5 U	< 5 U	< 10 U
ITMW-6	3/28/2001	< 5 U	< 5 U	< 10 U
ITMW-6	9/13/2001	< 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	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
ITMW-6	9/10/2002	< 5 U	< 5 U	< 10 U
ITMW-6	9/10/2002	< 5 U	< 5 U	< 10 U
ITMW-6	2/27/2003	< 5 U	< 5 U	< 10 U
ITMW-6	9/24/2003	< 5 U	< 5 U	< 10 U
ITMW-6	4/14/2004	< 5 U	< 5 U	< 10 U
ITMW-6	9/22/2004	< 5 U	< 5 U	< 10 U
ITMW-6	9/28/2005	< 5 U	< 5 U	< 10 U
ITMW-6	10/11/2006	< 5 U	4 J	< 10 U
ITMW-6	9/20/2007	< 5 U	< 5 U	< 10 U
ITMW-6	12/10/2008	< 5 U	< 5 U	< 5 U
ITMW-6	10/28/2009	< 5 U	2.1 J	< 5 U
ITMW-6	5/10/2010	< 5 U	1.9 J	< 5 U
ITMW-6	10/25/2011	< 5 U	2.7 J	< 5 U
ITMW-6	10/25/2011	< 5 U	2.4 J	< 5 U
ITMW-6	4/17/2012	< 5 U	2.9 J	< 5 U
ITMW-6	10/17/2012	< 1.6 U	3.1 J	< 0.11 U
ITMW-6	4/22/2013	< 1.6 U	2.1 J	0.33 J
ITMW-6	10/14/2013	3.4 J	5.5	0.18 J
ITMW-6	3/6/2014	2.7 J	4.9 J	0.18 J
ITMW-6	5/13/2014	3.6 J	5.3	0.17 J
ITMW-6	7/30/2014	4.4 J	6.7	< 0.50 U
ITMW-6	10/15/2014	3.1 J	5.2	< 0.50 U
ITMW-7	11/1/1989	ND	NT	ND
ITMW-7	1/1/1990	ND	NT	ND
ITMW-7	12/1/1996	290	NT	3
ITMW-7	5/1/1997	380	180	ND
ITMW-7	2/1/1999	ND	ND	ND
ITMW-7	6/1/1999	320	144	ND
ITMW-7	6/1/1999	300	140	ND
ITMW-7	3/1/2000	262	100	ND
ITMW-7	3/1/2000	207	92	ND
ITMW-7	9/19/2000	207	100	< 10 U
ITMW-7	9/21/2000	109	< 5 U	< 10 U
ITMW-7	3/28/2001	161	66	< 10 U
ITMW-7	9/13/2001	139	68	< 10 U
ITMW-7	9/10/2002	137	56	< 10 U
ITMW-7	9/10/2002	128	54	< 10 U
ITMW-7	2/27/2003	172	92.5	< 10 U
ITMW-7	9/24/2003	125	57.3	< 10 U
ITMW-7	4/14/2004	201	80.7	< 10 U
ITMW-7	9/22/2004	132	48.4	< 10 U
ITMW-7	4/7/2005	122	39	< 10 U
ITMW-7	9/28/2005	100	30.5	< 10 U
ITMW-7	3/14/2006	153	59.5	< 10 U
ITMW-7	10/10/2006	140	44	1 J
ITMW-7	4/17/2007	83	29.4	< 10 U
ITMW-7	9/21/2007	72	22	< 10 U
ITMW-7	4/30/2008	70	18	< 10 U
ITMW-7	12/11/2008	66	19	< 5 U
ITMW-7	4/27/2009	87	26	< 5 U
ITMW-7	10/28/2009	60	20	< 5 U
ITMW-7	5/10/2010	73	18	< 5 U
ITMW-7	3/23/2011	225 EF	93.2	56.5
ITMW-7	10/25/2011	99	26	< 5 U
ITMW-7	4/18/2012	100	20	< 5 U
ITMW-7	10/18/2012	63	17	< 0.11 U
ITMW-7	4/25/2013	69	16	0.27 J
ITMW-7	10/17/2013	47	12	< 0.11 U
ITMW-7	3/8/2014	37.4	10	0.24 J
ITMW-7	5/14/2014	37.0	11.1	0.22 J
ITMW-7	7/30/2014	36.7	11.2	< 0.50 U
ITMW-7	10/15/2014	33.7	10.3	< 0.50 U
ITMW-9	1/1/1990	ND	NT	ND
ITMW-9	12/1/1996	230	NT	ND
ITMW-9	5/1/1997	7	ND	ND
ITMW-9	2/1/1999	40	24	ND
ITMW-9	3/1/2000	69	45	ND
ITMW-9	9/20/2000	57.3	14.3	< 10 U
ITMW-9	9/20/2000	54.8	14	< 10 U
ITMW-9	3/28/2001	40	12	< 10 U
ITMW-9	9/13/2001	40	12	< 10 U
ITMW-9	9/10/2002	61	21	< 10 U
ITMW-9	2/28/2003	54.2	37.2	< 10 U
ITMW-9	9/23/2003	91	49.5	< 10 U
ITMW-9	9/23/2003	97.6	53.9	< 10 U
ITMW-9	4/14/2004	71.8	38.8	< 10 U
ITMW-9	9/22/2004	80.7	21.1	< 10 U
ITMW-9	4/6/2005	79	30.4	< 10 U

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

Well ID	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
ITMW-9	9/27/2005	98.8	54.6	< 10 U
ITMW-9	3/14/2006	101	78.7	< 10 U
ITMW-9	10/11/2006	110	77	6 J
ITMW-9	4/17/2007	79	39.6	< 10 U
ITMW-9	9/20/2007	76	26	< 10 U
ITMW-9	4/28/2008	82	37	< 10 U
ITMW-9	12/9/2008	90	62	< 5 U
ITMW-9	4/27/2009	110	51	< 5 U
ITMW-9	10/27/2009	120	67	5.7
ITMW-9	10/27/2009	120	71	6.1
ITMW-9	5/11/2010	130	38	< 5 U
ITMW-9	3/22/2011	120	48	2.4 J
ITMW-9	10/25/2011	90	57	< 5 U
ITMW-9	4/17/2012	150	50	2.5 J
ITMW-9	10/18/2012	120	53	5.2
ITMW-9	4/24/2013	140	44	1.6 J
ITMW-9	10/17/2013	83	42	16
ITMW-9	3/8/2014	112	40.4	0.41 J
ITMW-9	5/14/2014	113	42.2	0.64 J
ITMW-9	7/30/2014	143	43.9	0.54 J
ITMW-9	7/30/2014	141	44.4	0.53 J
ITMW-9	10/15/2014	75.3	38.8	1.7 J
ITMW-9	10/15/2014	76.9	39.1	1.8 J
ITMW-10	1/1/1990	ND	NT	ND
ITMW-10	12/1/1996	4	NT	ND
ITMW-10	2/1/1999	25	13	ND
ITMW-10	3/1/2000	23	17	ND
ITMW-10	9/20/2000	18.1	15.9	< 10 U
ITMW-10	3/28/2001	40	21	< 10 U
ITMW-10	9/13/2001	29	28	< 10 U
ITMW-10	9/13/2001	30	27	< 10 U
ITMW-10	9/10/2002	55	38	< 10 U
ITMW-10	2/28/2003	57.6	50.9	< 10 U
ITMW-10	7/16/2003	55.3	49.2	< 10 U
ITMW-10	9/23/2003	65.9	56.5	< 10 U
ITMW-10	4/14/2004	80	57.4	< 10 U
ITMW-10	9/22/2004	59.6	50	< 10 U
ITMW-10	4/6/2005	72.1	57.7	< 10 U
ITMW-10	9/28/2005	57.6	41.6	< 10 U
ITMW-10	3/14/2006	82	67.2	< 10 U
ITMW-10	10/10/2006	88	54	5 J
ITMW-10	4/17/2007	76	52.4	< 10 U
ITMW-10	9/20/2007	67	48	5 J
ITMW-10	4/28/2008	61	46	< 10 U
ITMW-10	12/9/2008	78	50	< 5 U
ITMW-10	4/27/2009	87	52	4.4 J
ITMW-10	10/27/2009	110	50	4.2 J
ITMW-10	5/11/2010	85	46	2.4 J
ITMW-10	3/22/2011	92	42	2.7 J
ITMW-10	10/25/2011	94	39	2.5 J
ITMW-10	10/18/2012	100	37	2.5
ITMW-10	10/15/2013	100	32	3.1
ITMW-10	3/6/2014	166	32.3	1.2 J
ITMW-10	5/14/2014	184	32.4	1.4 J
ITMW-10	7/30/2014	273	38.3	1.8 J
ITMW-10	10/15/2014	243	32.3	1.7 J
ITMW-11	1/1/1990	19000	NT	180
ITMW-11	11/1/1990	4700	NT	93
ITMW-11	2/1/1991	3400	NT	ND
ITMW-11	11/1/1993	2300	NT	43
ITMW-11	12/1/1996	510	NT	ND
ITMW-11	2/1/1999	650	10	ND
ITMW-11	3/1/2000	3370	206	ND
ITMW-11	9/19/2000	8030	327	11.7
ITMW-11	3/27/2001	7000	200	< 10 U
ITMW-11	9/13/2001	6000	183	< 10 U
ITMW-11	11/20/2001	< 5 U	< 5 U	< 10 U
ITMW-11	9/9/2002	7100	206	10
ITMW-11	9/9/2002	800	72	< 10 U
ITMW-11	2/26/2003	4110	346	58.8
ITMW-11	2/26/2003	3630	306	60.7
ITMW-11	9/24/2003	3990	269	11.8
ITMW-11	4/13/2004	3160	240	37.8
ITMW-11	9/21/2004	3450	204	< 10 U
ITMW-11	4/7/2005	4210	282	66.7
ITMW-11	9/29/2005	3910	199	18
ITMW-11	3/16/2006	14600	1290	482
ITMW-11	3/16/2006	12800	1210	381

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

Well ID	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
ITMW-11	10/13/2006	8000	340	47
ITMW-11	4/19/2007	3970	199	< 200 U
ITMW-11	9/21/2007	7600	180	21
ITMW-11	4/30/2008	4500	210	58
ITMW-11	12/10/2008	5800	190	27
ITMW-11	4/27/2009	2500	200	24
ITMW-11	5/11/2010	6200	290	28
ITMW-11	5/11/2010	6200	290	45
ITMW-11	3/23/2011	9700	520	130
ITMW-11	10/26/2011	8800	310	16
ITMW-11	10/19/2012	1400	34	2.4
ITMW-11	10/17/2013	180	8.7	2.9
ITMW-11	3/8/2014	2980	187 M1	22.5
ITMW-11	5/15/2014	1470	107	4.9
ITMW-11	5/15/2014	1590	99.5	5.5
ITMW-11	7/31/2014	7380	156	6.9
ITMW-11	10/15/2014	2050	70.4	3.5
ITMW-11	12/4/2014	1530	55.0	6.4
ITMW-12	11/1/1990	2400	NT	140
ITMW-12	2/1/1991	2100	NT	ND
ITMW-12	11/1/1993	2500	NT	35
ITMW-12	12/1/1996	1200	NT	ND
ITMW-12	2/1/1999	3100	480	34
ITMW-12	3/1/2000	3110	320	19
ITMW-12	9/19/2000	3350	180	12
ITMW-12	3/27/2001	3900	200	20
ITMW-12	9/13/2001	3100	159	< 10 U
ITMW-12	11/20/2001	2400	300	20
ITMW-12	9/11/2002	4200	300	< 10 U
ITMW-12	2/26/2003	3460	287	< 10 U
ITMW-12	2/26/2003	3940	308	< 10 U
ITMW-12	9/24/2003	2920	242	< 10 U
ITMW-12	4/13/2004	2410	245	< 10 U
ITMW-12	9/21/2004	1780	238	< 10 U
ITMW-12	9/29/2005	2120	273	< 10 U
ITMW-12	10/13/2006	3500	310	9 J
ITMW-12	9/21/2007	2100	220	< 10 U
ITMW-12	12/9/2008	1500	180	< 5 U
ITMW-12	10/26/2011	1600	230	1.8 J
ITMW-12	10/19/2012	2500	200	3.6
ITMW-12	10/17/2013	2300	190	3.2
ITMW-12	10/17/2013	2300	160	4.1
ITMW-12	3/8/2014	1910	148	3.4
ITMW-12	3/8/2014	2400	207	3.4
ITMW-12	5/14/2014	2740	164	14.0
ITMW-12	7/31/2014	2710	173	13.6
ITMW-12	10/15/2014	2950	192	3.7
ITMW-12	10/15/2014	2570	188	3.5
ITMW-12	12/4/2014	468	51.1	0.88 J
ITMW-13	11/1/1990	34	NT	18
ITMW-13	2/1/1991	32	NT	35
ITMW-13	11/1/1993	NT	NT	29
ITMW-13	12/1/1996	36	NT	36
ITMW-13	2/1/1999	36	140	48
ITMW-13	3/1/2000	37	121	53
ITMW-13	9/19/2000	22.4	112	50.5
ITMW-13	3/28/2001	44	92	40
ITMW-13	9/13/2001	35	111	80
ITMW-13	9/9/2002	99	110	10
ITMW-13	9/9/2002	81	86	20
ITMW-13	2/26/2003	70.2	85.5	< 10 U
ITMW-13	9/24/2003	159	130	< 10 U
ITMW-13	4/13/2004	48.4	87.2	< 10 U
ITMW-13	9/21/2004	25.5	71.6	< 10 U
ITMW-13	4/7/2005	71.8	103	< 10 U
ITMW-13	9/30/2005	72.7	114	17.9
ITMW-13	3/16/2006	141	187	< 10 U
ITMW-13	10/14/2006	100	150	17
ITMW-13	4/18/2007	83.1	78	4.3 J
ITMW-13	9/20/2007	28	40	< 10 U
ITMW-13	4/29/2008	69	72	< 10 U
ITMW-13	12/10/2008	26	23	< 5 U
ITMW-13	4/27/2009	79	78	< 5 U
ITMW-13	10/27/2009	18	22	< 5 U
ITMW-13	5/12/2010	97	72	< 5 U
ITMW-13	3/23/2011	130	83	< 5 U
ITMW-13	10/27/2011	64	40	< 5 U
ITMW-13	10/27/2011	65	41	< 5 U

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

Well ID	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
ITMW-13	4/19/2012	97	63	< 5 U
ITMW-13	10/18/2012	400	260	1.0 J
ITMW-13	4/25/2013	86	52	0.14 J
ITMW-13	10/16/2013	150	74	< 0.11 U
ITMW-13	3/8/2014	69.3	45.3	< 0.13 U
ITMW-13	5/14/2014	54.0	34.7	0.17 J
ITMW-13	7/30/2014	36.5	27.5	< 0.50 U
ITMW-13	10/15/2014	40.8	25.9	< 0.50 U
ITMW-14	11/1/1990	ND	NT	13
ITMW-14	2/1/1991	ND	NT	ND
ITMW-14	11/1/1993	6	NT	ND
ITMW-14	12/1/1996	ND	NT	ND
ITMW-14	2/1/1999	ND	29	20
ITMW-14	3/1/2000	ND	24	12
ITMW-14	9/19/2000	< 5 U	13.6	< 10 U
ITMW-14	3/27/2001	< 5 U	24	10
ITMW-14	9/13/2001	< 5 U	5	< 10 U
ITMW-14	9/11/2002	41	6	< 10 U
ITMW-14	2/26/2003	< 5 U	< 5 U	< 10 U
ITMW-14	9/24/2003	< 5 U	< 5 U	< 10 U
ITMW-14	4/13/2004	< 5 U	< 5 U	< 10 U
ITMW-14	9/21/2004	< 5 U	< 5 U	< 10 U
ITMW-14	9/30/2005	< 5 U	< 5 U	< 10 U
ITMW-14	10/14/2006	4 J	8	< 10 UJ
ITMW-14	9/21/2007	5 J	9	< 10 U
ITMW-14	12/10/2008	5.7	9.3	< 5 U
ITMW-14	11/4/2010	110	14	< 5 U
ITMW-14	10/27/2011	6.3	11	< 5 U
ITMW-14	4/19/2012	7.6	16	< 5 U
ITMW-14	10/19/2012	5.4	11	< 0.11 U
ITMW-14	4/25/2013	6.8	14	< 0.11 U
ITMW-14	10/16/2013	2.9 J	4.9 J	< 0.11 U
ITMW-14	3/8/2014	6.1	11.9	< 0.13 U
ITMW-14	5/14/2014	5.3	11.3	< 0.13 U
ITMW-14	7/30/2014	4.0 J	9.2	< 0.50 U
ITMW-14	10/15/2014	4.1 J	9.4	< 0.50 U
ITMW-15	11/1/1990	2500	NT	55
ITMW-15	2/1/1991	1700	NT	ND
ITMW-15	4/15/1991	2000	NT	ND
ITMW-15	4/19/1991	2100	NT	ND
ITMW-15	4/20/1991	2400	NT	ND
ITMW-15	11/1/1993	4300	NT	10
ITMW-15	12/1/1996	240	NT	ND
ITMW-15	2/1/1999	400	120	ND
ITMW-15	3/1/2000	339	97	ND
ITMW-15	9/19/2000	362	92.7	< 10 U
ITMW-15	9/19/2000	376	91	< 10 U
ITMW-15	3/28/2001	290	57	< 10 U
ITMW-15	9/13/2001	380	87	< 10 U
ITMW-15	9/13/2001	370	80	< 10 U
ITMW-15	11/20/2001	157	30	< 10 U
ITMW-15	9/11/2002	320	75	< 10 U
ITMW-15	2/26/2003	301	98.7	< 10 U
ITMW-15	9/25/2003	490	91.9	< 10 U
ITMW-15	4/14/2004	334	126	< 10 U
ITMW-15	9/21/2004	774	118	< 10 U
ITMW-15	4/7/2005	685	133	< 10 U
ITMW-15	9/29/2005	862	189	< 10 U
ITMW-15	3/16/2006	908	183	12
ITMW-15	10/13/2006	680	140	7 J
ITMW-15	4/19/2007	591	110	8.5 J
ITMW-15	9/21/2007	1000	190	27
ITMW-15	4/29/2008	100	18	< 10 U
ITMW-15	12/10/2008	1100	150	< 5 U
ITMW-15	4/27/2009	2800	130	17
ITMW-15	5/11/2010	2800	160	11
ITMW-15	10/26/2011	1100	74	< 5 U
ITMW-15	10/19/2012	240	14	1.1 J
ITMW-15	10/16/2013	2800	170	14
ITMW-15	3/8/2014	1630	152	11.6
ITMW-15	5/14/2014	899	61.7	4.4
ITMW-15	5/14/2014	729	60.7	4.1
ITMW-15	7/30/2014	1850	82.8	3.0
ITMW-15	7/30/2014	1820	82.5	3.1
ITMW-15	10/16/2014	1660	66.4	1.8 J
ITMW-15	10/16/2014	1490	63.0	2.0
ITMW-15	12/5/2014	63.0	< 0.50 U	< 0.50 U
ITMW-16	2/1/1991	31	NT	ND

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

Well ID	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
ITMW-16	11/1/1993	41	NT	7
ITMW-16	12/1/1996	ND	NT	ND
ITMW-16	2/1/1999	ND	ND	ND
ITMW-16	3/1/2000	7	ND	ND
ITMW-16	9/21/2000	< 5 U	< 5 U	< 10 U
ITMW-16	3/26/2001	< 5 U	< 5 U	< 10 U
ITMW-16	9/13/2001	< 5 U	< 5 U	< 10 U
ITMW-16	9/11/2002	< 5 U	< 5 U	< 10 U
ITMW-16	2/27/2003	< 5 U	< 5 U	< 10 U
ITMW-16	9/25/2003	< 5 U	< 5 U	< 10 U
ITMW-16	4/15/2004	< 5 U	< 5 U	< 10 U
ITMW-16	9/23/2004	< 5 U	< 5 U	< 10 U
ITMW-16	9/29/2005	< 5 U	< 5 U	< 10 U
ITMW-16	9/29/2005	< 5 U	< 5 U	< 10 U
ITMW-16	10/14/2006	< 5 U	< 5 U	< 10 U
ITMW-16	9/20/2007	< 5 U	< 5 U	< 10 U
ITMW-16	12/10/2008	< 5 U	< 5 U	< 5 U
ITMW-16	11/6/2010	17	< 5 U	< 5 U
ITMW-16	10/27/2011	< 5 U	< 5 U	< 5 U
ITMW-16	4/18/2012	< 5 U	< 5 U	< 5 U
ITMW-16	10/18/2012	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-16	4/24/2013	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-16	10/16/2013	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-16	3/7/2014	0.30 J	< 0.080 U	< 0.13 U
ITMW-16	5/13/2014	< 0.17 U	< 0.080 U	< 0.13 U
ITMW-16	7/30/2014	< 0.50 U	< 0.50 U	< 0.50 U
ITMW-16	10/15/2014	< 0.50 U	< 0.50 U	< 0.50 U
ITMW-17	2/1/1991	21000	NT	ND
ITMW-17	4/15/1991	21000	NT	ND
ITMW-17	4/24/1991	21000	NT	ND
ITMW-17	11/1/1993	18000	NT	15
ITMW-17	12/1/1996	9300	NT	ND
ITMW-17	2/1/1999	11000	240	ND
ITMW-17	3/1/2000	6780	171	ND
ITMW-17	9/19/2000	5500	180	< 10 U
ITMW-17	1/5/2001	8310	179	< 10 U
ITMW-17	3/28/2001	6700	134	< 10 U
ITMW-17	9/13/2001	6300	158	< 10 U
ITMW-17	9/11/2002	6500	153	< 10 U
ITMW-17	2/26/2003	4380	134	< 10 U
ITMW-17	9/25/2003	6090	136	< 10 U
ITMW-17	4/14/2004	5050	184	< 10 U
ITMW-17	4/14/2004	4920	182	< 10 U
ITMW-17	9/21/2004	5760	156	< 10 U
ITMW-17	4/7/2005	5750	156	< 10 U
ITMW-17	9/29/2005	5460	111	< 10 U
ITMW-17	3/15/2006	15900	211 E	26.3
ITMW-17	10/12/2006	19000	220	21
ITMW-17	4/18/2007	13000	298	< 10 U
ITMW-17	9/21/2007	11000	210	3 J
ITMW-17	4/29/2008	6200	140	< 10 U
ITMW-17	12/10/2008	5600	130	< 5 U
ITMW-17	4/27/2009	5200	130	< 5 U
ITMW-17	5/11/2010	4500	85	< 5 U
ITMW-17	11/4/2010	5400	110	< 5 U
ITMW-17	3/22/2011	5300	100	< 5 U
ITMW-17	10/26/2011	4500	98	< 5 U
ITMW-17	4/19/2012	4700	110	< 5 U
ITMW-17	10/19/2012	3500	100	0.48 J
ITMW-17	4/25/2013	5600	130	0.90 J
ITMW-17	10/17/2013	4800	79	< 0.11 U
ITMW-17	3/8/2014	3770	86.1	0.57 J
ITMW-17	3/8/2014	4040	87.3	0.74 J
ITMW-17	5/15/2014	3370	88.5	1.1 J
ITMW-17	5/15/2014	3630	82.9	1.3 J
ITMW-17	7/30/2014	2260	64.7	< 0.50 U
ITMW-17	10/16/2014	3510	70.5	3.2
ITMW-17	12/5/2014	4630	210 J	7.7
ITMW-18	2/1/1991	3700	NT	ND
ITMW-18	11/1/1993	4500	NT	6
ITMW-18	12/1/1996	1600	NT	ND
ITMW-18	2/1/1999	6300	480	ND
ITMW-18	3/1/2000	3560	401	ND
ITMW-18	9/19/2000	4080	409	< 10 U
ITMW-18	3/27/2001	4000	400	< 10 U
ITMW-18	3/27/2001	4200	370	< 100 U
ITMW-18	9/11/2001	4100	300	< 10 U
ITMW-18	9/11/2002	6700	300	< 10 U

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

Well ID	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
ITMW-18	2/26/2003	5110	290	< 10 U
ITMW-18	9/24/2003	7700	415	< 10 U
ITMW-18	4/13/2004	7740	410	< 10 U
ITMW-18	9/21/2004	7050	380	< 10 U
ITMW-18	4/8/2005	7080	389	< 10 U
ITMW-18	9/29/2005	4660	241	< 10 U
ITMW-18	3/15/2006	5750	373	< 50 U
ITMW-18	10/13/2006	6600	300	< 10 U
ITMW-18	4/18/2007	15000	387	< 10 U
ITMW-18	9/21/2007	8300	310	< 100 U
ITMW-18	4/30/2008	9000	350	< 10 U
ITMW-18	12/9/2008	7200	320	< 5 U
ITMW-18	4/27/2009	7100	320	< 5 U
ITMW-18	10/27/2009	7800	360	< 5 U
ITMW-18	5/11/2010	11000	360	< 5 U
ITMW-18	10/26/2011	8500	290	< 5 U
ITMW-18	4/19/2012	9800	360	2.9 J
ITMW-18	10/19/2012	7600	260	1.2 J
ITMW-18	4/25/2013	7200	270	0.90 J
ITMW-18	10/17/2013	7000	280	0.64 J
ITMW-18	3/8/2014	9380	285	< 6.5 U
ITMW-18	3/8/2014	8550	242 J	1.7 J
ITMW-18	5/15/2014	2500	108	< 0.13 U
ITMW-18	5/15/2014	2940	101	< 0.13 U
ITMW-18	7/31/2014	5360	139	1.6 J
ITMW-18	10/15/2014	3540	68.5	< 0.50 U
ITMW-18	12/4/2014	3690	74.3	< 0.50 U
ITMW-19	2/1/1991	9900	NT	ND
ITMW-19	11/1/1993	27000	NT	7
ITMW-19	12/1/1996	25000	NT	ND
ITMW-19	2/1/1999	33000	150	ND
ITMW-19	3/1/2000	33100	128	ND
ITMW-19	9/19/2000	35700	197	< 10 U
ITMW-19	1/5/2001	34000	166	< 10 U
ITMW-19	3/28/2001	38000	119	< 10 U
ITMW-19	9/13/2001	19000	132	< 10 U
ITMW-19	9/11/2002	27000	167	< 10 U
ITMW-19	2/26/2003	16200	126	< 10 U
ITMW-19	9/24/2003	27300	186	< 10 U
ITMW-19	4/13/2004	19400	186	< 10 U
ITMW-19	9/21/2004	20000	148	< 10 U
ITMW-19	4/7/2005	18300	146	< 10 U
ITMW-19	4/7/2005	16200	145	< 10 U
ITMW-19	9/29/2005	25700	144	< 10 U
ITMW-19	3/15/2006	21300	177	< 100 U
ITMW-19	10/12/2006	16000	150	2 J
ITMW-19	4/18/2007	20000	131	< 10 U
ITMW-19	9/21/2007	19000	110	< 200 U
ITMW-19	4/29/2008	17000	98	< 100 U
ITMW-19	12/10/2008	11000	93	< 5 U
ITMW-19	4/27/2009	13000	100	< 5 U
ITMW-19	5/11/2010	19000	130	< 5 U
ITMW-19	11/4/2010	19000	150	< 5 U
ITMW-19	11/4/2010	18000	140	< 5 U
ITMW-19	3/22/2011	16000	110	1 J
ITMW-19	10/26/2011	17000	120	< 5 U
ITMW-19	4/19/2012	15000	110	< 5 U
ITMW-19	4/19/2012	18000	110	< 5 U
ITMW-19	10/19/2012	15000	110	0.89 J
ITMW-19	4/25/2013	13000	110	0.57 J
ITMW-19	10/18/2013	16000	91 J	< 0.11 U
ITMW-19	10/18/2013	14000	100 J	< 0.11 U
ITMW-19	3/8/2014	8850	66.7	0.57 J
ITMW-19	3/8/2014	8270	60.8 J	< 6.5 U
ITMW-19	5/15/2014	15300 J	67.2	0.87 J
ITMW-19	5/15/2014	9780 J	65.8	0.85 J
ITMW-19	7/31/2014	13300	85.5	0.96 J
ITMW-19	10/16/2014	12800	76.7	1.9 J
ITMW-19	12/5/2014	33.5	< 0.50 U	< 0.50 U
ITMW-20	3/1/1991	ND	NT	ND
ITMW-20	11/1/1993	ND	NT	ND
ITMW-20	12/1/1996	290	NT	ND
ITMW-20	5/1/1997	ND	ND	ND
ITMW-20	2/1/1999	ND	ND	ND
ITMW-20	3/1/2000	ND	ND	ND
ITMW-20	9/21/2000	< 5 U	< 5 U	< 10 U
ITMW-20	3/27/2001	< 5 U	< 5 U	< 10 U
ITMW-20	9/11/2001	21	< 5 U	< 10 U

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

Well ID	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
ITMW-20	9/10/2002	< 5 U	< 5 U	< 10 U
ITMW-20	2/27/2003	< 5 U	< 5 U	< 10 U
ITMW-20	9/24/2003	< 5 U	< 5 U	< 10 U
ITMW-20	4/14/2004	< 5 U	< 5 U	< 10 U
ITMW-20	9/22/2004	< 5 U	< 5 U	< 10 U
ITMW-20	9/29/2005	< 5 U	< 5 U	< 10 U
ITMW-20	10/12/2006	< 5 U	< 5 U	< 10 U
ITMW-20	9/19/2007	< 5 U	< 5 U	< 10 U
ITMW-20	12/10/2008	< 5 U	< 5 U	< 5 U
ITMW-20	10/29/2009	< 5 U	< 5 U	< 5 U
ITMW-20	5/12/2010	< 5 U	< 5 U	< 5 U
ITMW-20	11/5/2010	15	< 5 U	< 5 U
ITMW-20	10/26/2011	< 5 U	< 5 U	< 5 U
ITMW-20	10/26/2011	< 5 U	< 5 U	< 5 U
ITMW-20	4/18/2012	< 5 U	< 5 U	< 5 U
ITMW-20	10/18/2012	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-20	4/23/2013	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-20	10/14/2013	< 1.6 U	< 0.56 U	< 0.11 U
ITMW-20	3/5/2014	< 0.17 U	< 0.080 U	0.15 J
ITMW-20	5/12/2014	0.21 J	< 0.080 U	< 0.13 U
ITMW-20	7/30/2014	< 0.50 U	< 0.50 U	< 0.50 U
ITMW-20	10/15/2014	< 0.50 U	< 0.50 U	< 0.50 U
ITMW-21	3/1/1991	21	NT	ND
ITMW-21	11/1/1993	37	NT	ND
ITMW-21	12/1/1996	150	NT	ND
ITMW-21	2/1/1999	190	ND	ND
ITMW-21	3/1/2000	196	ND	ND
ITMW-21	9/19/2000	192	< 5 U	< 10 U
ITMW-21	3/28/2001	123	< 5 U	< 10 U
ITMW-21	9/13/2001	116	< 5 U	< 10 U
ITMW-21	9/10/2002	13	< 5 U	< 10 U
ITMW-21	2/26/2003	39.5	< 5 U	< 10 U
ITMW-21	9/23/2003	9.09	< 5 U	< 10 U
ITMW-21	4/14/2004	52.9	< 5 U	< 10 U
ITMW-21	9/22/2004	7.8	< 5 U	< 10 U
ITMW-21	9/28/2005	6.45	< 5 U	< 10 U
ITMW-21	10/12/2006	9	< 5 U	< 10 U
ITMW-21	9/21/2007	10	< 5 U	< 10 U
ITMW-21	12/9/2008	15	< 5 U	< 5 U
ITMW-21	10/27/2009	14	< 5 U	< 5 U
ITMW-21	11/4/2010	1100	4.4 J	< 5 U
ITMW-21	3/22/2011	24	< 5 U	< 5 U
ITMW-21	10/25/2011	11	< 5 U	< 5 U
ITMW-21	4/17/2012	30	< 5 U	< 5 U
ITMW-21	10/19/2012	7.7	< 0.56 U	< 0.11 U
ITMW-21	4/24/2013	18	< 0.56 U	< 0.11 U
ITMW-21	10/15/2013	20	< 0.56 U	< 0.11 U
ITMW-21	3/6/2014	14.8	< 0.080 U	< 0.13 U
ITMW-21	5/14/2014	17.6	< 0.080 U	< 0.13 U
ITMW-21	7/30/2014	9.3	< 0.50 U	< 0.50 U
ITMW-21	7/30/2014	9.4	< 0.50 U	< 0.50 U
ITMW-21	10/15/2014	6.0	< 0.50 U	< 0.50 U
MW-22	12/1/1996	ND	NT	ND
MW-22	5/1/1997	ND	5	ND
MW-22	2/1/1999	ND	5	ND
MW-22	3/1/2000	ND	ND	ND
MW-22	9/19/2000	< 5 U	< 5 U	< 10 U
MW-22	3/27/2001	< 5 U	< 5 U	< 10 U
MW-22	9/13/2001	< 5 U	< 5 U	< 10 U
MW-22	9/10/2002	9	< 5 U	< 10 U
MW-22	2/27/2003	< 5 U	< 5 U	< 10 U
MW-22	9/23/2003	< 5 U	< 5 U	< 10 U
MW-22	9/23/2003	< 5 U	< 5 U	< 10 U
MW-22	4/13/2004	< 5 U	< 5 U	< 10 U
MW-22	9/21/2004	< 5 U	< 5 U	< 10 U
MW-22	9/30/2005	< 5 U	< 5 U	< 10 U
MW-22	10/14/2006	< 5 U	< 5 U	< 10 UJ
MW-22	9/20/2007	< 5 U	< 5 U	< 10 U
MW-22	12/9/2008	< 5 U	< 5 U	< 5 U
MW-22	10/27/2009	< 5 U	< 5 U	< 5 U
MW-22	11/3/2010	< 5 U	< 5 U	< 5 U
MW-22	10/27/2011	2.1 J	< 5 U	< 5 U
MW-22	4/18/2012	< 5 U	< 5 U	< 5 U
MW-22	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-22	4/23/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-22	10/14/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-22	3/5/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-22	5/12/2014	< 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	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
MW-22	7/30/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-22	10/15/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-23	12/1/1996	210	NT	ND
MW-23	5/1/1997	2400	NT	ND
MW-23	2/1/1999	350	10	ND
MW-23	2/1/1999	440	10	ND
MW-23	3/1/2000	147	ND	ND
MW-23	9/21/2000	67	< 5 U	< 10 U
MW-23	1/5/2001	137	< 5 U	< 10 U
MW-23	3/26/2001	87	< 5 U	< 10 U
MW-23	9/11/2001	23	< 5 U	< 10 U
MW-23	9/11/2002	111	< 5 U	< 10 U
MW-23	9/11/2002	105	< 5 U	< 10 U
MW-23	2/27/2003	54	< 5 U	< 10 U
MW-23	9/25/2003	83.9	< 5 U	< 10 U
MW-23	4/15/2004	70.3	< 5 U	< 10 U
MW-23	9/22/2004	73.4	< 5 U	< 10 U
MW-23	4/5/2005	55.5	< 5 U	< 10 U
MW-23	9/29/2005	65.8	< 5 U	< 10 U
MW-23	3/17/2006	47.1	< 5 U	< 10 U
MW-23	10/14/2006	59	< 5 U	< 10 UJ
MW-23	4/19/2007	39.9	9.79	< 10 U
MW-23	9/19/2007	47	< 5 U	< 10 U
MW-23	4/29/2008	29	< 5 U	< 10 U
MW-23	12/10/2008	69	< 5 U	< 5 U
MW-23	4/27/2009	32	< 5 U	< 5 U
MW-23	10/29/2009	45	< 5 U	< 5 U
MW-23	5/12/2010	55	< 5 U	< 5 U
MW-23	5/12/2010	52	< 5 U	< 5 U
MW-23	11/5/2010	76	< 5 U	< 5 U
MW-23	3/23/2011	46	< 5 U	< 5 U
MW-23	10/27/2011	41	< 5 U	< 5 U
MW-23	4/18/2012	36	< 5 U	< 5 U
MW-23	10/19/2012	43	< 0.56 U	< 0.11 U
MW-23	4/25/2013	20	< 0.56 U	< 0.11 U
MW-23	10/16/2013	54	< 0.56 U	< 0.11 U
MW-23	5/22/2014	22.8	< 0.080 U	< 0.13 U
MW-23	7/8/2014	27.8	0.68 J	< 0.50 U
MW-23	9/12/2014	62.1	1.8 J	< 0.50 U
MW-23	10/23/2014	189	3.5 J	< 0.50 U
MW-24	2/1/1999	1400	49	ND
MW-24	3/1/2000	403	25	ND
MW-24	3/1/2000	595	24	ND
MW-24	9/21/2000	128	11	< 10 U
MW-24	1/5/2001	247	12	< 10 U
MW-24	3/26/2001	330	11	< 10 U
MW-24	9/11/2001	124	6	< 10 U
MW-24	9/11/2002	199	6	< 10 U
MW-24	2/27/2003	253	7.01	< 10 U
MW-24	9/25/2003	155	< 5 U	< 10 U
MW-24	4/15/2004	181	5.12	< 10 U
MW-24	9/23/2004	116	< 5 U	< 10 U
MW-24	4/6/2005	152	6.04	< 10 U
MW-24	9/29/2005	161	< 5 U	< 10 U
MW-24	3/16/2006	347	7.57	< 10 U
MW-24	10/14/2006	620	11	2 J
MW-24	4/19/2007	196	11.6	< 10 U
MW-24	9/20/2007	140	< 5 U	< 10 U
MW-24	9/20/2007	150	< 5 U	< 10 U
MW-24	4/29/2008	150	3 J	< 10 U
MW-24	12/10/2008	150	3.4 J	< 5 U
MW-24	12/10/2008	130	3.4 J	< 5 U
MW-24	4/27/2009	120	< 5 U	< 5 U
MW-24	10/29/2009	110	2.6 J	< 5 U
MW-24	5/12/2010	150	4.3 J	< 5 U
MW-24	3/23/2011	170	3.6 J	< 5 U
MW-24	10/27/2011	170	1.9 J	< 5 U
MW-24	10/27/2011	170	1.4 J	< 5 U
MW-24	4/18/2012	150	2.9 J	< 5 U
MW-24	10/19/2012	190	3.7 J	< 0.11 U
MW-24	4/25/2013	110	3.5 J	0.23 J
MW-24	5/22/2014	79.7	1.2 J	< 0.13 U
MW-24	7/8/2014	102	1.4 J	< 0.50 U
MW-24	9/12/2014	55.7	0.66 J	< 0.50 U
MW-24	10/23/2014	33.1	< 0.50 U	< 0.50 U
MW-25	2/1/1999	29000	170	100
MW-25	2/1/1999	27000	180	110
MW-25	12/1/1999	94500	ND	ND

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

Well ID	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
MW-25	3/1/2000	35900	245	63
MW-25	9/21/2000	59000	300	50
MW-25	3/28/2001	34000	117	60
MW-25	9/13/2001	60000	300	< 200 U
MW-25	9/9/2002	157000	440	180
MW-25	9/9/2002	56000	370	200
MW-25	2/26/2003	45900	557	75.7
MW-25	7/17/2003	62200	621	243
MW-25	9/24/2003	103000	775	< 500 U
MW-25	4/14/2004	25600	255	31.8
MW-25	9/21/2004	85200	819	422
MW-25	4/7/2005	21100	353	61.1
MW-25	9/28/2005	136000	837	< 500 U
MW-25	3/15/2006	36300	774	< 200 U
MW-25	10/12/2006	64000	1300	610
MW-25	10/12/2006	65000	1400	600
MW-25	4/18/2007	19000	321	20
MW-25	4/18/2007	18000	319	20
MW-25	9/21/2007	54000	1200	800
MW-25	9/21/2007	55000	1200	780
MW-25	4/29/2008	23000	470	10 J
MW-25	4/29/2008	25000	510	10 J
MW-25	12/10/2008	100000	1200	430
MW-25	4/27/2009	36000	2100	140
MW-25	4/27/2009	39000	2000	190
MW-25	10/27/2009	140000	1500	570
MW-25	5/11/2010	81000	1400	11
MW-25	11/4/2010	270000	1500	400
MW-25	3/22/2011	57000	2400	34
MW-25	10/26/2011	120000	2100	< 250 U
MW-25	4/17/2012	18000	690	18
MW-25	10/19/2012	56000	4200	1500
MW-25	10/19/2012	49000	3600	1500
MW-25	4/25/2013	9100	330	7.9
MW-25	4/25/2013	9500	380	11
MW-25	10/18/2013	43000	2900	1300
MW-25	3/8/2014	14500	625	33.6 J
MW-25	5/15/2014	18500	600 J	30.3
MW-25	7/9/2014	49900	1750	< 0.50 U
MW-25	7/31/2014	71700	2310 J	< 500 U
MW-25	10/16/2014	42500	2870 J	540 J
MW-25	10/24/2014	59800	2650 J	0.66 J
MW-25	12/5/2014	2620 J	31.5	2.1
MW-26	2/1/1999	360	150	ND
MW-26	6/1/1999	ND	ND	ND
MW-26	3/1/2000	ND	ND	ND
MW-26	9/21/2000	< 5 U	< 5 U	< 10 U
MW-26	3/26/2001	< 5 U	< 5 U	< 10 U
MW-26	9/11/2001	< 5 U	< 5 U	< 10 U
MW-26	9/11/2001	< 5 U	< 5 U	< 10 U
MW-26	9/10/2002	< 5 U	< 5 U	< 10 U
MW-26	2/27/2003	< 5 U	< 5 U	< 10 U
MW-26	9/24/2003	< 5 U	< 5 U	< 10 U
MW-26	9/24/2003	< 5 U	< 5 U	< 10 U
MW-26	4/14/2004	< 5 U	< 5 U	< 10 U
MW-26	9/22/2004	< 5 U	< 5 U	< 10 U
MW-26	9/29/2005	< 5 U	< 5 U	< 10 U
MW-26	10/12/2006	< 5 U	< 5 U	< 10 U
MW-26	9/19/2007	< 5 U	< 5 U	< 10 U
MW-26	12/10/2008	< 5 U	< 5 U	< 5 U
MW-26	10/29/2009	< 5 U	< 5 U	< 5 U
MW-26	5/12/2010	< 5 U	< 5 U	< 5 U
MW-26	11/5/2010	22	< 5 U	< 5 U
MW-26	10/26/2011	< 5 U	< 5 U	< 5 U
MW-26	4/18/2012	< 5 U	< 5 U	< 5 U
MW-26	10/18/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-26	4/23/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-26	10/15/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-26	3/5/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-26	5/12/2014	0.25 J	< 0.080 U	< 0.13 U
MW-26	7/30/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-26	10/14/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-27	12/1/1999	ND	ND	ND
MW-27	12/7/1999	< 5 U	< 5 U	< 10 U
MW-27	12/9/1999	< 5 U	< 5 U	< 10 U
MW-27	3/1/2000	ND	ND	ND
MW-27	9/21/2000	< 5 U	< 5 U	< 10 U
MW-27	1/5/2001	< 5 U	< 5 U	< 10 U
MW-27	1/5/2001	5.55	< 5 U	< 10 U

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

Well ID	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
MW-27	3/26/2001	< 5 U	< 5 U	< 10 U
MW-27	9/11/2001	< 5 U	< 5 U	< 10 U
MW-27	9/11/2002	< 5 U	< 5 U	< 10 U
MW-27	9/11/2002	< 5 U	< 5 U	< 10 U
MW-27	2/27/2003	< 5 U	< 5 U	< 10 U
MW-27	9/25/2003	< 5 U	< 5 U	< 10 U
MW-27	4/15/2004	< 5 U	< 5 U	< 10 U
MW-27	9/22/2004	< 5 U	< 5 U	< 10 U
MW-27	9/29/2005	< 5 U	< 5 U	< 10 U
MW-27	10/14/2006	2 J	< 5 U	< 10 U
MW-27	9/19/2007	< 5 U	< 5 U	< 10 U
MW-27	12/10/2008	< 5 U	< 5 U	< 5 U
MW-27	5/12/2010	3.1 J	< 5 U	< 5 U
MW-27	11/5/2010	42	< 5 U	< 5 U
MW-27	10/27/2011	< 5 U	< 5 U	< 5 U
MW-27	4/18/2012	2.6 J	< 5 U	< 5 U
MW-27	10/18/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-27	4/24/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-27	10/15/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-27	3/7/2014	0.31 J	< 0.080 U	< 0.13 U
MW-27	5/13/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-27	7/30/2014	0.63 J	< 0.50 U	< 0.50 U
MW-27	10/14/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-28	12/1/1999	ND	ND	ND
MW-28	12/9/1999	< 5 U	< 5 U	< 10 U
MW-28	12/9/1999	< 5 U	< 5 U	< 10 U
MW-28	3/1/2000	ND	ND	ND
MW-28	9/21/2000	< 5 U	< 5 U	< 10 U
MW-28	3/27/2001	< 5 U	< 5 U	< 10 U
MW-28	3/27/2001	< 5 U	< 5 U	< 10 U
MW-28	9/11/2001	< 5 U	< 5 U	< 10 U
MW-28	9/11/2002	< 5 U	< 5 U	< 10 U
MW-28	2/27/2003	< 5 U	< 5 U	< 10 U
MW-28	9/25/2003	< 5 U	< 5 U	< 10 U
MW-28	4/15/2004	< 5 U	< 5 U	< 10 U
MW-28	9/22/2004	< 5 U	< 5 U	< 10 U
MW-28	9/30/2005	< 5 U	< 5 U	< 10 U
MW-28	10/14/2006	< 5 U	< 5 U	< 10 UJ
MW-28	9/19/2007	< 5 U	< 5 U	< 10 U
MW-28	12/10/2008	< 5 U	< 5 U	< 5 U
MW-28	10/29/2009	< 5 U	< 5 U	< 5 U
MW-28	5/12/2010	2.6 J	< 5 U	< 5 U
MW-28	11/5/2010	54	< 5 U	< 5 U
MW-28	3/23/2011	1.6 J	< 5 U	< 5 U
MW-28	10/27/2011	< 5 U	< 5 U	< 5 U
MW-28	4/19/2012	< 5 U	< 5 U	< 5 U
MW-28	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-28	4/24/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-28	10/15/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-28	3/6/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-28	5/13/2014	0.30 J	< 0.080 U	< 0.13 U
MW-28	7/30/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-28	10/14/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-29	12/1/1999	ND	ND	ND
MW-29	12/9/1999	< 5 U	< 5 U	< 10 U
MW-29	3/1/2000	ND	ND	ND
MW-29	9/20/2000	< 5 U	< 5 U	< 10 U
MW-29	3/27/2001	< 5 U	< 5 U	< 10 U
MW-29	9/11/2001	< 5 U	< 5 U	< 10 U
MW-29	9/10/2002	< 5 U	< 5 U	< 10 U
MW-29	2/27/2003	< 5 U	< 5 U	< 10 U
MW-29	9/24/2003	< 5 U	< 5 U	< 10 U
MW-29	4/14/2004	< 5 U	< 5 U	< 10 U
MW-29	9/22/2004	< 5 U	< 5 U	< 10 U
MW-29	9/28/2005	< 5 U	< 5 U	< 10 U
MW-29	10/12/2006	< 5 U	< 5 U	< 10 U
MW-29	9/19/2007	< 5 U	< 5 U	< 10 U
MW-29	12/10/2008	< 5 U	< 5 U	< 5 U
MW-29	12/10/2008	< 5 U	< 5 U	< 5 U
MW-29	10/29/2009	< 5 U	< 5 U	< 5 U
MW-29	10/25/2011	< 5 U	< 5 U	< 5 U
MW-29	4/18/2012	< 5 U	< 5 U	< 5 U
MW-29	10/18/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-29	4/23/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-29	10/14/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-29	3/5/2014	0.52 J	< 0.080 U	< 0.13 U
MW-29	5/13/2014	0.18 J	< 0.080 U	< 0.13 U
MW-29	7/30/2014	< 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	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
MW-29	10/15/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-30	12/1/1999	115	34	ND
MW-30	12/9/1999	115	34	< 10 U
MW-30	3/1/2000	86	25	ND
MW-30	9/20/2000	102	25	< 10 U
MW-30	3/27/2001	43	11	< 10 U
MW-30	9/11/2001	63	18	< 10 U
MW-30	9/10/2002	48	14	< 10 U
MW-30	2/27/2003	60	20.3	< 10 U
MW-30	9/24/2003	46.8	13.7	< 10 U
MW-30	4/14/2004	36.6	11.8	< 10 U
MW-30	9/22/2004	36.2	12.1	< 10 U
MW-30	9/28/2005	59.6	15.6	< 10 U
MW-30	10/12/2006	53	15	< 10 U
MW-30	9/20/2007	39	11	< 10 U
MW-30	12/10/2008	37	11	< 5 U
MW-30	11/3/2010	50	15	< 5 U
MW-30	10/26/2011	57	16	< 5 U
MW-30	4/18/2012	150	32	< 5 U
MW-30	10/18/2012	65	19	< 0.11 U
MW-30	4/25/2013	49	18	0.49 J
MW-30	10/14/2013	40	16	< 0.11 U
MW-31	1/5/2001	< 5 U	< 5 U	< 10 U
MW-31	3/26/2001	< 5 U	< 5 U	< 10 U
MW-31	9/13/2001	< 5 U	< 5 U	< 10 U
MW-31	9/11/2002	< 5 U	< 5 U	< 10 U
MW-31	2/28/2003	< 5 U	< 5 U	< 10 U
MW-31	9/25/2003	< 5 U	< 5 U	< 10 U
MW-31	4/15/2004	< 5 U	< 5 U	< 10 U
MW-31	9/23/2004	< 5 U	< 5 U	< 10 U
MW-31	4/5/2005	< 5 U	< 5 U	< 10 U
MW-31	9/27/2005	< 5 U	< 5 U	< 10 U
MW-31	3/15/2006	< 5 U	< 5 U	< 10 U
MW-31	10/11/2006	3 J	< 5 U	< 10 U
MW-31	4/19/2007	< 5 U	< 5 U	< 10 U
MW-31	9/18/2007	< 5 U	< 5 U	< 10 U
MW-31	4/30/2008	2 J	< 5 U	< 10 U
MW-31	12/11/2008	< 5 U	< 5 U	< 5 U
MW-31	4/25/2009	< 5 U	< 5 U	< 5 U
MW-31	5/12/2010	< 5 U	< 5 U	< 5 U
MW-31	11/7/2010	48	< 5 U	< 5 U
MW-31	3/23/2011	< 5 U	< 5 U	< 5 U
MW-31	10/26/2011	< 5 U	< 5 U	< 5 U
MW-31	10/19/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-31	10/18/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-31	3/6/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-31	5/13/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-31	7/30/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-31	7/30/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-31	10/14/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-32	1/5/2001	108	< 5 U	< 10 U
MW-32	3/27/2001	174	< 5 U	< 10 U
MW-32	9/13/2001	95	< 5 U	< 10 U
MW-32	9/11/2002	109	< 5 U	< 10 U
MW-32	2/28/2003	133	< 5 U	< 10 U
MW-32	9/25/2003	32.3	< 5 U	< 10 U
MW-32	4/15/2004	76.9	< 5 U	< 10 U
MW-32	9/23/2004	51.4	< 5 U	< 10 U
MW-32	4/5/2005	158	< 5 U	< 10 U
MW-32	9/27/2005	97.6	< 5 U	< 10 U
MW-32	3/15/2006	111	< 5 U	< 10 U
MW-32	10/12/2006	85	4 J	< 10 U
MW-32	4/19/2007	66.3	10.1	< 10 U
MW-32	9/18/2007	78	< 5 U	< 10 U
MW-32	4/30/2008	70	2 J	< 10 U
MW-32	12/11/2008	60	< 5 U	< 5 U
MW-32	4/25/2009	47	< 5 U	< 5 U
MW-32	10/28/2009	68	1.8 J	< 5 U
MW-32	5/12/2010	58	< 5 U	< 5 U
MW-32	11/6/2010	120	< 5 U	< 5 U
MW-32	3/24/2011	66	1.4 J	< 5 U
MW-32	10/26/2011	73	< 5 U	< 5 U
MW-32	10/19/2012	61	1.2 J	< 0.11 U
MW-32	10/18/2013	48	1.4 J	< 0.11 U
MW-32	3/8/2014	36.8	1.1 J	< 0.13 U
MW-32	5/13/2014	33.1	0.19 J	< 0.13 U
MW-32	7/29/2014	37.2	1.0 J	< 0.50 U
MW-32	10/14/2014	29.7	0.80 J	< 0.50 U

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

Well ID	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
MW-33	1/5/2001	120	< 5 U	< 10 U
MW-33	3/27/2001	260	7	< 10 U
MW-33	9/13/2001	310	8	< 10 U
MW-33	9/11/2002	450	8	< 10 U
MW-33	2/28/2003	274	6.62	< 10 U
MW-33	9/25/2003	198	5.95	< 10 U
MW-33	4/15/2004	871	21.3	< 10 U
MW-33	9/23/2004	798	15.3	< 10 U
MW-33	4/5/2005	1430	24.5	< 10 U
MW-33	9/27/2005	1030	15.2	< 10 U
MW-33	3/15/2006	1610	20.5	< 10 U
MW-33	10/12/2006	1300	19	< 10 U
MW-33	4/19/2007	1430	9.2 J	< 50 U
MW-33	9/18/2007	1700	25	< 10 U
MW-33	4/30/2008	1100	16	< 10 U
MW-33	12/11/2008	1200	18	< 5 U
MW-33	4/25/2009	1200	19	< 5 U
MW-33	5/27/2009	1000	19	< 5 U
MW-33	10/28/2009	1200	20	< 5 U
MW-33	5/12/2010	1100	21	< 5 U
MW-33	11/6/2010	1200	17	< 5 U
MW-33	3/4/2011	500	14	< 0.85 U
MW-33	5/23/2011	1300	18	NT
MW-33	10/26/2011	1000	16	< 5 U
MW-33	10/19/2012	1300	18	0.56 J
MW-33	10/18/2013	1100	19	< 0.11 U
MW-33	3/8/2014	918	15.9	0.56 J
MW-33	5/14/2014	954	15.1	0.56 J
MW-33	7/29/2014	1600	20.8	0.59 J
MW-33	10/15/2014	1290	15.3	< 0.50 U
MW-34	3/28/2001	83	< 5 U	< 10 U
MW-34	9/13/2001	61	< 5 U	< 10 U
MW-34	9/9/2002	84	< 5 U	< 10 U
MW-34	2/28/2003	< 5 U	< 5 U	< 10 U
MW-34	9/25/2003	28.4	< 5 U	< 10 U
MW-34	11/14/2003	121	< 5 U	< 10 U
MW-34	4/15/2004	119	< 5 U	< 10 U
MW-34	9/23/2004	81.1	< 5 U	< 10 U
MW-34	12/9/2004	93.3	< 5 U	< 10 U
MW-34	4/5/2005	65.8	< 5 U	< 10 U
MW-34	9/30/2005	83.7	< 5 U	< 10 U
MW-34	3/14/2006	77.1	< 5 U	< 10 U
MW-34	10/11/2006	63	4 J	< 10 U
MW-34	4/18/2007	41	9.79	< 10 U
MW-34	9/19/2007	61	< 5 U	< 10 U
MW-34	4/30/2008	32	< 5 U	< 10 U
MW-34	12/10/2008	53	< 5 U	< 5 U
MW-34	4/24/2009	43	< 5 U	< 5 U
MW-34	5/27/2009	12	< 5 U	< 5 U
MW-34	10/28/2009	34	< 5 U	< 5 U
MW-34	5/12/2010	38	< 5 U	< 5 U
MW-34	11/7/2010	70	< 5 U	< 5 U
MW-34	11/7/2010	73	< 5 U	< 5 U
MW-34	3/24/2011	40	< 5 U	< 5 U
MW-34	3/24/2011	42	< 5 U	< 5 U
MW-34	10/26/2011	56	< 5 U	< 5 U
MW-34	10/20/2012	90	1.6 J	< 0.11 U
MW-34	10/17/2013	43	0.90 J	< 0.11 U
MW-34	3/8/2014	28.7	0.61 J	< 0.13 U
MW-34	5/13/2014	19.9	< 0.080 U	< 0.13 U
MW-34	7/29/2014	78.2	1.7 J	< 0.50 U
MW-34	10/15/2014	47.7	0.96 J	< 0.50 U
MW-35R	3/28/2001	960	34	< 10 U
MW-35R	9/13/2001	1030	40	< 20 U
MW-35R	9/9/2002	900	31	< 10 U
MW-35R	2/28/2003	246	15.1	< 10 U
MW-35R	9/25/2003	297	19.8	< 10 U
MW-35R	11/14/2003	990	34.9	< 10 U
MW-35R	4/15/2004	1150	45.8	< 10 U
MW-35R	9/23/2004	685	28.4	< 10 U
MW-35R	12/9/2004	880	42	< 10 U
MW-35R	4/6/2005	886	35	< 10 U
MW-35R	9/30/2005	804	29.3	< 10 U
MW-35R	3/14/2006	858	24.2	< 10 U
MW-35R	4/6/2006	1540	52.5	< 10 U
MW-35R	10/11/2006	910	29	< 10 U
MW-35R	4/18/2007	900	27.6	< 10 U
MW-35R	9/19/2007	1100	28	< 10 U

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

Well ID	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
MW-35R	4/30/2008	1100	33	< 10 U
MW-35R	12/11/2008	790	27	< 5 U
MW-35R	4/24/2009	1100	37	< 5 U
MW-35R	5/7/2009	< 5 U	< 5 U	< 5 U
MW-35R	5/27/2009	< 5 U	< 5 U	< 5 U
MW-35R	11/5/2010	240	9.9	< 5 U
MW-35R	3/4/2011	180	8.4	< 0.85 U
MW-35R	5/23/2011	260	13	NT
MW-35R	10/25/2011	280	12	< 5 U
MW-35R	10/20/2012	280	10	< 0.11 U
MW-35R	10/17/2013	200	12	< 0.11 U
MW-35R	10/17/2013	220	13	< 0.11 U
MW-35R	3/8/2014	345	14.9	< 0.13 U
MW-35R	5/13/2014	183	6.1	< 0.13 U
MW-35R	7/30/2014	64.7	2.8 J	< 0.50 U
MW-35R	10/14/2014	79.2	2.6 J	< 0.50 U
MW-36	3/28/2001	< 5 U	< 5 U	< 10 U
MW-36	9/13/2001	< 5 U	< 5 U	< 10 U
MW-36	9/9/2002	< 5 U	< 5 U	< 10 U
MW-36	2/28/2003	< 5 U	< 5 U	< 10 U
MW-36	9/25/2003	< 5 U	< 5 U	< 10 U
MW-36	11/14/2003	< 5 U	< 5 U	< 10 U
MW-36	4/15/2004	< 5 U	< 5 U	< 10 U
MW-36	9/23/2004	< 5 U	< 5 U	< 10 U
MW-36	4/6/2005	< 5 U	< 5 U	< 10 U
MW-36	9/30/2005	< 5 U	< 5 U	< 10 U
MW-36	3/17/2006	< 5 U	< 5 U	< 10 U
MW-36	10/11/2006	< 5 U	< 5 U	< 10 U
MW-36	4/18/2007	< 5 U	< 5 U	< 10 U
MW-36	9/20/2007	< 5 U	< 5 U	< 10 U
MW-36	4/30/2008	< 5 U	< 5 U	< 10 U
MW-36	12/11/2008	< 5 U	< 5 U	< 5 U
MW-36	4/24/2009	< 5 U	< 5 U	< 5 U
MW-36	5/7/2009	< 5 U	< 5 U	< 5 U
MW-36	5/8/2009	< 5 U	< 5 U	< 5 U
MW-36	5/28/2009	< 5 U	< 5 U	< 5 U
MW-36	10/28/2009	< 5 U	< 5 U	< 5 U
MW-36	5/12/2010	< 5 U	< 5 U	< 5 U
MW-36	11/7/2010	9.9	< 5 U	< 5 U
MW-36	3/24/2011	< 5 U	< 5 U	< 5 U
MW-36	10/26/2011	< 5 U	< 5 U	< 5 U
MW-36	10/19/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-36	10/17/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-36	3/6/2014	0.22 J	< 0.080 U	< 0.13 U
MW-36	5/13/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-36	7/29/2014	0.61 J	< 0.50 U	< 0.50 U
MW-36	10/14/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-37	9/14/2001	5000	340	< 100 U
MW-37	11/20/2001	< 5 U	< 5 U	< 10 U
MW-37	9/11/2002	1400	10000	300
MW-37	2/27/2003	4050	5660	2500
MW-37	7/17/2003	2560	1710	316
MW-37	9/24/2003	3700	7020	973
MW-37	4/13/2004	5190	3160	1180
MW-37	9/21/2004	5030	5650	1370
MW-37	4/5/2005	5310	2360	1030 E
MW-37	9/29/2005	6780	3210	910 E
MW-37	3/16/2006	11200	5020	1730
MW-37	10/13/2006	13000	5300	1200
MW-37	10/13/2006	13000	5000	1200
MW-37	4/19/2007	9490	3010	780
MW-37	9/21/2007	22000	9100	2800
MW-37	4/30/2008	16000	3300	1800
MW-37	12/10/2008	24000	6300	1800
MW-37	4/27/2009	11000	3200	1200
MW-37	10/27/2009	37000	7400	2200
MW-37	5/11/2010	33000	7200	2400
MW-37	11/4/2010	54000	10000	2200
MW-37	3/22/2011	36000	6000	2300
MW-37	10/26/2011	57000	9700	2500
MW-37	4/18/2012	29000	5300	2100
MW-37	10/19/2012	4800	1100	230
MW-37	4/25/2013	1700	900	230
MW-37	10/17/2013	1100	1500	1300
MW-38	9/14/2001	620	90	< 20 U
MW-38	9/29/2005	< 5 U	98.9	2150
MW-38	10/13/2006	26	130	2000 J
MW-38	12/10/2008	44	110	1400

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

Well ID	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
MW-38	10/26/2011	580	870	1100
MW-38	10/18/2012	1000	750	700
MW-38	10/16/2013	2300	1200	560
MW-38	3/8/2014	1790	535	68.4
MW-38	5/14/2014	2040	426 J	98.2
MW-38	5/14/2014	1650	428	97.9
MW-38	7/31/2014	1720	637	197
MW-38	10/16/2014	6970	869	370
MW-38	10/16/2014	6750	781	321
MW-38	12/4/2014	3190	697	193
MW-39	7/18/2003	< 5 U	< 5 U	< 10 U
MW-39	9/25/2003	< 5 U	< 5 U	< 10 U
MW-39	11/14/2003	< 5 U	< 5 U	< 10 U
MW-39	4/15/2004	< 5 U	< 5 U	< 10 U
MW-39	9/23/2004	< 5 U	< 5 U	< 10 U
MW-39	4/8/2005	< 5 U	< 5 U	< 10 U
MW-39	9/30/2005	< 5 U	< 5 U	< 10 U
MW-39	3/17/2006	< 5 U	< 5 U	< 10 U
MW-39	10/11/2006	< 5 U	< 5 U	< 10 U
MW-39	4/18/2007	< 5 U	< 5 U	< 10 U
MW-39	9/19/2007	< 5 U	< 5 U	< 10 U
MW-39	4/30/2008	< 5 U	< 5 U	< 10 U
MW-39	12/9/2008	< 5 U	< 5 U	< 5 U
MW-39	4/24/2009	< 5 U	< 5 U	< 5 U
MW-39	10/27/2009	< 5 U	< 5 U	< 5 U
MW-39	5/11/2010	< 5 U	< 5 U	< 5 U
MW-39	11/7/2010	20	< 5 U	< 5 U
MW-39	3/24/2011	< 5 U	< 5 U	< 5 U
MW-39	10/26/2011	< 5 U	< 5 U	< 5 U
MW-39	10/19/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-39	10/18/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-39	3/6/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-39	5/13/2014	0.23 J	< 0.080 U	< 0.13 U
MW-39	7/29/2014	0.79 J	< 0.50 U	< 0.50 U
MW-39	10/13/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-40	7/18/2003	< 5 U	< 5 U	< 10 U
MW-40	9/25/2003	< 5 U	< 5 U	< 10 U
MW-40	11/14/2003	< 5 U	< 5 U	< 10 U
MW-40	11/14/2003	< 5 U	< 5 U	< 10 U
MW-40	4/15/2004	< 5 U	< 5 U	< 10 U
MW-40	9/23/2004	< 5 U	< 5 U	< 10 U
MW-40	4/7/2005	< 5 U	< 5 U	< 10 U
MW-40	9/29/2005	< 5 U	< 5 U	< 10 U
MW-40	3/14/2006	< 5 U	< 5 U	< 10 U
MW-40	10/10/2006	< 5 U	< 5 U	< 10 U
MW-40	4/18/2007	< 5 U	< 5 U	< 10 U
MW-40	9/18/2007	< 5 U	< 5 U	< 10 U
MW-40	4/28/2008	< 5 U	< 5 U	< 10 U
MW-40	12/11/2008	< 5 U	< 5 U	< 5 U
MW-40	4/24/2009	< 5 U	< 5 U	< 5 U
MW-40	5/27/2009	< 5 U	< 5 U	< 5 U
MW-40	10/29/2009	< 5 U	< 5 U	< 5 U
MW-40	5/12/2010	< 5 U	< 5 U	< 5 U
MW-40	11/4/2010	< 5 U	< 5 U	< 5 U
MW-40	3/23/2011	< 5 U	< 5 U	< 5 U
MW-40	10/26/2011	< 5 U	< 5 U	< 5 U
MW-40	4/18/2012	3.9 J	< 5 U	< 5 U
MW-40	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-40	4/23/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-40	10/15/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-40	3/6/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-40	5/12/2014	0.76 J	< 0.080 U	< 0.13 U
MW-40	7/29/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-40	10/13/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-41	7/18/2003	972	50.6	< 10 U
MW-41	7/18/2003	964	45.5	< 10 U
MW-41	9/25/2003	722	37.8	< 10 U
MW-41	11/14/2003	331	205	< 10 U
MW-41	4/15/2004	760	54.2	< 10 U
MW-41	9/23/2004	1060	48	< 10 U
MW-41	4/7/2005	1170	58	< 10 U
MW-41	9/30/2005	1120	55.8	< 10 U
MW-41	3/17/2006	917	52.5	< 10 U
MW-41	10/13/2006	970	43	< 10 UJ
MW-41	4/18/2007	900	30.1	< 10 U
MW-41	9/20/2007	850	32	< 10 U
MW-41	4/30/2008	730	31	< 10 U
MW-41	12/11/2008	820	29	< 5 U

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

Well ID	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
MW-41	4/24/2009	660	25	< 5 U
MW-41	5/7/2009	180	4.7 J	< 5 U
MW-41	5/8/2009	180	4.7 J	< 5 U
MW-41	5/27/2009	230	16	< 5 U
MW-41	10/28/2009	180	4 J	< 5 U
MW-41	5/13/2010	610	19	< 5 U
MW-41	11/5/2010	930	31	< 5 U
MW-41	3/4/2011	120	20	< 0.85 U
MW-41	5/23/2011	370	15	NT
MW-41	10/25/2011	420	18	< 5 U
MW-41	10/20/2012	620	23	< 0.11 U
MW-41	10/20/2012	550	21	< 0.11 U
MW-41	10/16/2013	520	24	< 0.11 U
MW-41	3/7/2014	501	19.7	0.68 J
MW-41	5/14/2014	518	18.0	0.50 J
MW-41	7/30/2014	511	19.1	< 0.50 U
MW-41	7/30/2014	480	19.7	< 0.50 U
MW-41	10/15/2014	491	16.9	< 0.50 U
MW-42B	11/14/2003	481	21.1	< 10 U
MW-42B	4/15/2004	856	29.3	< 10 U
MW-42B	9/23/2004	400	19.8	< 10 U
MW-42B	4/5/2005	1310	32	< 10 U
MW-42B	9/27/2005	1470	27.3	< 10 U
MW-42B	3/15/2006	2270	37.2	< 10 U
MW-42B	10/10/2006	2000	35	2 J
MW-42B	4/17/2007	1600	36.8	< 10 U
MW-42B	9/18/2007	2100	39	4 J
MW-42B	4/29/2008	1600	33	3 J
MW-42B	12/9/2008	1100	30	< 5 U
MW-42B	4/25/2009	1500	35	< 5 U
MW-43	11/14/2003	223	18.5	< 10 U
MW-43	4/15/2004	510	12.1	< 10 U
MW-43	9/23/2004	64.7	6.31	< 10 U
MW-43	4/5/2005	304	11.9	< 10 U
MW-43	9/27/2005	518	21.3	< 10 U
MW-43	3/15/2006	1300	35	< 10 U
MW-43	10/11/2006	920	30	< 10 U
MW-43	4/17/2007	220	14.1	< 10 U
MW-43	9/18/2007	350	13	< 10 U
MW-43	4/28/2008	120	4 J	< 10 U
MW-43	12/9/2008	150	5.3	< 5 U
MW-43	4/25/2009	120	< 5 U	< 5 U
MW-43	5/7/2009	180	6	< 5 U
MW-43	5/8/2009	180	6	< 5 U
MW-46R	11/14/2003	39.9	< 5 U	< 10 U
MW-46R	4/15/2004	77.1	27.2	< 10 U
MW-46R	9/23/2004	142	21.2	< 10 U
MW-46R	4/6/2005	210	28.4	< 10 U
MW-46R	9/28/2005	222	15.6	< 10 U
MW-46R	3/16/2006	111	6.37	< 10 U
MW-46R	4/6/2006	300	< 5 U	< 10 U
MW-46R	10/11/2006	450	8	< 10 U
MW-46R	4/17/2007	440	12.5	< 10 U
MW-46R	9/18/2007	420	9	< 10 U
MW-46R	4/29/2008	430	8	< 10 U
MW-46R	12/9/2008	310	19	< 5 U
MW-46R	4/25/2009	460	11	< 5 U
MW-46R	5/27/2009	< 5 U	< 5 U	< 5 U
MW-46R	10/27/2009	390	12	< 5 U
MW-46R	12/21/2009	410	10	< 1.6 U
MW-46R	5/11/2010	610	13	< 5 U
MW-46R	11/5/2010	650	12	< 5 U
MW-46R	3/7/2011	670	14	< 0.85 U
MW-46R	3/22/2011	680	11	< 5 U
MW-46R	5/23/2011	610	13	NT
MW-46R	10/26/2011	460	10	< 5 U
MW-46R	4/18/2012	680	14	< 5 U
MW-46R	10/20/2012	410	7.9	0.44 J
MW-46R	4/23/2013	470	7.6	0.91 J
MW-46R	10/18/2013	410	11	< 0.11 U
MW-46R	3/7/2014	469	12.8	0.46 J
MW-46R	5/14/2014	471	12.8	0.76 J
MW-46R	7/29/2014	472	13.7	0.64 J
MW-46R	10/16/2014	373	25.2	< 0.50 U
MW-46R	10/16/2014	410	24.6	< 0.50 U
MW-50	4/15/2004	6.51	< 5 U	< 10 U
MW-50	9/23/2004	< 5 U	< 5 U	< 10 U
MW-50	12/10/2004	< 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	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
MW-50	4/6/2005	< 5 U	< 5 U	< 10 U
MW-50	9/28/2005	< 5 U	< 5 U	< 10 U
MW-50	3/17/2006	< 5 U	< 5 U	< 10 U
MW-50	10/12/2006	< 5 U	< 5 U	< 10 U
MW-50	4/19/2007	< 5 U	< 5 U	< 10 U
MW-50	9/19/2007	< 5 U	< 5 U	< 10 U
MW-50	4/29/2008	< 5 U	< 5 U	< 10 U
MW-50	12/10/2008	< 5 U	< 5 U	< 5 U
MW-50	4/24/2009	< 5 U	< 5 U	< 5 U
MW-50	10/27/2009	< 5 U	< 5 U	< 5 U
MW-50	5/11/2010	< 5 U	< 5 U	< 5 U
MW-50	11/5/2010	< 5 U	< 5 U	< 5 U
MW-50	3/23/2011	< 5 U	< 5 U	< 5 U
MW-50	10/25/2011	< 5 U	< 5 U	< 5 U
MW-50	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-50	10/16/2013	1.6 J	< 0.56 U	< 0.11 U
MW-50	3/6/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-50	5/13/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-50	7/28/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-50	10/14/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-55	12/9/2004	< 5 U	< 5 U	< 10 U
MW-55	4/8/2005	< 5 U	< 5 U	< 10 U
MW-55	9/28/2005	< 5 U	< 5 U	< 10 U
MW-55	3/16/2006	< 5 U	< 5 U	< 10 U
MW-55	10/13/2006	2 J	< 5 U	< 10 UJ
MW-55	4/19/2007	2.6 J	< 5 U	< 10 U
MW-55	9/19/2007	5 J	< 5 U	< 10 U
MW-55	4/29/2008	< 5 U	< 5 U	< 10 U
MW-55	12/10/2008	< 5 U	< 5 U	< 5 U
MW-55	4/24/2009	< 5 U	< 5 U	< 5 U
MW-55	10/27/2009	3.6 J	< 5 U	< 5 U
MW-55	5/12/2010	4.2 J	< 5 U	< 5 U
MW-55	11/6/2010	14	< 5 U	< 5 U
MW-55	3/23/2011	5.5	< 5 U	< 5 U
MW-55	10/25/2011	7	< 5 U	< 5 U
MW-55	10/20/2012	9.2	< 0.56 U	< 0.11 U
MW-55	10/16/2013	13	< 0.56 U	< 0.11 U
MW-56	12/10/2004	90.2	< 5 U	< 10 U
MW-56	4/8/2005	88.2	< 5 U	< 10 U
MW-56	9/28/2005	207	< 5 U	< 10 U
MW-56	3/16/2006	8.7	< 5 U	< 10 U
MW-56	10/14/2006	110	2 J	< 10 UJ
MW-56	4/19/2007	< 5 U	< 5 U	< 10 U
MW-56	9/19/2007	38	< 5 U	< 10 U
MW-56	4/29/2008	4 J	< 5 U	< 10 U
MW-56	12/10/2008	93	< 5 U	< 5 U
MW-56	4/24/2009	14	< 5 U	< 5 U
MW-56	10/27/2009	8.7	< 5 U	< 5 U
MW-56	5/12/2010	230	6.4	< 5 U
MW-56	3/23/2011	71	2.6 J	< 5 U
MW-56	10/25/2011	150	11	1.9 J
MW-56	10/20/2012	470	11	< 0.11 U
MW-56	10/17/2013	590	17	< 0.11 U
MW-56	3/7/2014	618	15.3	0.15 J
MW-56	6/11/2014	307	17.6	0.16 J
MW-56	7/29/2014	516	19.3	< 0.50 U
MW-56	10/15/2014	408	12.1	< 0.50 U
MW-57	12/10/2004	207	6.72	< 10 U
MW-57	4/8/2005	282	6.83	< 10 U
MW-57	9/28/2005	96	< 5 U	< 10 U
MW-57	3/16/2006	254	7.56	< 10 U
MW-57	10/13/2006	64	< 5 U	< 10 UJ
MW-57	4/19/2007	201	3.77 J	< 10 U
MW-57	9/20/2007	250	5 J	< 10 U
MW-57	4/30/2008	14	< 5 U	< 10 U
MW-57	12/10/2008	130	7.4	< 5 U
MW-57	4/24/2009	96	4.2 J	< 5 U
MW-57	10/27/2009	100	2.6 J	< 5 U
MW-57	5/12/2010	210	6	< 5 U
MW-57	3/23/2011	110	2.3 J	< 5 U
MW-57	10/25/2011	59	2 J	< 5 U
MW-57	10/20/2012	120	5.1	< 0.11 U
MW-57	10/17/2013	210	7.4	< 0.11 U
MW-57	3/7/2014	134	3.0 J	0.14 J
MW-57	6/11/2014	167	4.4 J	< 0.13 U
MW-57	7/29/2014	308	8.2	< 0.50 U
MW-57	10/15/2014	172	4.2 J	< 0.50 U
MW-58	12/9/2004	526	14.5	< 10 U

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

Well ID	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
MW-58	4/7/2005	809	18.8	< 10 U
MW-58	9/28/2005	486	10.9	< 10 U
MW-58	3/16/2006	421	8.66	< 10 U
MW-58	10/13/2006	620	14	< 10 UJ
MW-58	4/19/2007	784	30.7	< 25 U
MW-58	4/19/2007	717	9.54 J	< 25 U
MW-58	9/19/2007	650	17	< 10 U
MW-58	9/19/2007	640	16	< 10 U
MW-58	4/30/2008	630	15	< 10 U
MW-58	4/30/2008	580	14	< 10 U
MW-58	12/11/2008	530	12	< 5 U
MW-58	12/11/2008	510	13	< 5 U
MW-58	4/25/2009	590	14	< 5 U
MW-58	4/25/2009	580	15	< 5 U
MW-58	10/28/2009	480	11	< 5 U
MW-58	10/28/2009	480	11	< 5 U
MW-58	5/12/2010	660	14	< 5 U
MW-58	11/6/2010	560	11	< 5 U
MW-58	11/6/2010	580	12	< 5 U
MW-58	3/24/2011	710	12	< 5 U
MW-58	3/24/2011	700	14	1.1 J
MW-58	10/20/2012	440	18	0.84 J
MW-58	10/17/2013	410	13	1.5 J
MW-58	10/17/2013	420	12	1.1 J
MW-58	3/7/2014	293	22.3	0.93 J
MW-58	5/12/2014	397	12.1	0.72 J
MW-58	7/29/2014	399	12.7	0.76 J
MW-58	10/15/2014	360	10.8	0.68 J
MW-60	4/1/2005	< 5 U	< 5 U	< 10 U
MW-60	9/30/2005	< 5 U	< 5 U	< 10 U
MW-60	3/17/2006	< 5 U	< 5 U	< 10 U
MW-60	10/12/2006	< 5 U	< 5 U	< 10 U
MW-60	4/19/2007	< 5 U	< 5 U	< 10 U
MW-60	9/19/2007	< 5 U	< 5 U	< 10 U
MW-60	4/29/2008	< 5 U	< 5 U	< 10 U
MW-60	12/10/2008	< 5 U	< 5 U	< 5 U
MW-60	4/24/2009	< 5 U	< 5 U	< 5 U
MW-60	10/27/2009	< 5 U	< 5 U	< 5 U
MW-60	5/11/2010	< 5 U	< 5 U	< 5 U
MW-60	11/4/2010	< 5 U	< 5 U	< 5 U
MW-60	3/23/2011	< 5 U	< 5 U	< 5 U
MW-60	10/25/2011	< 5 U	< 5 U	< 5 U
MW-60	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-60	10/15/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-60	3/6/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-60	5/13/2014	0.21 J	< 0.080 U	< 0.13 U
MW-60	7/28/2014	1.0 J	< 0.50 U	< 0.50 U
MW-60	10/14/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-61	4/1/2005	< 5 U	< 5 U	< 10 U
MW-61	4/1/2005	< 5 U	< 5 U	< 10 U
MW-61	9/30/2005	< 5 U	< 5 U	< 10 U
MW-61	3/17/2006	< 5 U	< 5 U	< 10 U
MW-61	10/12/2006	< 5 U	< 5 U	< 10 U
MW-61	4/19/2007	< 5 U	< 5 U	< 10 U
MW-61	9/19/2007	< 5 U	< 5 U	< 10 U
MW-61	4/29/2008	< 5 U	< 5 U	< 10 U
MW-61	12/10/2008	< 5 U	< 5 U	< 5 U
MW-61	4/24/2009	4 J	< 5 U	< 5 U
MW-61	10/27/2009	< 5 U	< 5 U	< 5 U
MW-61	5/11/2010	< 5 U	< 5 U	< 5 U
MW-61	11/4/2010	< 5 U	< 5 U	< 5 U
MW-61	3/23/2011	1.8 J	< 5 U	< 5 U
MW-61	10/25/2011	< 5 U	< 5 U	< 5 U
MW-61	10/17/2012	2.4 J	< 0.56 U	< 0.11 U
MW-61	10/16/2013	4.0 J	< 0.56 U	< 0.11 U
MW-61	3/6/2014	4.7 J	< 0.080 U	< 0.13 U
MW-61	5/13/2014	6.6	< 0.080 U	< 0.13 U
MW-61	7/28/2014	8.1	< 0.50 U	< 0.50 U
MW-61	10/14/2014	7.9	< 0.50 U	< 0.50 U
MW-62	4/1/2005	< 5 U	< 5 U	< 10 U
MW-62	9/30/2005	< 5 U	< 5 U	< 10 U
MW-62	3/16/2006	< 5 U	< 5 U	< 10 U
MW-62	10/12/2006	< 5 U	< 5 U	< 10 U
MW-62	4/19/2007	< 5 U	< 5 U	< 10 U
MW-62	9/19/2007	< 5 U	< 5 U	< 10 U
MW-62	4/29/2008	< 5 U	< 5 U	< 10 U
MW-62	12/10/2008	< 5 U	< 5 U	< 5 U
MW-62	4/24/2009	< 5 U	< 5 U	< 5 U

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

Well ID	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
MW-62	10/27/2009	< 5 U	< 5 U	< 5 U
MW-62	5/11/2010	< 5 U	< 5 U	< 5 U
MW-62	3/23/2011	< 5 U	< 5 U	< 5 U
MW-62	10/25/2011	1.9 J	< 5 U	< 5 U
MW-62	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-62	10/17/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-62	3/7/2014	0.18 J	< 0.080 U	< 0.13 U
MW-62	5/14/2014	0.62 J	< 0.080 U	< 0.13 U
MW-62	7/29/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-62	10/14/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-63	4/1/2005	8.14	< 5 U	< 10 U
MW-63	9/30/2005	< 5 U	< 5 U	< 10 U
MW-63	3/16/2006	9.76	< 5 U	< 10 U
MW-63	4/6/2006	11.6	< 5 U	< 10 U
MW-63	10/12/2006	4 J	< 5 U	< 10 U
MW-63	4/19/2007	4.08 J	< 5 U	< 10 U
MW-63	9/19/2007	8	< 5 U	< 10 U
MW-63	4/30/2008	3 J	< 5 U	< 10 U
MW-63	12/10/2008	< 5 U	< 5 U	< 5 U
MW-63	4/24/2009	4.3 J	< 5 U	< 5 U
MW-63	10/27/2009	7.7	< 5 U	< 5 U
MW-63	5/11/2010	7.6	< 5 U	< 5 U
MW-63	11/6/2010	11	< 5 U	< 5 U
MW-63	3/23/2011	12	< 5 U	< 5 U
MW-63	10/25/2011	9.8	< 5 U	< 5 U
MW-63	10/19/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-63	10/17/2013	7.5	< 0.56 U	< 0.11 U
MW-63	3/7/2014	9.4	1.3 J	< 0.13 U
MW-63	5/14/2014	12.2	0.61 J	0.13 J
MW-63	7/28/2014	8.3	0.99 J	< 0.50 U
MW-63	10/14/2014	9.4	0.98 J	< 0.50 U
MW-65	10/11/2006	470	19	< 10 U
MW-65	10/11/2006	560	18	< 10 U
MW-65	4/19/2007	1350	23.4	< 10 U
MW-65	9/20/2007	580	17	< 10 U
MW-65	4/30/2008	570	16	< 10 U
MW-65	12/11/2008	460	11	< 5 U
MW-65	4/24/2009	620	19	< 5 U
MW-65	11/7/2010	400	11	< 5 U
MW-65	3/4/2011	370	13	< 0.85 U
MW-65	10/25/2011	310	10	< 5 U
MW-65	10/20/2012	280	8.9	< 0.11 U
MW-65	10/17/2013	220	8.6	< 0.11 U
MW-65	3/8/2014	199	6.6	< 0.13 U
MW-65	5/14/2014	195	6.9	< 0.13 U
MW-65	7/30/2014	17.1	< 0.50 U	< 0.50 U
MW-65	10/14/2014	30.8	0.54 J	< 0.50 U
MW-66	4/6/2006	< 5 U	< 5 U	< 10 U
MW-66	10/12/2006	2 J	< 5 U	< 10 U
MW-66	4/18/2007	< 5 U	< 5 U	< 10 U
MW-66	9/19/2007	4 J	< 5 U	< 10 U
MW-66	4/29/2008	< 5 U	< 5 U	< 10 U
MW-66	12/10/2008	< 5 U	< 5 U	< 5 U
MW-66	4/25/2009	< 5 U	< 5 U	< 5 U
MW-66	10/28/2009	< 5 U	< 5 U	< 5 U
MW-66	5/11/2010	< 5 U	< 5 U	< 5 U
MW-66	11/3/2010	< 5 U	< 5 U	< 5 U
MW-66	3/24/2011	1.6 J	< 5 U	< 5 U
MW-66	10/26/2011	1.8 J	< 5 U	< 5 U
MW-66	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-66	10/17/2013	2.1 J	< 0.56 U	< 0.11 U
MW-66	3/7/2014	3.5 J	< 0.080 U	< 0.13 U
MW-66	5/13/2014	3.1 J	< 0.080 U	< 0.13 U
MW-66	7/28/2014	2.6 J	< 0.50 U	< 0.50 U
MW-66	10/13/2014	2.3 J	< 0.50 U	< 0.50 U
MW-67	4/6/2006	< 5 U	< 5 U	< 10 U
MW-67	10/12/2006	1 J	< 5 U	< 10 U
MW-67	4/19/2007	< 5 U	< 5 U	< 10 U
MW-67	9/18/2007	< 5 U	< 5 U	< 10 U
MW-67	4/29/2008	< 5 U	< 5 U	< 10 U
MW-67	12/10/2008	< 5 U	< 5 U	< 5 U
MW-67	4/25/2009	< 5 U	< 5 U	< 5 U
MW-67	10/28/2009	< 5 U	< 5 U	< 5 U
MW-67	5/11/2010	< 5 U	< 5 U	< 5 U
MW-67	11/3/2010	< 5 U	< 5 U	< 5 U
MW-67	3/24/2011	< 5 U	< 5 U	< 5 U
MW-67	10/26/2011	< 5 U	< 5 U	< 5 U
MW-67	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U

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

Well ID	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
MW-67	10/17/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-67	3/7/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-67	5/13/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-67	7/28/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-67	10/13/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-68	1/15/2009	< 5 U	< 5 U	< 5 U
MW-68	4/24/2009	< 5 U	< 5 U	< 5 U
MW-68	10/28/2009	< 5 U	< 5 U	< 5 U
MW-68	5/13/2010	< 5 U	< 5 U	< 5 U
MW-68	11/6/2010	9.5	< 5 U	< 5 U
MW-68	10/26/2011	< 5 U	< 5 U	< 5 U
MW-68	10/17/2012	< 1.6 U	< 0.56 U	< 0.11 U
MW-68	10/16/2013	< 1.6 U	< 0.56 U	< 0.11 U
MW-68	3/6/2014	< 0.17 U	< 0.080 U	< 0.13 U
MW-68	5/14/2014	0.49 J	< 0.080 U	< 0.13 U
MW-68	7/29/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-68	10/14/2014	< 0.50 U	< 0.50 U	< 0.50 U
RW-69	1/15/2009	170	7.1	< 5 U
RW-69	4/24/2009	62	< 5 U	< 5 U
RW-69	5/27/2009	290	10	< 5 U
RW-69	12/21/2009	200	6.3	< 1.6 U
RW-69	5/13/2010	170	8.2	< 5 U
RW-69	11/4/2010	320	9	< 5 U
RW-69	3/3/2011	200	7.1	< 0.85 U
RW-69	5/23/2011	130	3.0 J	NT
RW-69	10/26/2011	210	5.7	< 5 U
RW-69	4/18/2012	150	3.6 J	< 5 U
RW-69	10/18/2012	180	5.0	< 0.11 U
RW-69	4/23/2013	190	2.8 J	< 0.11 U
RW-69	10/16/2013	190	7.7	< 0.11 U
RW-69	3/7/2014	105	3.5 J	0.41 J
RW-69	5/13/2014	110	3.3 J	0.30 J
RW-69	7/29/2014	164	5.6	0.50 J
RW-69	10/14/2014	173	6.9	< 0.50 U
MW-70	11/4/2010	540	14	< 5 U
MW-70	3/22/2011	170	9.2	1.2 J
MW-70	10/26/2011	320	7.7	< 5 U
MW-70	4/18/2012	330	11	< 5 U
MW-70	10/18/2012	200	11	< 0.11 U
MW-70	4/23/2013	180	3.6 J	0.32 J
MW-70	10/16/2013	270	7.2	0.30 J
MW-71	10/28/2009	190	6.3	< 5 U
MW-71	5/13/2010	160	7.4	< 5 U
MW-71	11/4/2010	250	7.2	< 5 U
MW-71	3/22/2011	76	1.6 J	< 5 U
MW-71	10/26/2011	130	2.7 J	< 5 U
MW-71	4/18/2012	160	5.3	< 5 U
MW-71	10/20/2012	210	7.3	< 0.11 U
MW-71	4/23/2013	220	4.8 J	0.23 J
MW-71	10/16/2013	160	6.1	0.57 J
MW-71	3/7/2014	166	5.8	0.19 J
MW-71	5/13/2014	164	5.3	0.33 J
MW-71	7/29/2014	181	6.4	< 0.50 U
MW-71	10/14/2014	185	6.0	< 0.50 U
IW-72	1/16/2009	27	< 5 U	< 5 U
IW-72	4/23/2009	40	< 5 U	< 5 U
IW-72	5/8/2009	40	< 5 U	< 5 U
IW-72	3/3/2011	3.1 J	< 0.56 U	< 0.85 U
IW-72	5/19/2011	< 1.6 U	< 0.56 U	NT
IW-72	10/24/2011	< 5 U	< 5 U	< 5 U
IW-72	4/17/2012	3.8 J	< 5 U	< 5 U
IW-72	10/19/2012	< 1.6 U	< 0.56 U	< 0.11 U
IW-72	4/24/2013	< 1.6 U	< 0.56 U	< 0.11 U
IW-72	10/15/2013	< 1.6 U	< 0.56 U	< 0.11 U
IW-72	3/6/2014	< 0.17 U	< 0.080 U	< 0.13 U
IW-72	5/12/2014	< 0.17 U	< 0.080 U	< 0.13 U
IW-72	7/29/2014	< 0.50 U	< 0.50 U	< 0.50 U
IW-72	10/13/2014	< 0.50 U	< 0.50 U	< 0.50 U
IW-73	4/23/2009	400	16	< 5 U
IW-73	5/19/2011	160	3.6 J	NT
IW-73	10/25/2011	250	4.9 J	< 5 U
IW-73	4/17/2012	180	5.8	< 5 U
IW-73	10/20/2012	170	7.0	< 0.11 U
IW-73	4/24/2013	200	6.5	< 0.11 U
IW-73	4/24/2013	180	6.4	< 0.11 U
IW-73	10/15/2013	140	47	6.3
IW-73	3/7/2014	183	20.9	4.6
IW-73	5/14/2014	31.9	0.81 J	< 0.13 U

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

Well ID	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
IW-73	7/29/2014	138	24.3	26.1
IW-73	10/14/2014	8.5	0.84 J	1.1 J
IW-74	4/23/2009	260	8.1	< 5 U
IW-74	5/19/2011	74	< 0.56 U	NT
IW-74	10/25/2011	150	3.1 J	< 5 U
IW-74	4/17/2012	130	2.4 J	< 5 U
IW-74	10/20/2012	160	3.4 J	< 0.11 U
IW-74	4/24/2013	160	4.8 J	< 0.11 U
IW-74	10/15/2013	190	5.7	< 0.11 U
IW-74	3/7/2014	135	4.3 J	1.5 J
IW-74	3/7/2014	151	4.5 J	2.2
IW-74	5/14/2014	169	4.3 J	0.80 J
IW-74	7/29/2014	177	5.8	0.91 J
IW-74	10/14/2014	143	3.3 J	< 0.50 U
IW-74	10/14/2014	144	3.3 J	< 0.50 U
IW-75	1/16/2009	140	2.4 J	< 5 U
IW-75	10/25/2011	< 5 U	< 5 U	< 5 U
IW-75	4/17/2012	2.9 J	< 5 U	< 5 U
IW-75	10/18/2012	< 1.6 U	< 0.56 U	< 0.11 U
IW-75	10/15/2013	< 1.6 U	< 0.56 U	< 0.11 U
IW-76	4/23/2009	730	28	< 5 U
IW-76	5/7/2009	460	28	< 5 U
IW-76	3/4/2011	380	11	< 0.85 U
IW-76	5/23/2011	460	12	NT
IW-76	10/25/2011	130	2.2 J	< 5 U
IW-76	4/17/2012	400	8.9	< 5 U
IW-76	10/20/2012	610	16	< 0.11 U
IW-76	4/24/2013	420	13	0.39 J
IW-76	10/15/2013	450	8.7	< 0.11 U
IW-76	3/8/2014	127	1.5 J	< 0.13 U
IW-76	5/14/2014	10.3	< 0.080 U	< 0.13 U
IW-76	7/29/2014	319	2.7 J	< 0.50 U
IW-76	10/15/2014	214	6.7	< 0.50 U
IW-77	4/23/2009	570	20	< 5 U
IW-77	5/7/2009	300	17	< 5 U
IW-77	5/27/2009	250	13	< 5 U
IW-77	10/28/2009	380	13	< 5 U
IW-77	12/21/2009	250	12	< 1.6 U
IW-77	5/13/2010	260	11	< 5 U
IW-77	11/5/2010	1400	41	< 5 U
IW-77	3/4/2011	430	14	< 0.85 U
IW-77	5/23/2011	440	15	NT
IW-77	10/25/2011	1400	32	< 5 U
IW-77	4/17/2012	520	20	< 5 U
IW-77	4/17/2012	510	23	< 5 U
IW-77	10/19/2012	1000	32	0.65 J
IW-77	4/24/2013	530	21	< 0.11 U
IW-77	10/16/2013	1000	39	1.6 J
IW-77	10/16/2013	990	39	0.49 J
IW-77	3/8/2014	546	24.4	0.22 J
IW-77	5/14/2014	1460	36.0	0.66 J
IW-77	7/9/2014	1200	21.1	< 0.50 U
IW-77	7/29/2014	1540	35.2	< 0.50 U
IW-77	10/15/2014	741	15.8	< 0.50 U
IW-77	10/23/2014	554	11.9	< 0.50 U
IW-78	10/25/2011	350	12	< 5 U
IW-78	4/18/2012	120	2.3 J	< 5 U
IW-78	10/20/2012	310	8.7	< 0.11 U
IW-78	4/24/2013	7.0	< 0.56 U	< 0.11 U
IW-78	10/17/2013	190	4.6 J	< 0.11 U
IW-78	5/28/2014	255	6.2	< 0.13 U
IW-78	9/11/2014	39.6	1.2 J	< 0.50 U
IW-79	10/25/2011	570	13	< 5 U
IW-79	4/17/2012	430	2.1 J	< 5 U
IW-79	10/20/2012	670	20	0.45 J
IW-79	10/20/2012	480	16	< 0.11 U
IW-79	4/24/2013	420	9.0	< 0.11 U
IW-79	10/17/2013	440	12	< 0.11 U
IW-79	5/28/2014	426	6.9	< 0.13 U
IW-79	9/11/2014	105	1.8 J	< 0.50 U
IW-80	4/23/2009	170	4 J	< 5 U
IW-80	5/7/2009	69	< 5 U	< 5 U
IW-80	5/19/2011	27	< 0.56 U	NT
IW-80	10/25/2011	9.7	< 5 U	< 5 U
IW-80	4/17/2012	55	2.2 J	< 5 U
IW-80	10/19/2012	48	< 0.56 U	< 0.11 U
IW-80	4/24/2013	40	< 0.56 U	< 0.11 U

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

Well ID	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
IW-80	10/17/2013	58	2.4 J	< 0.11 U
IW-80	10/17/2013	62	2.4 J	< 0.11 U
IW-80	3/8/2014	79.1 J	2.7 J	< 0.13 U
IW-80	5/13/2014	24.2	< 0.080 U	< 0.13 U
IW-80	7/30/2014	25.6	0.85 J	< 0.50 U
IW-80	10/14/2014	11.8	< 0.50 U	< 0.50 U
MW-81	5/29/2014	512	14.3	0.21 J
MW-81	7/9/2014	518	11.4	< 0.50 U
MW-81	9/11/2014	463	13.5	< 0.50 U
MW-82	5/28/2014	285	4.8 J	0.14 J
MW-82	7/9/2014	48.2	1.2 J	< 0.50 U
MW-82	9/11/2014	50.0	1.1 J	< 0.50 U
MW-83	5/23/2014	470	8.3	< 0.13 U
MW-83	9/12/2014	213	4.9 J	< 0.50 U
MW-83	10/23/2014	210	5.2	< 0.50 U
MW-84	5/27/2014	214	4.6 J	0.16 J
MW-84	9/12/2014	0.93 J	< 0.50 U	< 0.50 U
MW-84	10/23/2014	0.68 J	< 0.50 U	< 0.50 U
MW-85	5/29/2014	1970	99.4	23.1
MW-85	7/8/2014	3780	133	3.9
MW-85	9/11/2014	5820	226 J	35.3
MW-85	12/5/2014	27700	280	7.7
MW-86	5/29/2014	533000	1220 J	341 J
MW-86	9/11/2014	129000	91.6	4.1
MW-86	12/5/2014	169000	290 E	24.7
MW-87	6/25/2014	564	41.8	< 0.50 U
MW-87	10/16/2014	594	47.8	< 0.50 U
MW-88	6/24/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-88	10/16/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-89	6/24/2014	19.5	< 0.50 U	< 0.50 U
MW-89	10/15/2014	11.3	< 0.50 U	< 0.50 U
MW-90	6/25/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-90	10/16/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-91	6/25/2014	234	21.7	< 0.50 U
MW-91	10/16/2014	319	28.8	< 0.50 U
MW-92	10/22/2014	2160	16.0	7.2
MW-92	12/4/2014	2200	23.4	10.3
MW-93	10/22/2014	18200	145	5.0
MW-93	12/4/2014	14600	85.7	2.5
MW-94	10/22/2014	11100	309 J	2.5
MW-94	12/4/2014	9570	250 J	3.0
MW-95	10/22/2014	22300	151	25.7
MW-95	12/4/2014	20900	159	29.9
MW-96	10/22/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-97	10/22/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-98	10/29/2014	< 0.50 U	< 0.50 U	< 0.50 U
MW-99	10/22/2014	< 0.50 U	< 0.50 U	< 0.50 U
IW-101	3/23/2014	314	7.5	0.21 J
IW-101	4/30/2014	794	18.9	< 0.13 U
IW-101	5/23/2014	509	11.2	< 0.13 U
IW-101	7/8/2014	150	4.5 J	< 0.50 U
IW-101	9/12/2014	139	3.4 J	< 0.50 U
IW-102	3/23/2014	685	14.6	0.45 J
IW-102	4/30/2014	239	5.4	< 0.13 U
IW-103	3/23/2014	692	13.1	0.76 J
IW-103	4/30/2014	729	22.8	0.83 J
IW-104	3/23/2014	637	13.5	0.69 J
IW-104	4/30/2014	527	12.6	< 0.13 U
IW-105	3/23/2014	901	14.4	0.54 J
IW-105	4/30/2014	185	4.9 J	< 0.13 U
IW-106	3/23/2014	198	4.2 J	< 2 U
IW-106	4/30/2014	163	6.8	< 0.13 U
IW-106	5/23/2014	132	2.6 J	< 0.13 U
IW-107	3/23/2014	198	4.3 J	0.14 J
IW-107	4/30/2014	110	3.3 J	< 0.13 U
IW-108	3/23/2014	1280	27.8	0.83 J
IW-108	4/29/2014	72.1	4.1 J	< 0.13 U
IW-108	5/23/2014	59.0	1.5 J	< 0.13 U
IW-109	3/23/2014	362	7.4	0.23 J
IW-109	4/29/2014	91.2	2.5 J	< 0.13 U
IW-109	5/23/2014	110	1.9 J	< 0.13 U
IW-110	3/23/2014	464	9.8	0.5 J
IW-110	4/16/2014	397	9.4	0.17 J
IW-110	4/30/2014	268	8.2	0.33 J
IW-111	3/23/2014	704	14	0.63 J
IW-111	4/29/2014	260	6.4	< 0.13 U
IW-112	3/23/2014	219	4.9 J	0.23 J

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

Well ID	Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
IW-112	4/16/2014	200	4.8 J	< 0.13 U
IW-112	4/30/2014	104	3.8 J	< 0.13 U
IW-113	3/24/2014	510	11.1	0.43 J
IW-113	4/14/2014	435	8.7	< 0.13 U
IW-114	3/24/2014	397	9.7	0.25 J
IW-114	4/14/2014	336	8.1	< 0.13 U
IW-115	3/24/2014	622	14	0.25 J
IW-115	4/7/2014	455	9.1 J	< 1.3 U
IW-115	4/14/2014	449	9.3	< 0.13 U
IW-115	5/28/2014	504	11.2	0.27 J
IW-115	7/9/2014	352	7.4	< 0.50 U
IW-115	9/11/2014	355	8.0	< 0.50 U
IW-116	3/24/2014	486	10.9	0.33 J
IW-116	4/15/2014	546	10.8	0.34 J
IW-117	3/24/2014	384	9.1	0.23 J
IW-117	4/15/2014	384	9.9	< 0.13 U
IW-118	3/24/2014	496	11.6	0.34 J
IW-118	4/15/2014	395	9.7	< 0.13 U
IW-118	5/28/2014	437	9.3	< 0.13 U
IW-119	3/24/2014	524	11.5	0.33 J
IW-119	4/7/2014	478	9.1 J	< 1.3 U
IW-119	4/15/2014	509	11.3	< 0.13 U
IW-120	3/24/2014	289	7.9	0.14 J
IW-120	4/15/2014	390	10.2	< 0.13 U
IW-121	3/24/2014	402	8.9 J	< 10 U
IW-121	4/15/2014	445	11.7	< 0.13 U
IW-122	3/24/2014	473	11.5	0.29 J
IW-122	4/15/2014	384	10.0	< 0.13 U
IW-123	3/24/2014	532	12.2	0.40 J
IW-123	4/7/2014	539	8.8 J	< 1.3 U
IW-123	4/15/2014	488	10.0	< 0.13 U
IW-124	3/24/2014	455	6.8 J	< 10 U
IW-124	4/15/2014	448	8.7	0.26 J
IW-125	3/25/2014	2140	207	3.1
IW-125	5/29/2014	17.1	2.9 J	< 0.13 U
IW-125	9/11/2014	7.3	1.0 J	< 0.50 U
IW-126	3/25/2014	2020	197	10.4
IW-126	5/29/2014	787	59.1	< 0.13 U
IW-127	3/24/2014	3700	219 J	7.6
IW-127	5/29/2014	639	34.7	< 0.13 U
IW-127	9/11/2014	1020	38.5	2.6
IW-127	12/4/2014	182	7.2	< 0.50 U
IW-128	3/25/2014	2980	178	11.7
IW-128	4/29/2014	1250	68.4	4.9
IW-128	5/29/2014	1190	62.7	< 0.13 U
IW-129	3/25/2014	2540	192	< 0.13 U
IW-129	5/29/2014	25.8	1.8 J	< 0.13 U
IW-130	3/23/2014	358	7.6 J	< 10 U
IW-130	5/23/2014	75.5	0.78 J	< 0.13 U
IW-131	3/24/2014	526	11.5	0.35 J
IW-131	4/30/2014	318	8.5	0.31 J
IW-131	5/28/2014	443	8.8	0.30 J
IW-132	10/23/2014	714	3.5 J	< 0.50 U
IW-135	10/23/2014	3840	43.3	2.0
IW-141	10/23/2014	368000	< 1000 U	82.6
IW-141	12/5/2014	46300	232 E	31.0
IW-143	10/23/2014	13100	44.8	2.5
IW-147	10/23/2014	199000	1640 J	< 1000 U
IW-147	12/5/2014	91600	1420 J	176
IW-152	10/22/2014	17600	224 J	8.2
IW-152	12/4/2014	< 0.50 U	< 0.50 U	< 0.50 U
IW-153	10/23/2014	293	85.3	12.3
IW-153	12/4/2014	1.6 J	< 0.50 U	< 0.50 U
IW-155	10/23/2014	14600	36.4	5.8
IW-157	10/23/2014	74200	712 J	195
IW-157	12/5/2014	31700	391 E	66.8
IW-169	10/22/2014	163	1.7 J	< 0.50 U
MW-172	10/22/2014	3010	21.4	2.4
MW-172	12/5/2014	1810	15.6	1.3 J

Notes:
E,J - Estimated Concentration
F - MS/MSD or RPD out of laboratory control limits
ND - Result is not detected at the associated method quantitation limit
NT - Analyte not tested
U - Not Detected (MDL included where available, RDL included for older analyses)
M1 - Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample

TABLE 8
SUMMARY OF STATISTICAL TEMPORAL TREND ANALYSIS (2009 - 2018)
Whirlpool Facility - Fort Smith, Arkansas

Well ID	Start Date	End Date	Number of Samples	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
Northern Plume Wells						
TMW-10	10/8/2015	4/18/2018	7	Decreasing	Stable	<PQL
TMW-11	10/8/2015	4/17/2018	7	Decreasing	Stable	<PQL
MW-39R	4/24/2009	4/18/2018	22	No Trend	ND	ND
MW-40R	4/24/2009	4/17/2018	25	<PQL	<PQL	ND
MW-46R	4/25/2009	4/18/2018	28	Stable	Stable	<PQL
MW-50R	4/24/2009	4/17/2018	22	Increasing	ND	ND
MW-55R	4/24/2009	4/18/2018	16	Stable	<PQL	<PQL
MW-60R	4/24/2009	4/17/2018	22	Increasing	ND	ND
MW-61R	4/24/2009	4/17/2018	22	Increasing	Increasing	ND
MW-62R	4/24/2009	4/17/2018	20	No Trend	ND	ND
MW-63R	4/24/2009	4/17/2018	22	Decreasing	No Trend	<PQL
MW-68	1/15/2009	4/17/2018	22	No Trend	ND	ND
RW-69	1/15/2009	4/18/2018	27	Decreasing	Stable	<PQL
IW-73	4/23/2009	4/18/2018	21	Decreasing	Decreasing	No Trend
IW-77	4/23/2009	4/18/2018	30	Decreasing	Decreasing	<PQL
MW-84	5/27/2014	4/18/2018	13	Decreasing	No Trend	<PQL
MW-194	8/5/2016	4/17/2018	6	Stable	Stable	ND
MW-195	8/5/2016	4/17/2018	6	ND	ND	ND
MW-196	8/5/2016	4/17/2018	6	ND	ND	ND
Southern Plume Wells						
ITMW-5	4/27/2009	4/19/2018	14	Increasing	Stable	Increasing
ITMW-7	4/27/2009	4/19/2018	23	Decreasing	Decreasing	Increasing
ITMW-10	4/27/2009	4/19/2018	21	Increasing	Decreasing	Decreasing
ITMW-20	10/29/2009	4/18/2018	22	No Trend	ND	<PQL
ITMW-21	10/27/2009	4/19/2018	22	Decreasing	<PQL	ND
MW-26	10/29/2009	4/18/2018	22	No Trend	ND	ND
MW-29	10/29/2009	4/19/2018	20	<PQL	<PQL	ND
MW-38	10/26/2011	4/19/2018	18	Stable	Stable	Decreasing
MW-86	5/29/2014	4/19/2018	13	Decreasing	Increasing	No Trend
MW-93	10/22/2014	4/19/2018	12	Stable	Decreasing	Stable
MW-95	10/22/2014	4/19/2018	12	Stable	Increasing	Stable
MW-182	7/23/2015	4/19/2018	7	Stable	Decreasing	<PQL
MW-185	10/5/2015	4/19/2018	7	Increasing	Increasing	ND
MW-186	10/5/2015	4/19/2018	7	Increasing	Increasing	<PQL
MW-187	10/5/2015	4/18/2018	7	<PQL	<PQL	ND
MW-188	10/5/2015	4/19/2018	7	<PQL	ND	ND
MW-189	10/5/2015	4/19/2018	7	Increasing	Increasing	<PQL
MW-190	10/5/2015	4/18/2018	7	<PQL	ND	ND
MW-191	10/5/2015	4/18/2018	7	No Trend	ND	No Trend
MW-192	10/5/2015	4/18/2018	7	No Trend	ND	ND
Northeast Corner Wells						
MW-91	6/25/2014	4/19/2018	12	Increasing	Increasing	<PQL
MW-96	10/22/2014	4/19/2018	11	<PQL	ND	ND
MW-97	10/22/2014	4/19/2018	11	ND	<PQL	ND
MW-98	10/29/2014	4/18/2018	11	<PQL	<PQL	ND
MW-99	10/22/2014	4/18/2018	10	Increasing	<PQL	ND
MW-183	10/5/2015	4/18/2018	7	Stable	<PQL	ND
MW-184	10/5/2015	4/18/2018	7	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

RAMBOLL

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
	4/17/2018 14:00	459.31	7.05	452.26	17.86	1077	0.12	6.89	-125.5	>3.3	930 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
	4/18/2018 13:10	460.75	7.30	453.45	18.36	864	0.11	6.33	155.8	0.03	930 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
	4/17/2018 12:50	460.20	9.58	450.62	19.29	1,332	0.06	7.16	-130.9	>3.3	930 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 - April 2018)
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	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	MW-61R-201804	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	60268487008	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	4/17/2018	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			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)	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)	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)	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)	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)	0.80 (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)	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)	0.46 J (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)	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)	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)	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)	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)	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)	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)	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)	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)	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)	1.9 (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)	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)	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)	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)	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)	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)	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)	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)	0.93 J (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)	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)	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)	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)	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)	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)	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)	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)	4.0 (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)	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)	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)	NM	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	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	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	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	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	NM	154000 (20000)	NM
Butyric acid	NE	U (5000)	U (5000)	280000 (100000)	NM	NM	U (5000)	U (5000)	U (5000)	NM	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	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)	NM	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	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	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)	NM	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	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	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	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)	NM	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)	NM	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)	NM	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	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	NM
Propionic Acid	NE	U (5000)	U (5000)	140000 (100000)	NM	NM	76000 (5000)	U (5000)	U (5000)	NM	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	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	NM
Sulfate	NE	14800 (1000)	11000 (1000)	79000 (5000)	NM	NM	7400 (1000)	12100 (1000)	7500 (1000)	7900 (1000)	NM	8900(1000)	NM	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	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)	NM	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)	NM	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)	NM	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	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	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	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	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	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
H1 Analysis conducted outside the EPA method hold time

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

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TABLE 10
GROUNDWATER SAMPLE ANALYTICAL RESULTS ISCR PILOT WELLS (July 2015 - April 2018)
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-10	TMW-11	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-10-201804	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	TMW-11-201804
Lab Sample ID(s)		190520001, 190770017, 60218387004, 002NE037	60231848024, 209510003, 037NK07	60243014026	60243014015	60256365032	60268532020	167200001, 60203213001	60204791001	60206665002	175080002, 60208468002	179040011, 021NA010	190510020, 190770018, 60218288007, 002NE032	60231848015, 209510007, 037NK03	60243014009	60243014009	60268487011
Sample Date		5/4/2016	11/08/2016	4/27/2017	4/27/2017	10/24/2017	4/18/2018	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	4/17/2018
Sample Method		Low Flow	Low Flow	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)	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)	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)	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)	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)	1.4 J (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)	0.42 (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)	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)	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)	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)	0.48 J (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)	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)	U (0.080)	0.46 J (0.080)	0.31 J (0.080)	U (0.080)	U (0.080)	NM	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)	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 (0.12)	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)	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)	5.2 (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)	1.2 (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)	0.64 J (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	0.22 J (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)	U (0.16)	NM	U (0.16)	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)	U (0.14)	NM	U (0.14)	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)	U (0.14)	NM	U (0.14)	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)	U (0.12)	NM	U (0.12)	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)	U (0.18)	NM	U (0.18)	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)	U (1.2)	NM	U (1.2)	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)	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)	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)	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)	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)	U (0.12)	NM	U (0.12)	U (0.12)
1,1,2,2-Tetrachloroethene	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)	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)	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)	0.43 J (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	123 (0.17)	95.4 (0.17)	96.2 (0.17)	102 (0.17)	89.5 (0.17)	85.0 (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)	0.67 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)	0.46 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)	0.59 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)	U (0.42)	NM	U (0.42)	U (0.42)
Metals																	
Iron	NE	2160 (50.0)	133 (50.0)	NM	NM	276,000 (50,000)	NM	5220 (50.0)	NM	NM	193000 (50.0)	20900 (50.0)	11700 (50.0)	7730 (50.0)	NM	8800 (50.0)	NM
Manganese	NE	20.6 (5.0)	NM	NM	NM	37,800 (5,000)	NM	NM	NM	NM	35900 (50.0)	4090 (5.0)	1850 (5.0)	NM	NM	NM	NM
Monitored Natural Attenuation Parameters (Laboratory)																	
Acetic acid	NE	U (5000)	NM	NM	NM	NM	NM	U (5000)	NM	NM	1600000 (25000)	18000 (5000)	U (5000)	NM	NM	NM	NM
Total Alkalinity	NE	171000 (20000)	NM	NM	NM	NM	NM	NM	NM	NM	2630000 (60000)	1750000 (40000)	967000 (20000)	NM	NM	566000 H1 (20000)	NM
Ammonia	NE	U (100)	NM	NM	NM	NM	NM	NM	NM	NM	NM	1900 (100)	6600 (100)	NM	NM	3000 H1 (100)	NM
Bicarbonate Alkalinity	NE	171000 (20000)	NM	NM	NM	NM	NM	NM	NM	NM	2630000 (60000)	1750000 (40000)	967000 (20000)	NM	NM	566000 H1 (20000)	NM
Butyric acid	NE	U (5000)	NM	NM	NM	NM	NM	U (5000)	NM	NM	600000 (25000)	U (5000)	U (5000)	NM	NM	NM	NM
Carbon Dioxide	NE	287000 (20000)	NM	NM	NM	NM	NM	NM	NM	NM	3270000 (20000)	1770000 (20000)	982000 (20000)	NM	NM	NM	NM
Organic Carbon (total)	NE	510 J (1000)	750 J (1000)	NM	NM	260 J (1,000)	NM	U (1000)	NM	NM	NM	306000 (100000)	46200 (10000)	29400 (3000)	NM	3700 (1000)	NM
Organic Carbon (dissolved)	NE	570 (1000)	NM	NM	NM	NM	NM	U (1000)	NM	NM	NM	284000 (50000)	22500 (2000)	NM	NM	NM	NM
Carbonate Alkalinity	NE	U (20000)	NM	NM	NM	NM	NM	NM	NM	NM	U (60000)	U (40000)	U (20000)	NM	NM	U (20000)	NM
Chloride	NE	154000 (20000)	NM	NM	NM	167,000 (10,000)	NM	149000 (10000)	NM	NM	NM	131000 (20000)	145000 (10000)	NM	NM	NM	NM
2-Chloroethanol	NE	U (10000)	NM	NM	NM	NM	NM	U (10000)	NM	NM	NM	NM	U (10000)	NM	NM	NM	NM
Iron, Ferric	NE	2000 (200)	U (200)	NM	NM	NM	NM	5200 (200)	NM	NM	NM	17900 (200)	11000 (200)	4400 (200)	NM	NM	NM
Lactic Acid	NE	U (10000)	NM	NM	NM	NM	NM	U (10000)	NM	NM	160000 (10000)	64000 (10000)	U (10000)	NM	NM	NM	NM
Nitrogen	NE	140 (100)	2100 (100)	NM	NM	U (100)	NM	U (100)	NM	NM	NM	U (100)	U (100)	U (100)	NM	110 H1 (100)	NM
Nitrogen, Nitrate (As N)	NE	140 (100)	1100 (100)	NM	NM	U (100)	NM	U (100)	NM	NM	U (1000)	U (100)	U (100)	U (100)	NM	U H1 (100)	NM
Nitrogen, Nitrite	NE	U (100)	970 (100)	NM	NM	U (100)	NM	U (100)	NM	NM	U (1000)	U (100)	U (100)	19 J (100)	NM	65 J H1 (100)	NM
pH [PH UNITS]	NE	6.4 (0.10)		NM	NM	NM	NM	NM	NM	NM	6.7 (0.10)	7.2 (0.10)	7.2 (0.10)	NM	NM	NM	NM
Phosphates (total)	NE	210 (30)	NM	NM	NM	NM	NM	NM	NM	NM	NM	350 (30)	1800 (30)	NM	NM	NM	NM
Propionic Acid	NE	U (5000)	NM	NM	NM	NM	NM	U (5000)	NM	NM	550000 (25000)	260000 (5000)	U (5000)	NM	NM	NM	NM
Pyruvic Acid	NE	U (5000)	NM	NM	NM	NM	NM	U (5000)	NM	NM	U (5000)	U (5000)	U (5000)	NM	NM	NM	NM
Sulfide (total)	NE	U (50)	U (50)	NM	NM	U (50)	NM	NM	NM	NM	NM	NM	U (50)	U (50)	NM	U H1 (50)	NM
Sulfate	NE	2300 (1000)	2400 (1000)	NM	NM	2,000 (1,000)	NM	3300 (1000)	NM	NM	910 J (1000)	1200 (1000)	2400 (1000)	680 J (1000)	NM	740 J H1 (1000)	NM
Gases																	
Acetylene	NE	U (0.50)	U (0.50)	NM	NM	NM	NM	NM	NM	NM	U (0.50)	U (0.50)	U (0.50)	U (0.50)	NM	NM	NM
Methane	NE	700 (0.50)	24 (0.50)	NM	NM	410 (0.02)	NM	0.57 (0.50)	NM	NM	12000 (0.50)	15000 (0.50)	17000 (0.50)	15000 (0.50)	NM	16000 (0.02)	NM
Ethane	NE	0.36 (0.10)	U (0.10)	NM	NM	U (0.007)	NM	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)	NM
Ethene	NE	0.15 (0.10)	0.25 (0.10)	NM	NM	0.54 (0.005)	NM	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)	NM
Hydrogen (H2) [nM][4]	NE	0.95 (0.60)	1.8 (0.60)	NM	NM	1.9 (0.16)	NM	NM	NM	NM	NM	NM	1.2 (0.60)	2.2 (0.60)	NM	1.7 (0.16)	NM
Molecular Analyses																	
BAV1 Vinyl Chloride Reductase [cells/mL]	NE	U (2)	0.5 (0.5)	NM	NM	U (0.6)	NM	NM	NM	NM	NM	U (8.33)	U (3.33)	26.9 (0.5)	NM	U (1)	NM
Dehalococcoides (DHC) [cells/mL]	NE	U (2)	158 (0.5)	NM	NM	555	NM	NM	NM	NM	NM	48.9 (8.33)	14.2 (3.33)	715 (0.5)	NM	100	NM
tceA Reductase [cells/mL]	NE	U (2)	14.3 (0.5)	NM	NM	537	NM	NM	NM	NM	NM	3.2 J (8.33)	U (3.33)	1.7 (0.5)	NM	396	NM
Vinyl Chloride Reductase (vrcA) [cells/mL]	NE	U (2)	10.8 (0.5)	NM	NM	786	NM	NM	NM	NM	NM	U (8.33)	U (3.33)	115 (0.5)	NM	263	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
H1 Analysis conducted outside the EPA method hold time

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

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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
930 days after injection	4/17-18/2018	4.0	85.0	0.67
	Percent Reduction	75.8%	55.3%	97.8%

Notes:

TCE = Trichloroethylene

Concentrations in micrograms per liter (µg/L)

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Figures

FILE: L:\Loop Project Files\Whirlpool Fort Smith\2018 Semi Annual M&R\mxd\2018 Semi-Annual Potentiometric Surface Map_20180430.mxd

0 150 300 450 600

Feet

1 inch = 300 feet

Notes
- Water levels measured April 17th, 2018
- Water levels in ft

MW-60R 454.55
MW-61R 452.17
MW-50R 452.97
TMW-10 453.51
MW-196 453.37
TMW-11 453.61
MW-195 456.01
TMW-23 455.31
TMW-22 457.63
TMW-21 457.62
TMW-20 456.25
MW-55R 462.52
TMW-12 459.66
TMW-29 452.30
MW-68 462.92
MW-58R 462.21
MW-57R 461.04
MW-194 457.24
MW-70 462.85
MW-56R 460.22
TMW-24 458.14
MW-71 462.84
MW-46R 462.53
TMW-14 459.24
MW-40R 462.76
RW-69 462.47
MW-63R 458.22
IW-74 462.67
IW-75 462.79
MW-97 450.73
IW-73 462.78
IW-72 462.54
MW-41R 462.62
MW-62R 458.22
IW-76 462.58
MW-81 462.75
MW-82 462.77
MW-96 451.12
MW-39R 462.84
IW-115 462.48
IW-77 462.77
MW-183 450.76
MW-98 450.77
MW-65R 462.73
IW-80 462.65
MW-34R 462.88
MW-36R 462.63
MW-35R 462.65
IW-79 462.78
MW-90 458.76
MW-26 463.57
MW-23 462.83
MW-27 462.75
MW-28 462.39
MW-89 456.47
MW-84 462.65
IW-78 462.76
MW-88 457.39
MW-184 455.82
MW-24 462.82
MW-83 462.69
ITMW-3 461.13
ITMW-17 462.59
ITMW-14 462.27
ITMW-20 463.40
ITMW-2 462.00
MW-85 462.67
ITMW-1 460.26
MW-87 457.53
MW-99 456.71
MW-25 462.85
ITMW-13 462.41
MW-86 462.59
MW-91 456.92
ITMW-21 463.17
ITMW-16 462.73
ITMW-11 462.74
MW-92 462.71
ITMW-12 462.45
MW-172 462.66
MW-37 462.74
ITMW-19 462.52
MW-38 462.74
MW-93 462.51
MW-94 462.23
ITMW-18 462.38
MW-30 462.41
ITMW-15 462.80
MW-29 463.34
MW-95 462.31
ITMW-7 461.64
ITMW-4 459.50
ITMW-5 459.53
ITMW-9 459.36
ITMW-10 459.53
MW-185 458.96
ITMW-6 459.51
TMW-27 456.68
MW-182 459.35
TMW-25 457.35
TMW-32 456.21
TMW-16 456.88
MW-190 459.40
MW-191 459.36
MW-192 459.23
TMW-26 456.39
TMW-30 456.03
MW-189 459.49
MW-186 456.42
TMW-19 459.36
MW-187 457.81
MW-188 459.29

Brazil Ave
Ferguson St
Ingersoll Ave
Boys Club Ln
Jerry Lind Rd
Jacobs Ave
Ingersoll Ave (Prop

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

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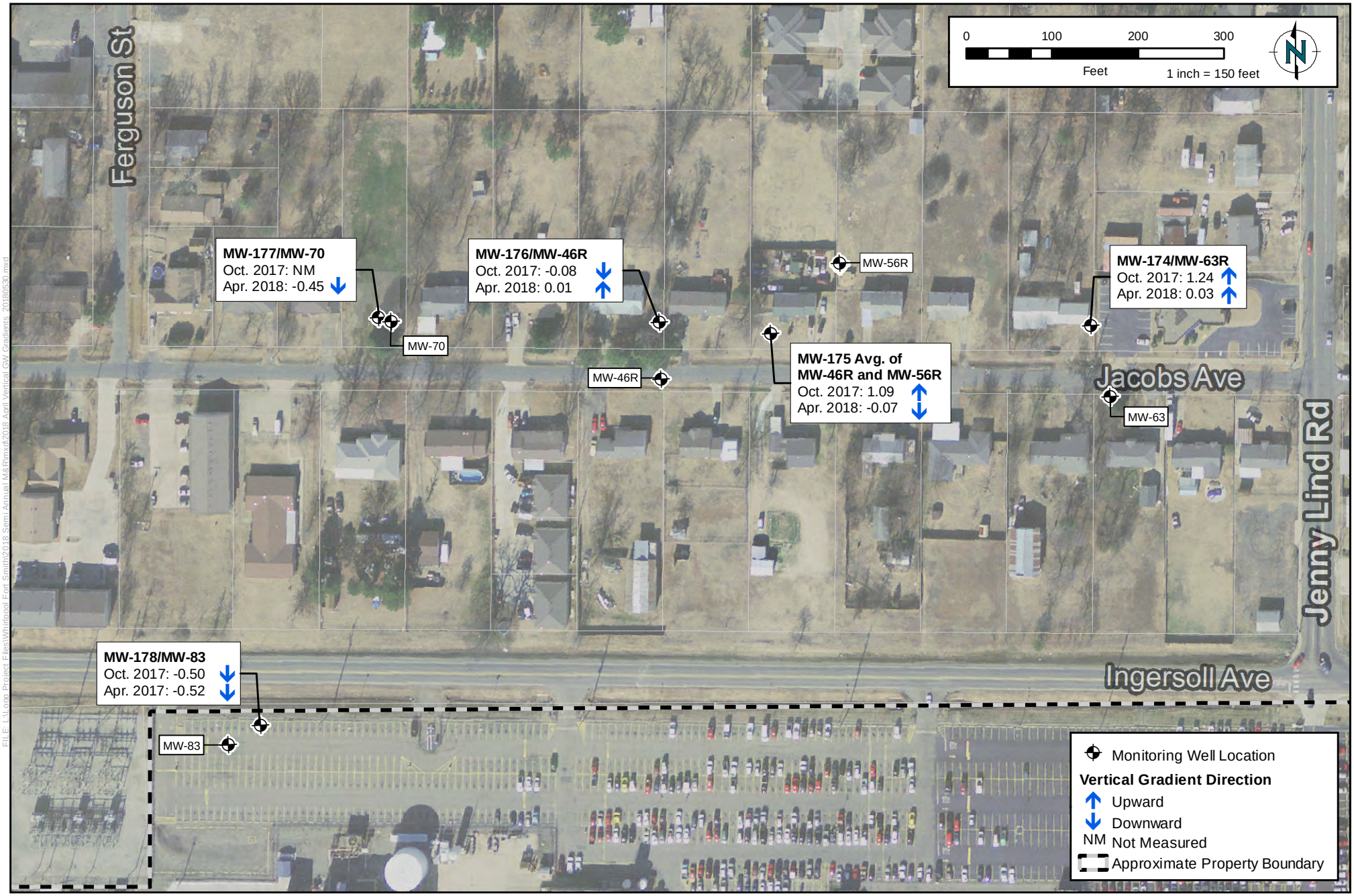
2018 SEMI-ANNUAL SAMPLING POTENTIOMETRIC SURFACE

Whirlpool Facility - Fort Smith, Arkansas

Figure 1A

DRAFTED BY: FK/WZ | DATE: 04/30/2018 | PROJECT: 1690007739



FILE: L:\Loop Project Files\Whirlpool Fort Smith\2018 Semi Annual M&R\mxd\2018 April Vertical GW Gradients_20180530.mxd

RAMBOLL

DRAFTED BY: FK/WZ | DATE: 05/30/2018

VERTICAL GROUNDWATER GRADIENTS OBSERVED IN NESTED WELLS OCTOBER 2017 / APRIL 2018

Whirlpool Facility - Fort Smith, Arkansas

Figure 1B

PROJECT: 1690007739



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DRAFTED BY: FK/WZ | DATE: 05/29/2018

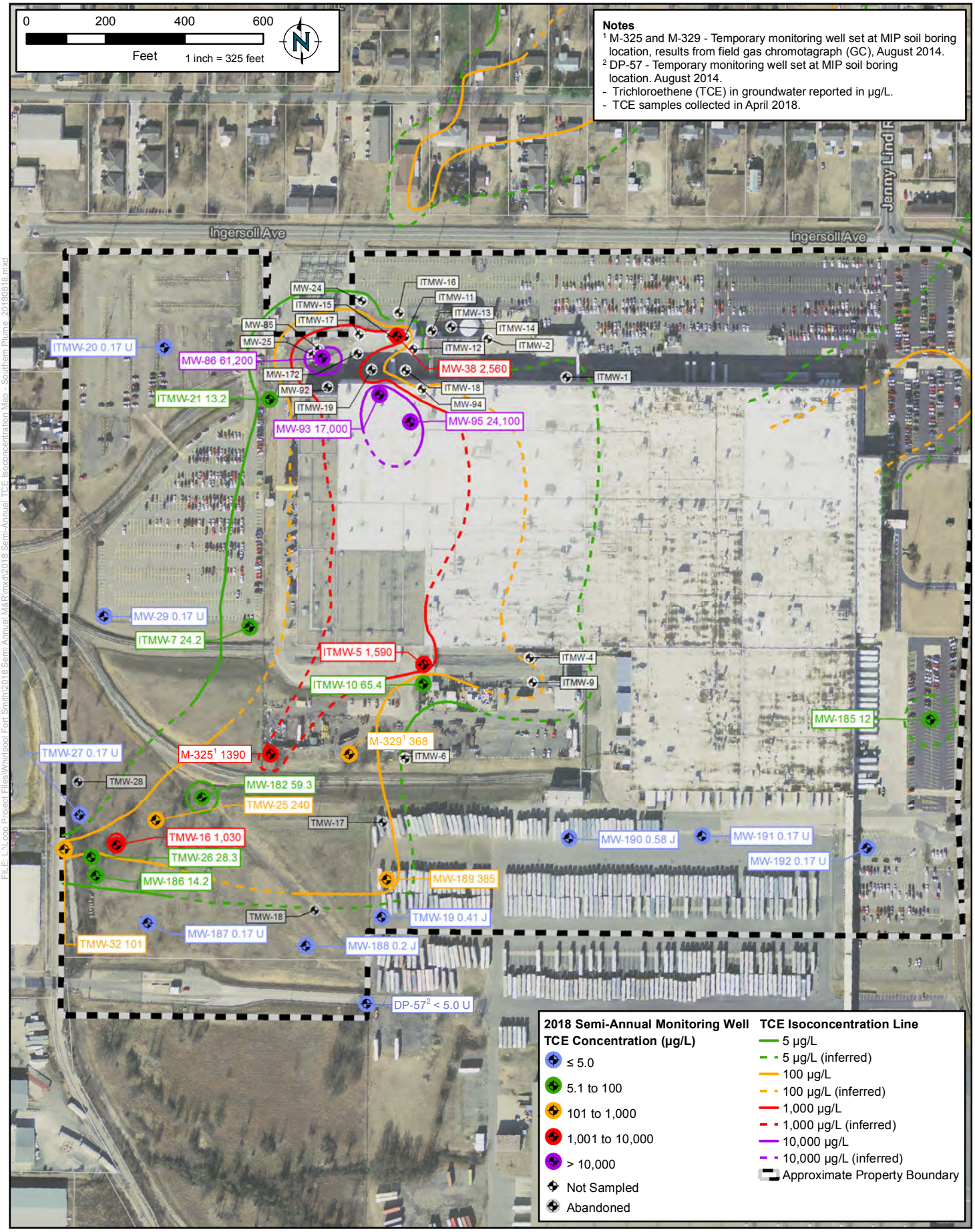
2018 SEMI-ANNUAL TCE ISOCONCENTRATION MAP NORTHERN AND NORTHEASTERN PLUMES

Whirlpool Facility - Fort Smith, Arkansas

Figure 2A

PROJECT: 1690007739

FILE: \\environcorp.int\dfs-shares\NCSA\Chicago Loop\Loop Data (L)\Loop Project Files\Whirlpool Fort Smith\2018 Semi Annual M&R\mxd\2018 Semi-Annual TCE Isoconcentration Map - N and NE Plume_20180530.mxd



RAMBOLL

DRAFTED BY: FK/WZ | DATE: 06/18/2018

2018 SEMI-ANNUAL TCE ISOCONCENTRATION MAP SOUTHERN PLUME

Whirlpool Facility - Fort Smith, Arkansas

Figure 2B

PROJECT: 1690007739

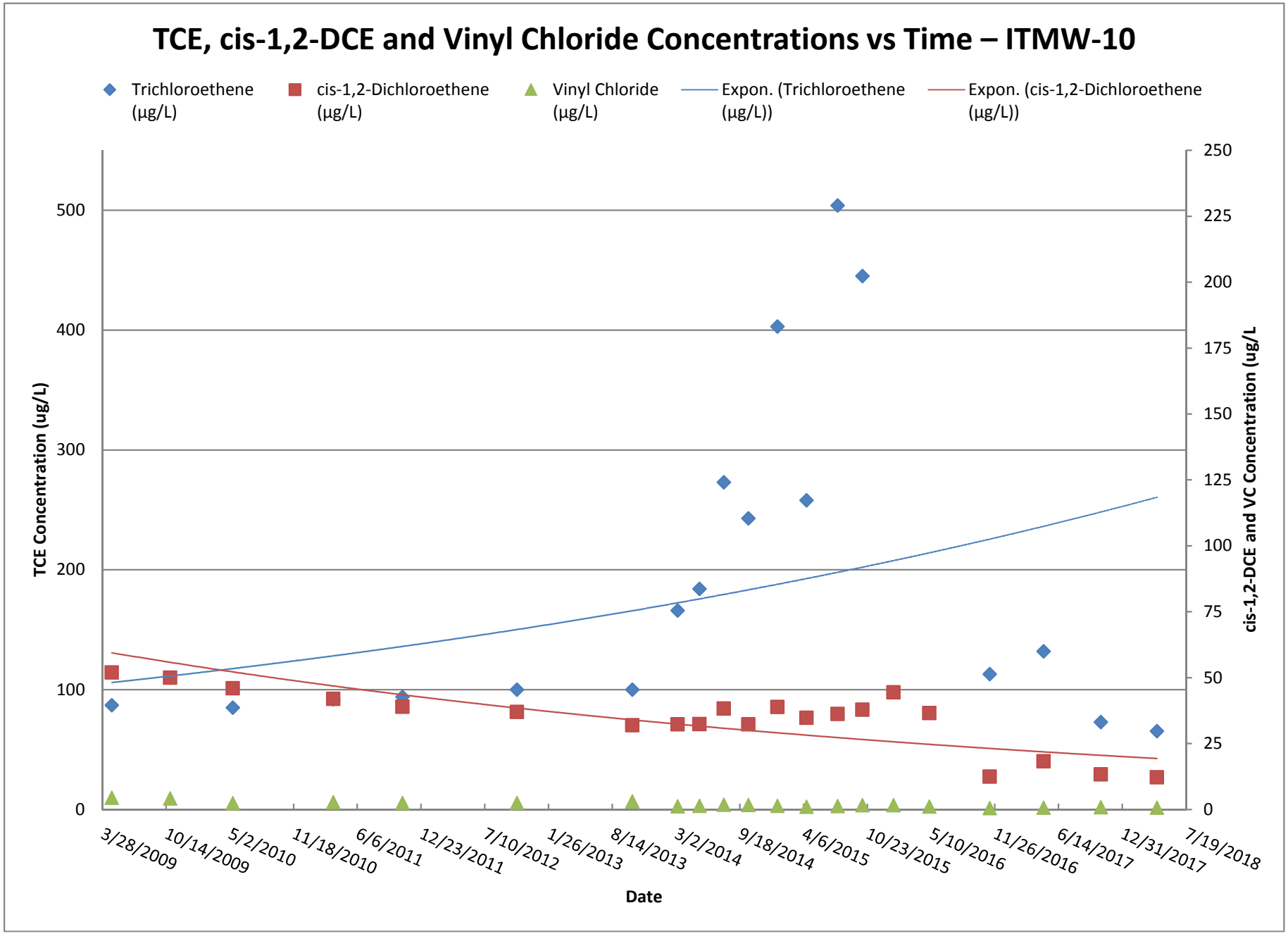


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Figure 3
Whirlpool Facility
Fort Smith, Arkansas

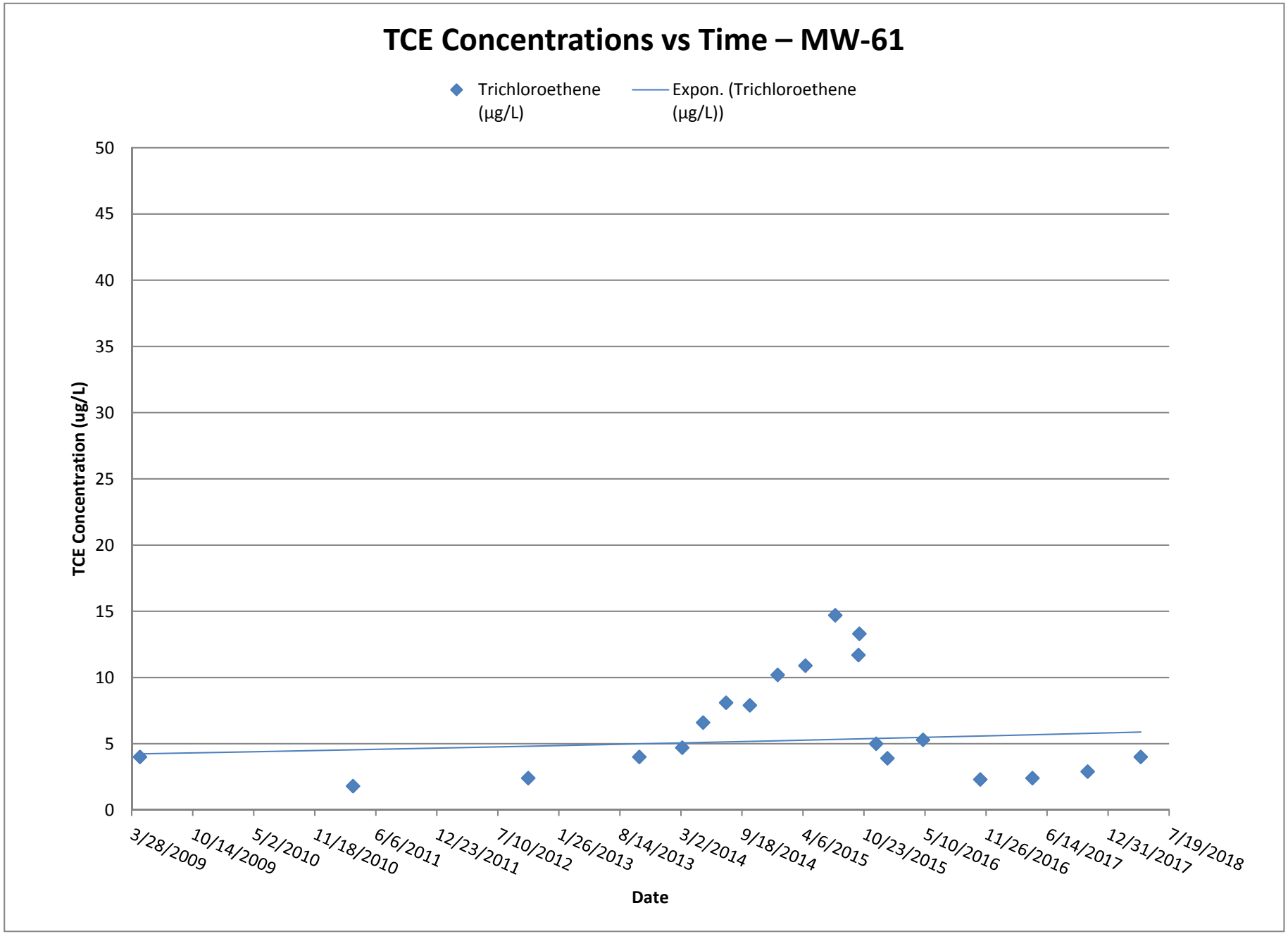

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Figure 4
Whirlpool Facility
Fort Smith, Arkansas

Appendix A

Calibration Logs

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: April 17, 2018

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 #:** 76L100 **Exp:** 12/31/2018

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 #:** 2062 **Exp:** 10-2022

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 #** 8GA687 **Exp:** Jan 2020
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 #** 8GA937 **Exp:** Jan 2020
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 #** 8GA543 **Exp:** Jan 2020
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: 11:09am + 10min = 11:19am
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.)
   30.03 in. x 25.4 = 762.7 mmHg - 15.169 = 747.6 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: 11E101549

1. Specific Conductance: 1.415 mS/cm
2. ORP: 240.0
3. pH:
   - Point 1: 7 7.00
   - Point 2: 4 3.99
   - Point 3: 10 10.02
4. DO: 98.4%

Turbidity Meter Model/Serial Number: LaMotte: 2667-4112

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Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 4/17/18

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 #:** 762100 **Exp:** 12/31/18

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 #:** 2062 **Exp:** 10/31/22

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 #** 762254 **Exp:** 12/31/19
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 #** 86A190 **Exp:** 1/31/20
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 #** 761670 **Exp:** 12/31/19
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: 10 15 + 10min = 10 25
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.)
   29.91 in. x 25.4 = 759.714 mmHg - 15.169 = 744.545 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: 15K101827

1. Specific Conductance: 1412
2. ORP: 240.0
3. pH:
   - Point 1: 7.00
   - Point 2: 4.00
   - Point 3: 10.00
4. DO: 98.0

Turbidity Meter Model/Serial Number: LaMotte 2020WE: 1035-0412

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Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 4/17/18

Calibrated by: NZ

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 6GH060 **Exp:** 08/2018

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 #:** 2062 **Exp:** 10/2022

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 #** 7GF140 **Exp:** 7/2019
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 #** ~~10/2018~~ NZ GGJ010 **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 #** ~~7/2018~~ NZ GGG109 **Exp:** 7/2018
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: 1010 + 10min = 1020
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.)
   29.91 in. x 25.4 = 759.714 mmHg - 15.169 = 744.545 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: 13D100788

1. Specific Conductance: 1,413 ms/cm
2. ORP: ~~240 mV~~ NZ
3. pH: ~~7105~~ NZ
   - Point 1: 7.00
   - Point 2: 4.00
   - Point 3: 10.01
4. DO: 98%

Turbidity Meter Model/Serial Number: 1062 – 2511

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Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 4/17/2018

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 #:** 76K920 **Exp:** 11/ ↘ in hold

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 #:** 1720 **Exp:** 6/2022

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 #** 7GI561 **Exp:** 9/2019
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 #** 7G1006 **Exp:** 9/2019
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:** 12/31/2018
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: 10:05 + 10min = 10:15
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.)
   29.91 in. x 25.4 = 759.714 mmHg - 15.169 = 744.545 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: 14K55 (probe) / 11J102426 (engraved on monitor), 02005D (tape on monitor)

1. Specific Conductance: 1413 µS/cm
2. ORP: 240.0
3. pH:
   - Point 1: 7.00/7
   - Point 2: 4.00/4
   - Point 3: 9.99/10
4. DO: 97.9%

Turbidity Meter Model/Serial Number: ~~Hach 2100Q~~ LaMotte 2020 / 21788 / 021783 VJM 4/17/18 to

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Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 4/17/18

Calibrated by: H. Anvers

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 7G1K920 **Exp:** 11/18

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 #:** 1720 **Exp:** 6/22

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 #** 7G1561 **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 #** 7G1006 **Exp:** 9/19
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 #** 7G1128 **Exp:** 8/19
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: 1010 + 10min = 1020
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.)
   29.91 in. x 25.4 = 759.714 mmHg - 15.169 = 744.545 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: 14F101473

1. Specific Conductance: 1,414 µS/cm
2. ORP: 240.1 mV
3. pH:
   - Point 1: 7.00
   - Point 2: 4.00
   - Point 3: 10.00
4. DO: 98.0 %

Turbidity Meter Model/Serial Number: 030493 (Pine serial number, the real one was illegible)

RAMBOLL

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: April 18, 2018

Calibrated by: Jo Pawlowsky

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 16L100 **Exp:** 12/31/18

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 #:** 2062 **Exp:** 10-2022

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 #** 86A087 **Exp:** Jan 2020
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 #** 86A937 **Exp:** Jan 2020
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 #** 86A543 **Exp:** Jan 2020
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): 0746

1. Ensure unit has been on for at least 10 minutes: Initial time: ~~11:09am~~ + 10min = 0756
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.)
   29.81 in. x 25.4 = 757.174 mmHg - 15.169 = 742.005 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: 11E101549

1. Specific Conductance: 1.376
2. ORP: 334.0
3. pH:
   - Point 1: 7.00
   - Point 2: ~~4.00~~ 3.99
   - Point 3: 10.02
4. DO: 97.7%

Turbidity Meter Model/Serial Number: La Motte 2667-4112

RAMBOLL

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 4/16/18

Calibrated by: S Krech

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 76L100 **Exp:** 12/31/18

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 #:** 2062 **Exp:** 10/31/22

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 #** 76L254 **Exp:** 12/31/19
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 #** 86A140 **Exp:** 1/31/20
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 #** 70L670 **Exp:** 12/31/19
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: 742 + 10min = 752
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.)
   29.81 in. x 25.4 = 757.174 mmHg - 15.169 = 742.005 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: 15L 101827

1. Specific Conductance: 1413
2. ORP: 240.0
3. pH:
   - Point 1: 7.00
   - Point 2: 4.00
   - Point 3: 10.00
4. DO: 97.7

Turbidity Meter Model/Serial Number: Hach 2020we; 1035.042

RAMBOLL

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 4/18/18

Calibrated by: NZ

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 661060 **Exp:** 08/2018

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 #:** 2062 **Exp:** 10/2022

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 #** 7GF140 **Exp:** 7/2019
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 #** 6G5010 **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:** 7/2018
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: 0745 + 10min = 0755
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.)
   29.81 in. x 25.4 = 757.174 mmHg - 15.169 = 742.005 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: 13J100788

1. Specific Conductance: 1,413
2. ORP: 240 mV
3. pH:
   - Point 1: 7.08
   - Point 2: 4.00
   - Point 3: 9.98
4. DO: 97.77

Turbidity Meter Model/Serial Number: 1062-2511

RAMBOLL

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 4/18/2018

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 #:** 76k920 **Exp:** 11/2018

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 #:** 1720 **Exp:** 6/2022

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 #** 7GL561 **Exp:** 9/2019
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 #** 7GL006 **Exp:** 9/2019
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:** 12/31/2018
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: 7:15 + 10min = 7:25
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.)
   29.79 in. x 25.4 = 756.666 mmHg - 15.169 = 741.497 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.

7:43 - 7:53

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: 14F55 (Probe), 11J102426 (Engraved on monitor), 020058 (Monitor tape)

1. Specific Conductance: 1413 µS/cm
2. ORP: 240
3. pH:
   - Point 1: 7/7
   - Point 2: 4/4
   - Point 3: 10/10
4. DO: 97.6% / 100%

Turbidity Meter Model/Serial Number: Lamotte 2020, 21788/021783

RAMBOLL

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 4/18/18

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 #:** 7GK920 **Exp:** 11/18

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 #:** 1720 **Exp:** 6/22

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 #** 7G1561 **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 #** 7G1006 **Exp:** 9/19
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 #** 7GH1128 **Exp:** 8/19
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: 0736 + 10min = 0746
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.)
   29.81 in. x 25.4 = 757.174 mmHg - 15.169 = 742.005 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: 14F101473

1. Specific Conductance: 1,413 µS/cm
2. ORP: 240.0 mV
3. pH:
   - Point 1: 7.00
   - Point 2: 4.00
   - Point 3: 10.01
4. DO: 97.9%

Turbidity Meter Model/Serial Number: 030493 (pine serial number, unit's was illegible)

RAMBOLL

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: April 19, 2018

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 #:** 16L100 **Exp:** 12/31/18

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 #:** 2062 **Exp:** 10-2022

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 #** 8GA697 **Exp:** Jan 2020
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 #** 8GA937 **Exp:** Jan 2020
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 #** 8GA543 **Exp:** Jan 2020
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.)
   29.33 in. x 25.4 = 770.58 mmHg - 15.169 = 755.2 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: 11E10154

1. Specific Conductance: 1.417 mS/cm
2. ORP: 239.8 mV
3. pH:
   - Point 1: 7.01
   - Point 2: 3.98
   - Point 4: 10.02
4. DO: 99.4

Turbidity Meter Model/Serial Number: La Motte: 2667-4112

RAMBOLL

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 4/19/18

Calibrated by: J Kneel

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 762100 **Exp:** 12/31/18

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 #:** 2062 **Exp:** 10/31/22

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 #** 762254 **Exp:** 12/31/19
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 #** 862190 **Exp:** 1/31/20
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 #** 702670 **Exp:** 12/31/19
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: 740 + 10min = 750
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.)
   30.33 in. x 25.4 = 770.382 mmHg - 15.169 = 755.213 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: 15K101827

1. Specific Conductance: 1413
2. ORP: 700.0
3. pH:
   - Point 1: 7.00
   - Point 2: 4.00
   - Point 3: 10.01
4. DO: 99.4

Turbidity Meter Model/Serial Number: Lamotte 2020WE: 1835-0417

RAMBOLL

Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 4/19/18

Calibrated by: NZ

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** GGH060 **Exp:** 8/2018

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 #:** ~~10~~ NC 2062 **Exp:** 10-2022

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 #** 7GF140 **Exp:** 7/2019
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 #** GGJ010 **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 #** GGG109 **Exp:** 7/2018
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: 1238 + 10min = 1248
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.)
   30.33 in. x 25.4 = 770.38 mmHg - 15.169 = 755.213 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: 13D100078 8

1. Specific Conductance: 1413 µs/cm
2. ORP: 240.0 mV
3. pH:
   - Point 1: 7.00
   - Point 2: 4.00
   - Point 3: 9.98
4. DO: 99.4 %

Turbidity Meter Model/Serial Number: 1062-2511

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Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: 4/19/18

Calibrated by: Nick Mann

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

Specific Conductance calibration (should take *at least* 1.5 minutes): **Lot #:** 7618920 **Exp:** 11/2018

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 #:** 1720 **Exp:** 6/2022

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 #** 7GI561 **Exp:** 9/2019
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 #** 7GI006 **Exp:** 9/2019
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:** 12/31/2018
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: 7:15 + 10min = 7:25
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.)
   30.33 in. x 25.4 = 770.382 mmHg - 15.169 = 755.213 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: 14155 (probe), 11J102426 (engraved on monitor), 020058 (monitor type)

1. Specific Conductance: 1413 µS/cm
2. ORP: 240
3. pH:
   - Point 1: 7/7
   - Point 2: 4/4
   - Point 3: 9.96/10
4. DO: 99.4%/100%

Turbidity Meter Model/Serial Number: Lamotte 2020 / 21788/021783

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Whirlpool Ft. Smith Field Equipment Calibration Checklist

Date: ~~4/18/18~~ JP 4/19/18

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 #:** 7GK920 **Exp:** 11/18

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 #:** 1720 **Exp:** 6/22

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 #** 7G1561 **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 #** 7G1006 **Exp:** 9/19
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 #** 7GH1128 **Exp:** 8/19
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: 0743 + 10min = 0753
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.)
   30.33 in. x 25.4 = 770.382 mmHg - 15.169 = 755.213 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: 14F101473

1. Specific Conductance: 1413 µS/cm
2. ORP: 240.1 mV
3. pH:
   - Point 1: 7.00
   - Point 2: 4.00
   - Point 3: 10.01
4. DO: 99.4%

Turbidity Meter Model/Serial Number: 030493 (Pine serial number, unit's were illegible)

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Appendix B

Semi-Annual 2018 Soil Vapor Monitoring and Vapor Intrusion Assessment Report





APPENDIX B
2018 Semi-Annual Soil Vapor Monitoring and Vapor Intrusion Assessment Report
Whirlpool Facility
Fort Smith, Arkansas

Prepared for:
Whirlpool Corporation

Prepared by:
Ramboll US Corporation

Date:
July 2018

Project Number:
1690007739

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1 Introduction

Ramboll US Corporation (Ramboll), on behalf of Whirlpool Corporation (Whirlpool), is submitting this 2018 Semi-Annual Soil Vapor Monitoring and Vapor Intrusion Assessment Report for the Fort Smith, Arkansas, Site (Site). The work was performed and the report prepared in accordance with: the Revised Groundwater Monitoring Plan (RGWMP) approved by ADEQ in September 2016; the Remedial Action Decision Document (RADD) issued by the Arkansas Department of Environmental Quality (ADEQ) on December 27, 2013 and revised in November 2015 (Revised RADD); and, ADEQ comment letters and Ramboll/Whirlpool responses to previous quarterly monitoring reports. This report is Attachment B of the 2018 Semi-Annual 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 2018 semi-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 April 17, 18, and 19, 2018 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 monitoring wells 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 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 April 2018 sampling event, as well as the sampling events since 2014.

Table 1b summarizes the groundwater monitoring wells and vapor monitoring points sampled in April 2018, 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 April 17 and 18 were not preceded by at least five consecutive days with less than 0.1 inch of rain: 1.17 inches of rain were recorded on April 13, 2018. Precipitation data for April 2018 are provided in Appendix B.

The volatile organic compound (VOC) results for the groundwater, soil vapor, and perched water samples collected during the 2018 Semi-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, the 2017 semi-annual report, and the 2017 annual report.

The data collected over the groundwater plume in the neighborhood through October 2017 continued to show that 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). Details of the October 2017 vapor intrusion assessment can be found in the Annual 2018 Soil Vapor Monitoring and Vapor Intrusion Assessment Report (Ramboll Environ 2017c).

3.2 Current Assessment

Groundwater data from monitoring wells (which have identifiers beginning with “MW-”) in the neighborhood collected during the 2018 semi-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 2018 semi-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 April 2018 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 2×10^{-6} and 0.4, respectively. These risk estimates are below ADEQ’s risk management limits of 10^{-4} and 1, respectively (ADEQ 2005). The calculations for risk

[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).

estimates discussed in this section are included in Appendix C. Toxicity values used in the risk calculations are current as of May 2018.

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 April 2018 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 4 x 10^{-7} and 0.09, 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 bgs for VP-7 and 10.5 ft 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 4 x 10^{-9} and 0.0004, respectively; the upper-bound cumulative cancer risk and non-cancer HI estimates for perched water at VP-8 are 2 x 10^{-8} and 0.003, 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 2 x 10^{-6} and 0.3, 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 1 x 10^{-6} and 0.3, 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 subslab 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 4 x 10^{-5} and 8, respectively. The upper-bound HI estimate exceeds ADEQ's noncancer risk management limit of 1 for RME risks.

The elevated HI is the result of TCE that was detected at a concentration of 540 µg/m^3 on April 19, 2018. This concentration is 35% higher than the Fourth Quarter 2017 TCE soil vapor concentration of 400 µg/m^3. However, as discussed in the Annual 2017 Soil Vapor Monitoring and Vapor Intrusion Assessment Report (Ramboll Environ 2017c), VP-9 was also 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 prior to this time beginning in 2012.

Because of the large increase in the TCE soil vapor concentration in 2015, outdoor, crawl space, and indoor air samples were collected at Parcel 3 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 6×10^{-10} and 0.000006, 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 the north parking lot for the former Whirlpool building (i.e. non-residential property) located immediately 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 8×10^{-8} and 0.02, 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 ft bgs and 10.5 ft bgs, respectively. As shown in Table 6, the upper-bound cumulative cancer risk and non-cancer HI estimates for groundwater at VP-14 are 2×10^{-7} and 0.04, respectively; the upper-bound cumulative cancer risk and non-cancer HI estimates for groundwater at MW-178 are 2×10^{-8} and 0.005, 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; and
- 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, this concentration is lower than that at VP-9 November 2015, when data from outdoor, crawl space, and indoor air sampling demonstrated that vapor intrusion from groundwater was actually not occurring.

5 References

Arkansas Department of Environmental Quality (ADEQ). 2005. Ground Water Remediation Level Interim Policy and Technical Guidance. Memorandum from Marcus Devine, Director, to Ellen Carpenter, Legal Division Chief. July 12.

Arkansas Department of Environmental Quality (ADEQ). 2013. Remedial Action Decision Document (RADD) for Corrective Action. Facility Identification Number: 66-00048. December 27.

ENVIRON International Corporation (ENVIRON). 2013. Revised Risk Management Plan. April 24.

ENVIRON International Corporation (ENVIRON). 2014a. First Quarter 2014 Progress Report, Attachment B: Soil Vapor Monitoring/Vapor Intrusion Report. May 15.

ENVIRON International Corporation (ENVIRON). 2014b. Second Quarter 2014 Progress Report, Attachment B: Soil Vapor Monitoring/Vapor Intrusion Report. August 15.

Ramboll Environ US Corporation (Ramboll Environ). 2015. Fourth Quarter 2015 Progress Report, Attachment B: Soil Vapor Monitoring and Vapor Intrusion Assessment Report. December.

Ramboll Environ US Corporation (Ramboll Environ). 2016a. Human Health Risk Assessment Update. January.

Ramboll Environ US Corporation (Ramboll Environ). 2016b. First Quarter 2016 Progress Report, Attachment B: Soil Vapor Monitoring and Vapor Intrusion Assessment Report. May.

Ramboll Environ US Corporation (Ramboll Environ). 2016c. Second Quarter 2016 Progress Report, Attachment B: Soil Vapor Monitoring and Vapor Intrusion Assessment Report. July.

Ramboll Environ US Corporation (Ramboll Environ). 2016d. Revised Groundwater Monitoring Plan. September.

Ramboll Environ US Corporation (Ramboll Environ). 2017a. Annual 2016 Soil Vapor Monitoring and Vapor Intrusion Assessment Report. January.

Ramboll Environ US Corporation (Ramboll Environ). 2017b. Semi-Annual 2017 Soil Vapor Monitoring and Vapor Intrusion Assessment Report. June.

Ramboll Environ US Corporation (Ramboll Environ). 2017c. Annual 2017 Soil Vapor Monitoring and Vapor Intrusion Assessment Report. December.

United States Environmental Protection Agency (USEPA). 2015a. OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to

Indoor Air. Office of Solid Waste and Emergency Response. OSWER Publication 9200.2-154. June.

United States Environmental Protection Agency (USEPA). 2015b. Technical Guide for Addressing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites. EPA 510-R-15-001. June.

Weather Underground. "Weather History for Fort Smith, AR." Weather Forecast & Reports. April 2018. Accessed May 25, 2018. < https://www.wunderground.com/history/airport/KFSM/2018/4/9/MonthlyCalendar.html>.

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#
Semi-Annual 2018	4/2018	--	--	**Water**	**Water**	NS	**Air**	**Water**	--	**Water**	--	--	**Water**
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	Semi-Annual 2018
						4/2018
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
SEMI-ANNUAL 2018 GROUNDWATER VOC DATA FOR MONITORING WELLS IN THE NEIGHBORHOOD
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-39R	MW-40R	MW-46R	MW-50R	MW-55R	MW-55R	MW-60R
Field Sample ID	MW-39R-201804	MW-40R-201804	MW-46R-201804	MW-50R-201804	MW-55R-201804	DUP-05-201804	MW-60R-201804
Lab Sample ID	60268532018	60268487017	60268532015	60268487012	60268532013	60268532014	60268487007
Sample Date	04/18/2018	04/17/2018	04/18/2018	04/17/2018	04/18/2018	04/18/2018	04/17/2018
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)
Bromodichloromethane	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)
Bromomethane	U (0.16)	U (0.16)	1.4 J (0.16)	U (0.16)	1.4 J (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)
Chloroethane	UJ (0.15)	UJ (0.15)	UJ (0.15)	U (0.15)	UJ (0.15)	UJ (0.15)	U (0.15)
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)	1.4 (0.20)	U (0.20)	0.28 J (0.20)	0.28 J (0.20)	U (0.20)
cis-1,2-Dichloroethene	U (0.080)	U (0.080)	12.6 (0.080)	U (0.080)	0.77 J (0.080)	0.82 J (0.080)	U (0.080)
trans-1,2-Dichloroethene	U (0.20)	U (0.20)	0.40 J (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)
Methylene Chloride	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	U (0.10)	U (0.10)	0.13 J (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)	520 (1.7)	0.61 J (0.17)	17.0 (0.17)	18.1 (0.17)	U (0.17)
Vinyl Chloride	U (0.13)	U (0.13)	0.56 J (0.13)	U (0.13)	U (0.13)	0.16 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
SEMI-ANNUAL 2018 GROUNDWATER VOC DATA FOR MONITORING WELLS IN THE NEIGHBORHOOD
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-61R	MW-62R	MW-63R	MW-63R	MW-68	MW-96	MW-97
Field Sample ID	MW-61R-201804	MW-62R-201804	MW-63R-201804	DUP-01-201804	MW-68-201804	MW-96-201804	MW-97-201804
Lab Sample ID	60268487008	60268487009	60268487015	60268487016	60268487004	60268614002	60268614001
Sample Date	04/17/2018	04/17/2018	04/17/2018	04/17/2018	04/17/2018	04/19/2018	04/19/2018
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)
Bromodichloromethane	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)
Bromomethane	U (0.16)	U (0.16)	1.4 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	0.46 J (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)
Chloroethane	U (0.15)	U (0.15)	UJ (0.15)	UJ (0.15)	U (0.15)	U (0.15)	U (0.15)
Chloroform	U (0.14)	U (0.14)	U (0.14)	0.15 J (0.14)	U (0.14)	0.36 J (0.14)	U (0.14)
Chloromethane	U (0.080)	U (0.080)	U (0.080)	0.13 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)	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	1.9 (0.080)	U (0.080)	0.44 J (0.080)	0.38 J (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	0.93 J (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)
Methylene Chloride	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
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	4.0 (0.17)	U (0.17)	4.8 (0.17)	4.9 (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
SEMI-ANNUAL 2018 GROUNDWATER VOC DATA FOR MONITORING WELLS IN THE NEIGHBORHOOD
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-98	MW-99	MW-175	MW-176	MW-183	MW-184	MW-194
Field Sample ID	MW-98-201804	MW-99-201804	MW-175-201804	MW-176-201804	MW-183-201804	MW-184-201804	MW-194-201804
Lab Sample ID	60268532003	60268532001	60268532012	60268487013	60268532005	60268532002	60268487010
Sample Date	04/18/2018	04/18/2018	04/18/2018	04/17/2018	04/18/2018	04/18/2018	04/17/2018
Comments							
VOC							
Acetone	U (1.9)	U (1.9)	U (1.9)	33.2 (1.9)	U (1.9)	U (1.9)	U (1.9)
Benzene	U (0.060)	U (0.060)	U (0.060)	0.27 J (0.060)	U (0.060)	U (0.060)	U (0.060)
Bromodichloromethane	U (0.19)	0.41 J (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)
Bromomethane	U (0.16)	U (0.16)	U (0.16)	1.5 J (0.16)	U (0.16)	U (0.16)	U (0.16)
2-Butanone	U (0.59)	U (0.59)	U (0.59)	1.7 J (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)
Chloroethane	UJ (0.15)	UJ (0.15)	UJ (0.15)	0.31 J (0.15)	UJ (0.15)	UJ (0.15)	U (0.15)
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)	0.14 J (0.080)	0.16 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)	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)	0.55 J (0.20)	2.8 (0.20)	U (0.20)	U (0.20)	U (0.20)
cis-1,2-Dichloroethene	U (0.080)	0.12 J (0.080)	1.9 (0.080)	105 (0.080)	0.14 J (0.080)	U (0.080)	0.57 J (0.080)
trans-1,2-Dichloroethene	U (0.20)	U (0.20)	U (0.20)	1.6 (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)
Methylene Chloride	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	U (0.10)	U (0.10)	U (0.10)	0.17 J (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)	1.3 (0.17)	117 (0.17)	426 (1.7)	1.9 (0.17)	U (0.17)	9.4 (0.17)
Vinyl Chloride	U (0.13)	U (0.13)	0.15 J (0.13)	1.1 (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
SEMI-ANNUAL 2018 GROUNDWATER VOC DATA FOR MONITORING WELLS IN THE NEIGHBORHOOD
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-195	MW-195	MW-196
Field Sample ID	MW-195-201804	DUP-02-201804	MW-196-201804
Lab Sample ID	60268487002	60268487003	60268487001
Sample Date	04/17/2018	04/17/2018	04/17/2018
Comments		Field Duplicate	
VOC			
Acetone	U (1.9)	U (1.9)	U (1.9)
Benzene	U (0.060)	U (0.060)	U (0.060)
Bromodichloromethane	U (0.19)	U (0.19)	U (0.19)
Bromomethane	U (0.16)	U (0.16)	U (0.16)
2-Butanone	1.4 J (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	U (0.12)	U (0.12)	U (0.12)
Chloroethane	U (0.15)	U (0.15)	U (0.15)
Chloroform	U (0.14)	U (0.14)	U (0.14)
Chloromethane	U (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	U (0.080)	U (0.080)	U (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	1.1 J (0.42)	U (0.42)	U (0.42)
Methylene Chloride	U (0.15)	U (0.15)	U (0.15)
Tetrachloroethene	U (0.10)	U (0.10)	U (0.10)
Toluene	U (0.17)	U (0.17)	U (0.17)
Trichloroethene	U (0.17)	U (0.17)	U (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 2b
SEMI-ANNUAL 2018 GROUNDWATER VOC DATA FOR MONITORING WELLS SOUTH OF THE NEIGHBORHOOD
Whirlpool Facility - Fort Smith, Arkansas

Location	MW-178	MW-179
Field Sample ID	MW-178-201804	MW-179-201804
Lab Sample ID	60268532016	60268614025
Sample Date	04/18/2018	04/19/2018
Comments		
VOC		
Acetone	U (1.9)	2.9 J (1.9)
Benzene	0.21 J (0.060)	U (0.060)
Bromodichloromethane	U (0.19)	U (0.19)
Bromomethane	1.4 J (0.16)	U (0.16)
2-Butanone	U (0.59)	U (0.59)
Carbon Disulfide	U (0.12)	U (0.12)
Chloroethane	UJ (0.15)	U (0.15)
Chloroform	U (0.14)	U (0.14)
Chloromethane	0.11 J (0.080)	U (0.080)
1,1-Dichloroethane	U (0.050)	U (0.050)
1,2-Dichloroethane	U (0.12)	U (0.12)
1,1-Dichloroethene	0.22 J (0.20)	0.27 J (0.20)
cis-1,2-Dichloroethene	1.4 (0.080)	0.85 J (0.080)
trans-1,2-Dichloroethene	U (0.20)	U (0.20)
2-Hexanone	U (1.2)	U (1.2)
4-Methyl-2-pentanone	U (0.42)	U (0.42)
Methylene Chloride	U (0.15)	U (0.15)
Tetrachloroethene	U (0.10)	U (0.10)
Toluene	U (0.17)	U (0.17)
Trichloroethene	5.3 (0.17)	21.7 (0.17)
Vinyl Chloride	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
SEMI-ANNUAL 2018
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-7-201804	VP-8-201804	VP-10-201804	VP-12-201804	VP-14-201804
Lab Sample ID	60268615001	60268615002	60268615003	60268615004	60268615005
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	04/19/2018	04/19/2018	04/19/2018	04/19/2018	04/19/2018
Comments					
VOC					
Acetone	25.6 (1.9)	61.0 (1.9)	U (1.9)	U (1.9)	4.0 J (1.9)
Benzene	0.90 J (0.060)	0.82 J (0.060)	0.25 J (0.060)	0.13 J (0.060)	0.16 J (0.060)
Bromodichloromethane	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)
Bromomethane	U (0.16)	U (0.16)	U (0.16)	U (0.16)	U (0.16)
2-Butanone	4.0 J (0.59)	12.1 (0.59)	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	U (0.12)	U (0.12)	0.52 J (0.12)	U (0.12)	U (0.12)
Chloroethane	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Chloroform	U (0.14)	U (0.14)	1.3 (0.14)	U (0.14)	0.44 J (0.14)
Chloromethane	U (0.080)	0.45 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)	0.14 J (0.12)	U (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	U (0.20)	U (0.20)	1.8 (0.20)	U (0.20)	0.87 J (0.20)
cis-1,2-Dichloroethene	U (0.080)	U (0.080)	14.9 (0.080)	U (0.080)	2.6 (0.080)
trans-1,2-Dichloroethene	U (0.20)	U (0.20)	0.31 J (0.20)	U (0.20)	0.23 J (0.20)
2-Hexanone	U (1.2)	2.9 J (1.2)	U (1.2)	U (1.2)	U (1.2)
4-Methyl-2-pentanone	0.92 J (0.42)	0.89 J (0.42)	U (0.42)	U (0.42)	U (0.42)
Methylene Chloride	U (0.15)	U (0.15)	0.38 J (0.15)	0.25 J (0.15)	U (0.15)
Tetrachloroethene	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	0.21 J (0.17)	0.25 J (0.17)	0.36 J (0.17)	U (0.17)	U (0.17)
Trichloroethene	U (0.17)	3.4 (0.17)	357 (0.85)	U (0.17)	55.8 (0.17)
Vinyl Chloride	U (0.13)	0.17 J (0.13)	0.40 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

TABLE 3a
SEMI-ANNUAL 2018
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-7-201804	VP-8-201804	VP-10-201804	VP-12-201804	VP-14-201804
Lab Sample ID	60268615001	60268615002	60268615003	60268615004	60268615005
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	04/19/2018	04/19/2018	04/19/2018	04/19/2018	04/19/2018
Comments					

µg/L = Micrograms per liter

TABLE 3b
SEMI-ANNUAL 2018 SOIL VAPOR DATA
Whirlpool Corporation; Fort Smith, Arkansas

Parcel	Parcel 3
Location	VP-9
Field Sample ID	VP-9-201804
Lab Sample ID	P1802082-001
Collection Depth (ft bgs)	5.25-5.75
Sample Date	04/19/2018
Comments	
VOC	
1,1-Dichloroethane	0.098 (0.019)
1,2-Dichloroethane	0.17 (0.026)
1,1-Dichloroethene	0.39 (0.027)
cis-1,2-Dichloroethene	0.28 (0.029)
trans-1,2-Dichloroethene	0.52 (0.023)
Tetrachloroethene	0.20 (0.026)
Trichloroethene	540 D (0.27)
Vinyl Chloride	0.21 (0.024)

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 2018 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	3.32E-02	MW-176		2.2E-07
VOC	Benzene	71-43-2	2.70E-04	MW-176	1.2E-09	1.2E-05
VOC	Bromodichloromethane	75-27-4	4.10E-04	MW-99		
VOC	Bromomethane	74-83-9	1.50E-03	MW-176		4.6E-04
VOC	2-Butanone	78-93-3	1.70E-03	MW-176		6.6E-08
VOC	Carbon Disulfide	75-15-0	4.60E-04	MW-61R		1.8E-06
VOC	Chloroethane	75-00-3	3.10E-04	MW-176		9.9E-08
VOC	Chloroform	67-66-3	3.60E-04	MW-96	4.3E-09	8.8E-06
VOC	Chloromethane	74-87-3	1.60E-04	MW-176		2.8E-06
VOC	1,1-Dichloroethene	75-35-4	2.80E-03	MW-176		3.6E-05
VOC	cis-1,2-Dichloroethene	156-59-2	1.05E-01	MW-176		
VOC	trans-1,2-Dichloroethene	156-60-5	1.60E-03	MW-176		
VOC	4-Methyl-2-pentanone	108-10-1	1.10E-03	MW-195		8.3E-08
VOC	Tetrachloroethene	127-18-4	1.70E-04	MW-176	3.2E-11	7.2E-06
VOC	Trichloroethene	79-01-6	5.20E-01	MW-46R	1.9E-06	4.0E-01
VOC	Vinyl Chloride	75-01-4	1.10E-03	MW-176	2.3E-08	3.5E-05
				Cumulative Risk and HI:	2E-06	4E-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 2018 Semi-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		3.8E-07		4.6E-07								2.2E-07		
VOC	Benzene	71-43-2	4.4E-09	4.4E-05	3.7E-09	3.6E-05					1.1E-09	1.1E-05	1.2E-09	1.2E-05	5.7E-10	5.7E-06
VOC	Bromomethane	74-83-9												4.6E-04		
VOC	2-Butanone	78-93-3		3.5E-07		5.3E-07								6.6E-08		
VOC	Carbon Disulfide	75-15-0										2.1E-06				
VOC	Chloroethane	75-00-3												9.9E-08		
VOC	Chloroform	67-66-3									1.6E-08	3.2E-05				
VOC	Chloromethane	74-87-3				7.8E-06		2.4E-06						2.8E-06		
VOC	1,1-Dichloroethane	75-34-3								5.6E-06						
VOC	1,2-Dichloroethane	107-06-2			1.1E-09	1.4E-05			5.4E-08	7.0E-04						
VOC	1,1-Dichloroethene	75-35-4						7.1E-06		5.6E-05		2.3E-05		3.6E-05		
VOC	cis-1,2-Dichloroethene	156-59-2														
VOC	trans-1,2-Dichloroethene	156-60-5														
VOC	2-Hexanone	591-78-6				2.3E-05										
VOC	4-Methyl-2-pentanone	108-10-1		1.3E-07		7.3E-08										
VOC	Methylene Chloride	75-09-2									4.5E-12	6.8E-07			2.9E-12	4.4E-07
VOC	Tetrachloroethene	127-18-4							6.4E-10	1.4E-04			3.2E-11	7.2E-06		
VOC	Toluene	108-88-3		5.9E-08		6.5E-08						9.3E-08				
VOC	Trichloroethene	79-01-6			1.3E-08	2.6E-03	4.3E-07	9.0E-02	3.8E-05	7.8E+00	1.3E-06	2.8E-01	1.6E-06	3.3E-01		
VOC	Vinyl Chloride	75-01-4			3.5E-09	5.4E-06	3.1E-09	4.7E-06	3.9E-08	6.0E-05	8.2E-09	1.3E-05	2.3E-08	3.5E-05		
	Cumulative Risk and HI:		4E-09	4E-05	2E-08	3E-03	4E-07	9E-02	4E-05	**8E+00**	1E-06	3E-01	2E-06	3E-01	6E-10	6E-06

Notes:
Only COCs detected in the 2018 Semi-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				3.0E-08		1.9E-08
VOC	Benzene	71-43-2	9.8E-10	9.7E-06	7.1E-10	7.1E-06		
VOC	Bromomethane	74-83-9		4.5E-04				
VOC	Chloroform	67-66-3			5.3E-09	1.1E-05		
VOC	Chloromethane	74-87-3		1.9E-06				
VOC	1,1-Dichloroethene	75-35-4		2.9E-06		1.1E-05		3.5E-06
VOC	cis-1,2-Dichloroethene	156-59-2						
VOC	trans-1,2-Dichloroethene	156-60-5						
VOC	Trichloroethene	79-01-6	2.0E-08	4.2E-03	2.1E-07	4.3E-02	8.1E-08	1.7E-02
	Cumulative Risk and HI:		2E-08	5E-03	2E-07	4E-02	8E-08	2E-02

Notes:

Only COCs detected in the 2018 Semi-Annual Samping Event samples at locations listed on the table are shown.

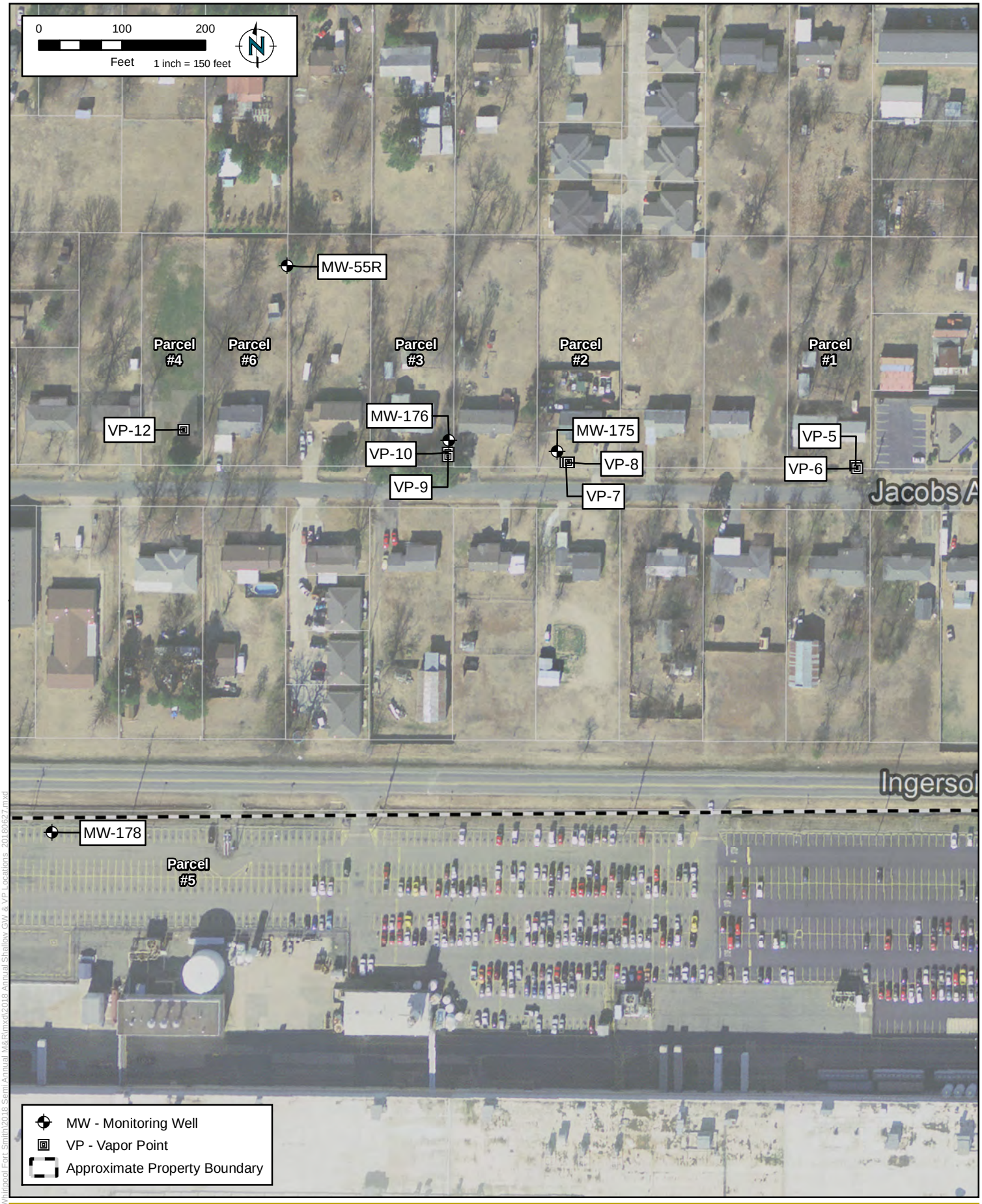
Risk and HQ estimates were not calculated for detected chemicals with inadequate toxicity or physical/chemical parameters or where chemical concentrations were non-detect.

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

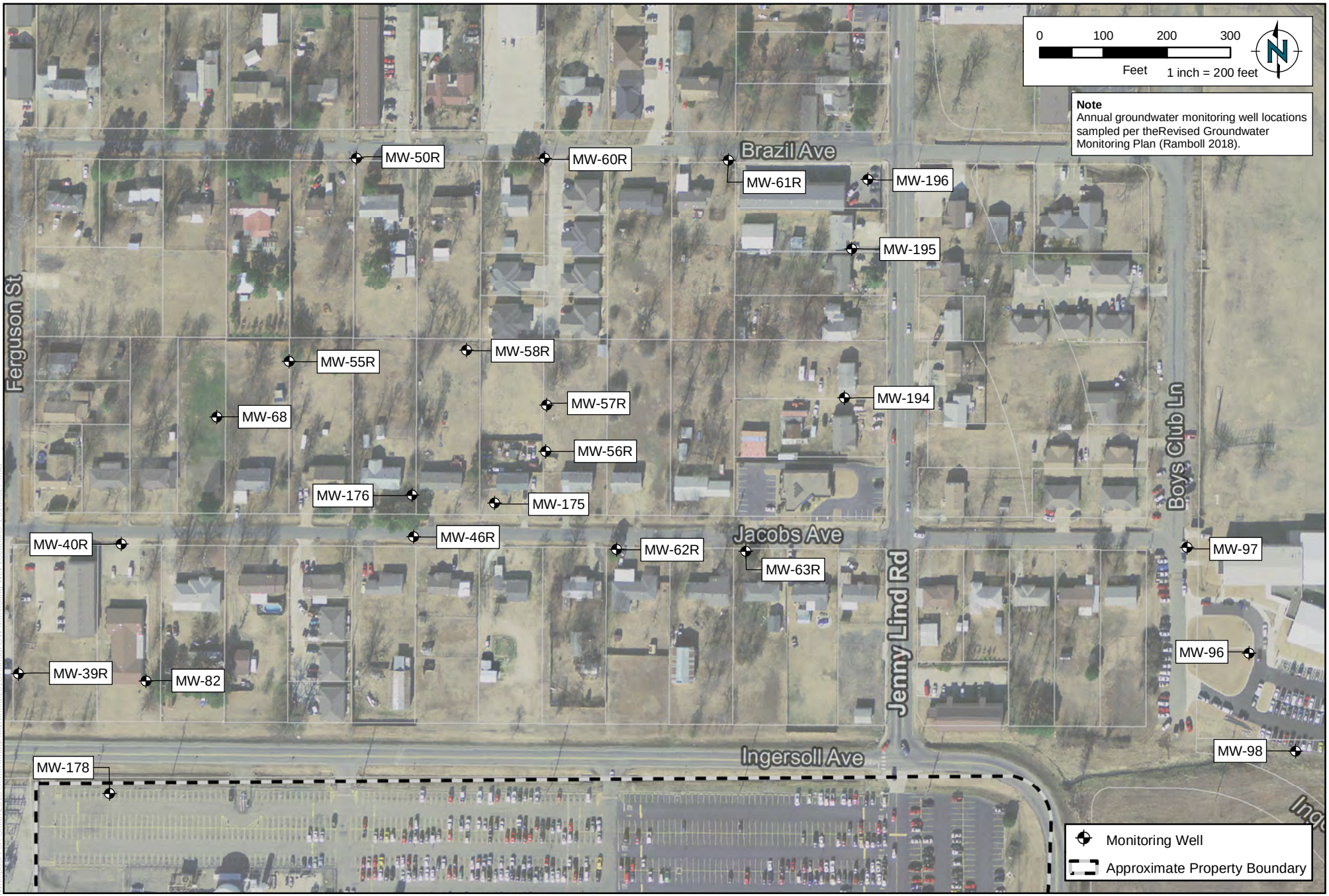
SHALLOW GROUNDWATER MONITORING WELLS AND VAPOR POINTS SAMPLED DURING 2018 ANNUAL SAMPLING

Whirlpool Facility - Fort Smith, Arkansas

Figure 1

DRAFTED BY: FK	DATE: 06/27/2018	PROJECT: 1690007739

FILE: L:\Loop Project Files\Whirlpool Fort Smith\2018 Semi-Annual M&R\mxd\2018 Annual Shallow GW & VP Locations_20180627.mxd



RAMBOLL

DRAFTED BY: FK | DATE: 06/27/2018

GROUNDWATER MONITORING WELL LOCATIONS

Whirlpool Facility - Fort Smith, Arkansas

Figure 2

PROJECT: 1690007739

FILE: L:\Loop Project Files\Whirlpool Fort Smith\2018 Semi Annual M&R\mxd\2018 Annual GW Monitoring Well Locations_20180627.mxd

Appendix A
Laboratory Analytical Data

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

April 03, 2018

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

RE: Project: FORT SMITH, AR
Pace Project No.: 60267227

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on April 03, 2018. 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: Kristen Drucquer, Ramboll
Tamara House-Knight, Ramboll Environ
M. Wilson

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CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60267227

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.: 60267227

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60267227001	**MW-186-20180402**	Water	04/02/18 13:20	04/03/18 06:05
60267227002	**DUP-01-20180402**	Water	04/02/18 13:20	04/03/18 06:05
60267227003	**TMW-30-20180402**	Water	04/02/18 14:50	04/03/18 06:05
60267227004	**TMW-27-20180402**	Water	04/02/18 13:15	04/03/18 06:05
60267227005	**TMW-26-20180402**	Water	04/02/18 14:25	04/03/18 06:05
60267227006	**TMW-16-20180402**	Water	04/02/18 16:45	04/03/18 06:05
60267227007	**EB-01-20180402**	Water	04/02/18 17:30	04/03/18 06:05
60267227008	**TB-01-20180402**	Water	04/02/18 13:15	04/03/18 06:05

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60267227

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60267227001	**MW-186-20180402**	EPA 5030B/8260	PGH	38	PASI-K
60267227002	**DUP-01-20180402**	EPA 5030B/8260	PGH	38	PASI-K
60267227003	**TMW-30-20180402**	EPA 5030B/8260	PGH	38	PASI-K
60267227004	**TMW-27-20180402**	EPA 5030B/8260	PGH	38	PASI-K
60267227005	**TMW-26-20180402**	EPA 5030B/8260	PGH	38	PASI-K
60267227006	**TMW-16-20180402**	EPA 5030B/8260	PGH	38	PASI-K
60267227007	**EB-01-20180402**	EPA 5030B/8260	PGH	38	PASI-K
60267227008	**TB-01-20180402**	EPA 5030B/8260	PGH	38	PASI-K

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60267227

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 03, 2018

General Information:
8 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: 520221

B: Analyte was detected in the associated method blank.

- BLANK for HBN 520221 [MSV/8844 (Lab ID: 2129143)
  - Chloromethane
  - Methylene chloride

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: 520221

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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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267227

Sample: MW-186-20180402 **Lab ID: 60267227001** Collected: 04/02/18 13:20 Received: 04/03/18 06:05 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		04/03/18 11:26	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/03/18 11:26	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/03/18 11:26	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/03/18 11:26	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/03/18 11:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/03/18 11:26	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/03/18 11:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/03/18 11:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/03/18 11:26	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/03/18 11:26	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/03/18 11:26	67-66-3	
Chloromethane	**0.094J**	ug/L	1.0	0.080	1		04/03/18 11:26	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/03/18 11:26	124-48-1	
1,1-Dichloroethane	**1.1**	ug/L	1.0	0.050	1		04/03/18 11:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/03/18 11:26	107-06-2	
1,1-Dichloroethene	**0.54J**	ug/L	1.0	0.20	1		04/03/18 11:26	75-35-4	
cis-1,2-Dichloroethene	**4.2**	ug/L	1.0	0.080	1		04/03/18 11:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 11:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/03/18 11:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/03/18 11:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/03/18 11:26	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/03/18 11:26	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/03/18 11:26	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/03/18 11:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/03/18 11:26	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/03/18 11:26	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/03/18 11:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/03/18 11:26	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/03/18 11:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/03/18 11:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/03/18 11:26	79-00-5	
Trichloroethene	**13.1**	ug/L	1.0	0.17	1		04/03/18 11:26	79-01-6	
Vinyl chloride	**0.22J**	ug/L	1.0	0.13	1		04/03/18 11:26	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/03/18 11:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-119		1		04/03/18 11:26	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	80-117		1		04/03/18 11:26	17060-07-0	
Toluene-d8 (S)	96	%	80-115		1		04/03/18 11:26	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/03/18 11:26		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267227

Sample: DUP-01-20180402 **Lab ID: 60267227002** Collected: 04/02/18 13:20 Received: 04/03/18 06:05 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		04/03/18 12:08	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/03/18 12:08	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/03/18 12:08	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/03/18 12:08	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/03/18 12:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/03/18 12:08	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/03/18 12:08	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/03/18 12:08	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/03/18 12:08	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/03/18 12:08	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/03/18 12:08	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/03/18 12:08	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/03/18 12:08	124-48-1	
1,1-Dichloroethane	**1.2**	ug/L	1.0	0.050	1		04/03/18 12:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/03/18 12:08	107-06-2	
1,1-Dichloroethene	**0.52J**	ug/L	1.0	0.20	1		04/03/18 12:08	75-35-4	
cis-1,2-Dichloroethene	**4.7**	ug/L	1.0	0.080	1		04/03/18 12:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 12:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/03/18 12:08	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/03/18 12:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/03/18 12:08	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/03/18 12:08	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/03/18 12:08	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/03/18 12:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/03/18 12:08	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/03/18 12:08	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/03/18 12:08	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/03/18 12:08	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/03/18 12:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/03/18 12:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/03/18 12:08	79-00-5	
Trichloroethene	**12.9**	ug/L	1.0	0.17	1		04/03/18 12:08	79-01-6	
Vinyl chloride	**0.21J**	ug/L	1.0	0.13	1		04/03/18 12:08	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/03/18 12:08	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/03/18 12:08	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	80-117		1		04/03/18 12:08	17060-07-0	
Toluene-d8 (S)	103	%	80-115		1		04/03/18 12:08	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/03/18 12:08		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267227

Sample: TMW-30-20180402 **Lab ID: 60267227003** Collected: 04/02/18 14:50 Received: 04/03/18 06:05 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		04/03/18 11:40	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/03/18 11:40	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/03/18 11:40	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/03/18 11:40	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/03/18 11:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/03/18 11:40	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/03/18 11:40	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/03/18 11:40	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/03/18 11:40	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/03/18 11:40	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/03/18 11:40	67-66-3	
Chloromethane	**0.12J**	ug/L	1.0	0.080	1		04/03/18 11:40	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/03/18 11:40	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/03/18 11:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/03/18 11:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 11:40	75-35-4	
cis-1,2-Dichloroethene	**0.49J**	ug/L	1.0	0.080	1		04/03/18 11:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 11:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/03/18 11:40	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/03/18 11:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/03/18 11:40	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/03/18 11:40	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/03/18 11:40	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/03/18 11:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/03/18 11:40	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/03/18 11:40	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/03/18 11:40	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/03/18 11:40	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/03/18 11:40	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/03/18 11:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/03/18 11:40	79-00-5	
Trichloroethene	**1.5**	ug/L	1.0	0.17	1		04/03/18 11:40	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/03/18 11:40	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/03/18 11:40	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-119		1		04/03/18 11:40	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/03/18 11:40	17060-07-0	
Toluene-d8 (S)	97	%	80-115		1		04/03/18 11:40	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/03/18 11:40		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267227

Sample: TMW-27-20180402 **Lab ID: 60267227004** Collected: 04/02/18 13:15 Received: 04/03/18 06:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**3.9J**	ug/L	10.0	1.9	1		04/03/18 11:54	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/03/18 11:54	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/03/18 11:54	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/03/18 11:54	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/03/18 11:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/03/18 11:54	78-93-3	
Carbon disulfide	**0.14J**	ug/L	5.0	0.12	1		04/03/18 11:54	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/03/18 11:54	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/03/18 11:54	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/03/18 11:54	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/03/18 11:54	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/03/18 11:54	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/03/18 11:54	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/03/18 11:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/03/18 11:54	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 11:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/03/18 11:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 11:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/03/18 11:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/03/18 11:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/03/18 11:54	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/03/18 11:54	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/03/18 11:54	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/03/18 11:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/03/18 11:54	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/03/18 11:54	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/03/18 11:54	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/03/18 11:54	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/03/18 11:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/03/18 11:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/03/18 11:54	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/03/18 11:54	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/03/18 11:54	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/03/18 11:54	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-119		1		04/03/18 11:54	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	80-117		1		04/03/18 11:54	17060-07-0	
Toluene-d8 (S)	95	%	80-115		1		04/03/18 11:54	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/03/18 11:54		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267227

Sample: TMW-26-20180402 **Lab ID: 60267227005** Collected: 04/02/18 14:25 Received: 04/03/18 06:05 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		04/03/18 12:22	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/03/18 12:22	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/03/18 12:22	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/03/18 12:22	75-25-2	
Bromomethane	**0.48J**	ug/L	5.0	0.16	1		04/03/18 12:22	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/03/18 12:22	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/03/18 12:22	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/03/18 12:22	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/03/18 12:22	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/03/18 12:22	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/03/18 12:22	67-66-3	
Chloromethane	**0.33J**	ug/L	1.0	0.080	1		04/03/18 12:22	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/03/18 12:22	124-48-1	
1,1-Dichloroethane	**0.22J**	ug/L	1.0	0.050	1		04/03/18 12:22	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/03/18 12:22	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 12:22	75-35-4	
cis-1,2-Dichloroethene	**0.98J**	ug/L	1.0	0.080	1		04/03/18 12:22	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 12:22	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/03/18 12:22	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/03/18 12:22	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/03/18 12:22	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/03/18 12:22	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/03/18 12:22	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/03/18 12:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/03/18 12:22	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/03/18 12:22	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/03/18 12:22	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/03/18 12:22	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/03/18 12:22	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/03/18 12:22	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/03/18 12:22	79-00-5	
Trichloroethene	**35.4**	ug/L	1.0	0.17	1		04/03/18 12:22	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/03/18 12:22	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/03/18 12:22	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/03/18 12:22	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	80-117		1		04/03/18 12:22	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/03/18 12:22	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/03/18 12:22		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267227

Sample: TMW-16-20180402 **Lab ID: 60267227006** Collected: 04/02/18 16:45 Received: 04/03/18 06:05 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		04/03/18 12:36	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/03/18 12:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/03/18 12:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/03/18 12:36	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/03/18 12:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/03/18 12:36	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/03/18 12:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/03/18 12:36	56-23-5	
Chlorobenzene	**0.22J**	ug/L	1.0	0.21	1		04/03/18 12:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/03/18 12:36	75-00-3	
Chloroform	**1.6**	ug/L	1.0	0.14	1		04/03/18 12:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/03/18 12:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/03/18 12:36	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/03/18 12:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/03/18 12:36	107-06-2	
1,1-Dichloroethene	**1.3**	ug/L	1.0	0.20	1		04/03/18 12:36	75-35-4	
cis-1,2-Dichloroethene	**11.5**	ug/L	1.0	0.080	1		04/03/18 12:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 12:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/03/18 12:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/03/18 12:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/03/18 12:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/03/18 12:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/03/18 12:36	591-78-6	
Methylene chloride	**0.83J**	ug/L	1.0	0.15	1		04/03/18 12:36	75-09-2	B
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/03/18 12:36	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/03/18 12:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/03/18 12:36	79-34-5	
Tetrachloroethene	**0.40J**	ug/L	1.0	0.10	1		04/03/18 12:36	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/03/18 12:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/03/18 12:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/03/18 12:36	79-00-5	
Trichloroethene	**985**	ug/L	20.0	3.4	20		04/03/18 13:31	79-01-6	
Vinyl chloride	**0.78J**	ug/L	1.0	0.13	1		04/03/18 12:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/03/18 12:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/03/18 12:36	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/03/18 12:36	17060-07-0	
Toluene-d8 (S)	94	%	80-115		1		04/03/18 12:36	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/03/18 12:36		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267227

Sample: EB-01-20180402 **Lab ID: 60267227007** Collected: 04/02/18 17:30 Received: 04/03/18 06:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**5.2J**	ug/L	10.0	1.9	1		04/03/18 11:12	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/03/18 11:12	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/03/18 11:12	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/03/18 11:12	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/03/18 11:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/03/18 11:12	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/03/18 11:12	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/03/18 11:12	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/03/18 11:12	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/03/18 11:12	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/03/18 11:12	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/03/18 11:12	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/03/18 11:12	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/03/18 11:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/03/18 11:12	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 11:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/03/18 11:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 11:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/03/18 11:12	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/03/18 11:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/03/18 11:12	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/03/18 11:12	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/03/18 11:12	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/03/18 11:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/03/18 11:12	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/03/18 11:12	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/03/18 11:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/03/18 11:12	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/03/18 11:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/03/18 11:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/03/18 11:12	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/03/18 11:12	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/03/18 11:12	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/03/18 11:12	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/03/18 11:12	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-117		1		04/03/18 11:12	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/03/18 11:12	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/03/18 11:12		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267227

Sample: TB-01-20180402 **Lab ID: 60267227008** Collected: 04/02/18 13:15 Received: 04/03/18 06:05 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		04/03/18 10:59	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/03/18 10:59	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/03/18 10:59	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/03/18 10:59	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/03/18 10:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/03/18 10:59	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/03/18 10:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/03/18 10:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/03/18 10:59	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/03/18 10:59	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/03/18 10:59	67-66-3	
Chloromethane	**0.098J**	ug/L	1.0	0.080	1		04/03/18 10:59	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/03/18 10:59	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/03/18 10:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/03/18 10:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 10:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/03/18 10:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 10:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/03/18 10:59	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/03/18 10:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/03/18 10:59	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/03/18 10:59	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/03/18 10:59	591-78-6	
Methylene chloride	**0.59J**	ug/L	1.0	0.15	1		04/03/18 10:59	75-09-2	B
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/03/18 10:59	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/03/18 10:59	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/03/18 10:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/03/18 10:59	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/03/18 10:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/03/18 10:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/03/18 10:59	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/03/18 10:59	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/03/18 10:59	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/03/18 10:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-119		1		04/03/18 10:59	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	80-117		1		04/03/18 10:59	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/03/18 10:59	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/03/18 10:59		

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60267227

QC Batch: 520221 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60267227001, 60267227002, 60267227003, 60267227004, 60267227005, 60267227006, 60267227007, 60267227008

METHOD BLANK: 2129143 Matrix: Water
Associated Lab Samples: 60267227001, 60267227002, 60267227003, 60267227004, 60267227005, 60267227006, 60267227007, 60267227008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/03/18 10:45	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/03/18 10:45	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/03/18 10:45	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/03/18 10:45	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/03/18 10:45	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/03/18 10:45	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/03/18 10:45	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/03/18 10:45	
2-Hexanone	ug/L	ND	10.0	1.2	04/03/18 10:45	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/03/18 10:45	
Acetone	ug/L	ND	10.0	1.9	04/03/18 10:45	
Benzene	ug/L	ND	1.0	0.060	04/03/18 10:45	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/03/18 10:45	
Bromoform	ug/L	ND	1.0	0.070	04/03/18 10:45	
Bromomethane	ug/L	ND	5.0	0.16	04/03/18 10:45	
Carbon disulfide	ug/L	ND	5.0	0.12	04/03/18 10:45	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/03/18 10:45	
Chlorobenzene	ug/L	ND	1.0	0.21	04/03/18 10:45	
Chloroethane	ug/L	ND	1.0	0.15	04/03/18 10:45	
Chloroform	ug/L	ND	1.0	0.14	04/03/18 10:45	
Chloromethane	ug/L	0.095J	1.0	0.080	04/03/18 10:45	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/03/18 10:45	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/03/18 10:45	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/03/18 10:45	
Ethylbenzene	ug/L	ND	1.0	0.18	04/03/18 10:45	
Methylene chloride	ug/L	0.57J	1.0	0.15	04/03/18 10:45	
Styrene	ug/L	ND	1.0	0.12	04/03/18 10:45	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/03/18 10:45	
Toluene	ug/L	ND	1.0	0.17	04/03/18 10:45	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/03/18 10:45	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/03/18 10:45	
Trichloroethene	ug/L	ND	1.0	0.17	04/03/18 10:45	
Vinyl chloride	ug/L	ND	1.0	0.13	04/03/18 10:45	
Xylene (Total)	ug/L	ND	3.0	0.42	04/03/18 10:45	
1,2-Dichloroethane-d4 (S)	%	104	80-117		04/03/18 10:45	
4-Bromofluorobenzene (S)	%	95	80-119		04/03/18 10:45	
Toluene-d8 (S)	%	96	80-115		04/03/18 10:45	

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.

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60267227

LABORATORY CONTROL SAMPLE: 2129144

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.3	101	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	19.8	99	74-121	
1,1,2-Trichloroethane	ug/L	20	21.0	105	83-119	
1,1-Dichloroethane	ug/L	20	20.0	100	85-128	
1,1-Dichloroethene	ug/L	20	20.6	103	85-123	
1,2-Dichloroethane	ug/L	20	21.8	109	77-120	
1,2-Dichloropropane	ug/L	20	21.5	107	81-126	
2-Butanone (MEK)	ug/L	100	106	106	65-134	
2-Hexanone	ug/L	100	111	111	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	111	111	66-139	
Acetone	ug/L	100	122	122	62-142	
Benzene	ug/L	20	20.0	100	81-118	
Bromodichloromethane	ug/L	20	20.6	103	85-123	
Bromoform	ug/L	20	21.1	106	83-123	
Bromomethane	ug/L	20	18.9	95	39-149	
Carbon disulfide	ug/L	20	20.2	101	85-124	
Carbon tetrachloride	ug/L	20	20.4	102	85-126	
Chlorobenzene	ug/L	20	20.8	104	87-118	
Chloroethane	ug/L	20	15.6	78	73-134	
Chloroform	ug/L	20	21.3	107	85-119	
Chloromethane	ug/L	20	19.4	97	20-174	
cis-1,2-Dichloroethene	ug/L	20	19.5	98	84-121	
cis-1,3-Dichloropropene	ug/L	20	20.9	105	80-124	
Dibromochloromethane	ug/L	20	20.1	101	83-122	
Ethylbenzene	ug/L	20	20.2	101	80-118	
Methylene chloride	ug/L	20	20.8	104	81-126	
Styrene	ug/L	20	21.0	105	85-120	
Tetrachloroethene	ug/L	20	19.9	99	87-120	
Toluene	ug/L	20	19.9	100	82-118	
trans-1,2-Dichloroethene	ug/L	20	19.9	99	83-121	
trans-1,3-Dichloropropene	ug/L	20	21.0	105	80-122	
Trichloroethene	ug/L	20	20.7	104	82-120	
Vinyl chloride	ug/L	20	19.9	99	74-147	
Xylene (Total)	ug/L	60	60.3	100	81-120	
1,2-Dichloroethane-d4 (S)	%			106	80-117	
4-Bromofluorobenzene (S)	%			95	80-119	
Toluene-d8 (S)	%			98	80-115	

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.

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QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60267227

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: 520221

[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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60267227

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60267227001	**MW-186-20180402**	EPA 5030B/8260	520221		
60267227002	**DUP-01-20180402**	EPA 5030B/8260	520221		
60267227003	**TMW-30-20180402**	EPA 5030B/8260	520221		
60267227004	**TMW-27-20180402**	EPA 5030B/8260	520221		
60267227005	**TMW-26-20180402**	EPA 5030B/8260	520221		
60267227006	**TMW-16-20180402**	EPA 5030B/8260	520221		
60267227007	**EB-01-20180402**	EPA 5030B/8260	520221		
60267227008	**TB-01-20180402**	EPA 5030B/8260	520221		

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Sample Condition Upon Receipt

WO# : 60267227

60267227

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: 266 **Type of Ice:** ~~Wet~~ Blue None

Cooler Temperature (°C): **As-read** 2.4 **Corr. Factor** +0.2 **Corrected** 2.6

Date and initials of person examining contents: 4/3/18

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	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: 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	
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
Address:	7500 College Blvd., Ste. 925
	Overland Park, KS 66210
Email To:	THouseKnight@ramboll.com
Phone: 913-553-5926	Fax:
Requested Due Date/TAT:	same day ~~24 hr TAT~~

Section B — Required Project Information:

Report To:	Tamara House-Knight
Copy To:	nzurweller@ramboll.com; mwilson@ramboll.com
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:	Richard Mannz
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 GRAB/COMPOSITE START DATE	COLLECTED GRAB/COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test: 8260 VOCs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~MW~~-18e-20180402	WT	G	4-2-18	1320				3				X				X		60267227
2	~~MW~~ DUP-01-20180402				1320				3				X				X		3(X,AH)
3	MW-30-20180402				1450				3				X				X		
4	MW-27-20180402				1315				3				X				X		
5	MW-26-20180402				1425				3				X				X		
6	MW-11e-20180402				1645				3				X				X		
7	EB-01-20180402				1730				3				X				X		
8	TB-01-20180402								2				X				X		2(X,AH)
9																			
10																			
11																			
12																			

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)
same day TAT	Jo Pavlowsky/Ramboll	4/2/18	6:00pm	/PACE	04/03/18	0605	2.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Johanna Pavlowsky

SIGNATURE of SAMPLER: Johanna Pavlowsky DATE Signed (MM/DD/YY): 04/02/18

*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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April 04, 2018

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

RE: Project: FORT SMITH, AR
Pace Project No.: 60267331

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on April 04, 2018. 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: Kristen Drucquer, Ramboll
Tamara House-Knight, Ramboll Environ
M. Wilson

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CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60267331

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.: 60267331

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60267331001	**TMW-32-20180403**	Water	04/03/18 16:45	04/04/18 06:30
60267331002	**TMW-33-20180403**	Water	04/03/18 16:10	04/04/18 06:30
60267331003	**TMW-31-20180403**	Water	04/03/18 17:20	04/04/18 06:30
60267331004	**TB-02-20180403**	Water	04/03/18 17:50	04/04/18 06:30

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60267331

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60267331001	**TMW-32-20180403**	EPA 5030B/8260	PGH	38	PASI-K
60267331002	**TMW-33-20180403**	EPA 5030B/8260	PGH	38	PASI-K
60267331003	**TMW-31-20180403**	EPA 5030B/8260	PGH	38	PASI-K
60267331004	**TB-02-20180403**	EPA 5030B/8260	PGH	38	PASI-K

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60267331

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 04, 2018

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.

QC Batch: 520438

B: Analyte was detected in the associated method blank.
- BLANK for HBN 520438 [MSV/8848 (Lab ID: 2130115)
  - Chloromethane

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: 520438

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

Additional Comments:

Analyte Comments:

QC Batch: 520438

1e: Sample was diluted due to the presence of high levels of sediment in the vials.
- TMW-31-20180403 (Lab ID: 60267331003)
  - 4-Bromofluorobenzene (S)

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60267331

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 04, 2018

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.: 60267331

Sample: TMW-32-20180403 **Lab ID: 60267331001** Collected: 04/03/18 16:45 Received: 04/04/18 06:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**4.2J**	ug/L	10.0	1.9	1		04/04/18 11:38	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/04/18 11:38	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/04/18 11:38	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/04/18 11:38	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/04/18 11:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/04/18 11:38	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/04/18 11:38	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/04/18 11:38	56-23-5	
Chlorobenzene	**2.3**	ug/L	1.0	0.21	1		04/04/18 11:38	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/04/18 11:38	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/04/18 11:38	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/04/18 11:38	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/04/18 11:38	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/04/18 11:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/04/18 11:38	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/04/18 11:38	75-35-4	
cis-1,2-Dichloroethene	**3.3**	ug/L	1.0	0.080	1		04/04/18 11:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/04/18 11:38	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/04/18 11:38	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/04/18 11:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/04/18 11:38	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/04/18 11:38	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/04/18 11:38	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/04/18 11:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/04/18 11:38	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/04/18 11:38	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/04/18 11:38	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/04/18 11:38	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/04/18 11:38	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/04/18 11:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/04/18 11:38	79-00-5	
Trichloroethene	**65.8**	ug/L	1.0	0.17	1		04/04/18 11:38	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/04/18 11:38	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/04/18 11:38	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/04/18 11:38	460-00-4	
1,2-Dichloroethane-d4 (S)	114	%	80-117		1		04/04/18 11:38	17060-07-0	
Toluene-d8 (S)	94	%	80-115		1		04/04/18 11:38	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/04/18 11:38		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267331

Sample: TMW-33-20180403 **Lab ID: 60267331002** Collected: 04/03/18 16:10 Received: 04/04/18 06:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**4.8J**	ug/L	10.0	1.9	1		04/04/18 11:52	67-64-1	
Benzene	**0.23J**	ug/L	1.0	0.060	1		04/04/18 11:52	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/04/18 11:52	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/04/18 11:52	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/04/18 11:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/04/18 11:52	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/04/18 11:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/04/18 11:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/04/18 11:52	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/04/18 11:52	75-00-3	
Chloroform	**0.29J**	ug/L	1.0	0.14	1		04/04/18 11:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/04/18 11:52	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/04/18 11:52	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/04/18 11:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/04/18 11:52	107-06-2	
1,1-Dichloroethene	**0.26J**	ug/L	1.0	0.20	1		04/04/18 11:52	75-35-4	
cis-1,2-Dichloroethene	**2.3**	ug/L	1.0	0.080	1		04/04/18 11:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/04/18 11:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/04/18 11:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/04/18 11:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/04/18 11:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/04/18 11:52	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/04/18 11:52	591-78-6	
Methylene chloride	**0.28J**	ug/L	1.0	0.15	1		04/04/18 11:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/04/18 11:52	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/04/18 11:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/04/18 11:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/04/18 11:52	127-18-4	
Toluene	**0.29J**	ug/L	1.0	0.17	1		04/04/18 11:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/04/18 11:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/04/18 11:52	79-00-5	
Trichloroethene	**55.8**	ug/L	1.0	0.17	1		04/04/18 11:52	79-01-6	
Vinyl chloride	**0.17J**	ug/L	1.0	0.13	1		04/04/18 11:52	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/04/18 11:52	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-119		1		04/04/18 11:52	460-00-4	
1,2-Dichloroethane-d4 (S)	114	%	80-117		1		04/04/18 11:52	17060-07-0	
Toluene-d8 (S)	98	%	80-115		1		04/04/18 11:52	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/04/18 11:52		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267331

Sample: TMW-31-20180403 **Lab ID: 60267331003** Collected: 04/03/18 17:20 Received: 04/04/18 06:30 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	50.0	9.4	5		04/04/18 12:06	67-64-1	
Benzene	ND	ug/L	5.0	0.30	5		04/04/18 12:06	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	0.95	5		04/04/18 12:06	75-27-4	
Bromoform	ND	ug/L	5.0	0.35	5		04/04/18 12:06	75-25-2	
Bromomethane	ND	ug/L	25.0	0.80	5		04/04/18 12:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0	3.0	5		04/04/18 12:06	78-93-3	
Carbon disulfide	ND	ug/L	25.0	0.60	5		04/04/18 12:06	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	0.90	5		04/04/18 12:06	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1.0	5		04/04/18 12:06	108-90-7	
Chloroethane	ND	ug/L	5.0	0.75	5		04/04/18 12:06	75-00-3	
Chloroform	ND	ug/L	5.0	0.70	5		04/04/18 12:06	67-66-3	
Chloromethane	ND	ug/L	5.0	0.40	5		04/04/18 12:06	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1.0	5		04/04/18 12:06	124-48-1	
1,1-Dichloroethane	ND	ug/L	5.0	0.25	5		04/04/18 12:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	0.60	5		04/04/18 12:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1.0	5		04/04/18 12:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.40	5		04/04/18 12:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1.0	5		04/04/18 12:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	0.80	5		04/04/18 12:06	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	0.70	5		04/04/18 12:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	0.60	5		04/04/18 12:06	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	0.90	5		04/04/18 12:06	100-41-4	
2-Hexanone	ND	ug/L	50.0	6.0	5		04/04/18 12:06	591-78-6	
Methylene chloride	**2.7J**	ug/L	5.0	0.75	5		04/04/18 12:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	2.1	5		04/04/18 12:06	108-10-1	
Styrene	ND	ug/L	5.0	0.60	5		04/04/18 12:06	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	0.75	5		04/04/18 12:06	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	0.50	5		04/04/18 12:06	127-18-4	
Toluene	ND	ug/L	5.0	0.85	5		04/04/18 12:06	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	0.55	5		04/04/18 12:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1.0	5		04/04/18 12:06	79-00-5	
Trichloroethene	ND	ug/L	5.0	0.85	5		04/04/18 12:06	79-01-6	
Vinyl chloride	ND	ug/L	5.0	0.65	5		04/04/18 12:06	75-01-4	
Xylene (Total)	ND	ug/L	15.0	2.1	5		04/04/18 12:06	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-119		5		04/04/18 12:06	460-00-4	1e
1,2-Dichloroethane-d4 (S)	107	%	80-117		5		04/04/18 12:06	17060-07-0	
Toluene-d8 (S)	95	%	80-115		5		04/04/18 12:06	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	5		04/04/18 12:06		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267331

Sample: TB-02-20180403 **Lab ID: 60267331004** Collected: 04/03/18 17:50 Received: 04/04/18 06:30 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		04/04/18 11:24	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/04/18 11:24	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/04/18 11:24	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/04/18 11:24	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/04/18 11:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/04/18 11:24	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/04/18 11:24	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/04/18 11:24	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/04/18 11:24	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/04/18 11:24	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/04/18 11:24	67-66-3	
Chloromethane	**0.19J**	ug/L	1.0	0.080	1		04/04/18 11:24	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/04/18 11:24	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/04/18 11:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/04/18 11:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/04/18 11:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/04/18 11:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/04/18 11:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/04/18 11:24	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/04/18 11:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/04/18 11:24	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/04/18 11:24	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/04/18 11:24	591-78-6	
Methylene chloride	**0.53J**	ug/L	1.0	0.15	1		04/04/18 11:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/04/18 11:24	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/04/18 11:24	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/04/18 11:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/04/18 11:24	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/04/18 11:24	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/04/18 11:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/04/18 11:24	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/04/18 11:24	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/04/18 11:24	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/04/18 11:24	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/04/18 11:24	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	80-117		1		04/04/18 11:24	17060-07-0	
Toluene-d8 (S)	97	%	80-115		1		04/04/18 11:24	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/04/18 11:24		

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60267331

QC Batch: 520438 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60267331001, 60267331002, 60267331003, 60267331004

METHOD BLANK: 2130115 Matrix: Water
Associated Lab Samples: 60267331001, 60267331002, 60267331003, 60267331004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/04/18 10:57	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/04/18 10:57	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/04/18 10:57	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/04/18 10:57	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/04/18 10:57	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/04/18 10:57	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/04/18 10:57	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/04/18 10:57	
2-Hexanone	ug/L	ND	10.0	1.2	04/04/18 10:57	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/04/18 10:57	
Acetone	ug/L	ND	10.0	1.9	04/04/18 10:57	
Benzene	ug/L	ND	1.0	0.060	04/04/18 10:57	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/04/18 10:57	
Bromoform	ug/L	ND	1.0	0.070	04/04/18 10:57	
Bromomethane	ug/L	ND	5.0	0.16	04/04/18 10:57	
Carbon disulfide	ug/L	ND	5.0	0.12	04/04/18 10:57	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/04/18 10:57	
Chlorobenzene	ug/L	ND	1.0	0.21	04/04/18 10:57	
Chloroethane	ug/L	ND	1.0	0.15	04/04/18 10:57	
Chloroform	ug/L	ND	1.0	0.14	04/04/18 10:57	
Chloromethane	ug/L	0.13J	1.0	0.080	04/04/18 10:57	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/04/18 10:57	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/04/18 10:57	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/04/18 10:57	
Ethylbenzene	ug/L	ND	1.0	0.18	04/04/18 10:57	
Methylene chloride	ug/L	ND	1.0	0.15	04/04/18 10:57	
Styrene	ug/L	ND	1.0	0.12	04/04/18 10:57	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/04/18 10:57	
Toluene	ug/L	ND	1.0	0.17	04/04/18 10:57	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/04/18 10:57	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/04/18 10:57	
Trichloroethene	ug/L	ND	1.0	0.17	04/04/18 10:57	
Vinyl chloride	ug/L	ND	1.0	0.13	04/04/18 10:57	
Xylene (Total)	ug/L	ND	3.0	0.42	04/04/18 10:57	
1,2-Dichloroethane-d4 (S)	%	108	80-117		04/04/18 10:57	
4-Bromofluorobenzene (S)	%	92	80-119		04/04/18 10:57	
Toluene-d8 (S)	%	93	80-115		04/04/18 10:57	

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

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60267331

LABORATORY CONTROL SAMPLE: 2130116

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.3	107	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	16.1	81	74-121	
1,1,2-Trichloroethane	ug/L	20	17.6	88	83-119	
1,1-Dichloroethane	ug/L	20	19.2	96	85-128	
1,1-Dichloroethene	ug/L	20	22.4	112	85-123	
1,2-Dichloroethane	ug/L	20	22.1	110	77-120	
1,2-Dichloropropane	ug/L	20	19.8	99	81-126	
2-Butanone (MEK)	ug/L	100	107	107	65-134	
2-Hexanone	ug/L	100	95.2	95	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	105	105	66-139	
Acetone	ug/L	100	123	123	62-142	
Benzene	ug/L	20	19.5	98	81-118	
Bromodichloromethane	ug/L	20	20.8	104	85-123	
Bromoform	ug/L	20	19.2	96	83-123	
Bromomethane	ug/L	20	23.6	118	39-149	
Carbon disulfide	ug/L	20	20.4	102	85-124	
Carbon tetrachloride	ug/L	20	22.1	111	85-126	
Chlorobenzene	ug/L	20	19.9	99	87-118	
Chloroethane	ug/L	20	18.2	91	73-134	
Chloroform	ug/L	20	21.7	109	85-119	
Chloromethane	ug/L	20	19.7	98	20-174	
cis-1,2-Dichloroethene	ug/L	20	18.9	94	84-121	
cis-1,3-Dichloropropene	ug/L	20	20.7	104	80-124	
Dibromochloromethane	ug/L	20	20.2	101	83-122	
Ethylbenzene	ug/L	20	19.0	95	80-118	
Methylene chloride	ug/L	20	21.4	107	81-126	
Styrene	ug/L	20	19.5	98	85-120	
Tetrachloroethene	ug/L	20	20.0	100	87-120	
Toluene	ug/L	20	18.4	92	82-118	
trans-1,2-Dichloroethene	ug/L	20	20.4	102	83-121	
trans-1,3-Dichloropropene	ug/L	20	18.8	94	80-122	
Trichloroethene	ug/L	20	21.5	107	82-120	
Vinyl chloride	ug/L	20	22.7	114	74-147	
Xylene (Total)	ug/L	60	56.6	94	81-120	
1,2-Dichloroethane-d4 (S)	%			113	80-117	
4-Bromofluorobenzene (S)	%			92	80-119	
Toluene-d8 (S)	%			94	80-115	

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.

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QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60267331

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: 520438

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1e Sample was diluted due to the presence of high levels of sediment in the vials.

B Analyte was detected in the associated method blank.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60267331

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60267331001	**TMW-32-20180403**	EPA 5030B/8260	520438		
60267331002	**TMW-33-20180403**	EPA 5030B/8260	520438		
60267331003	**TMW-31-20180403**	EPA 5030B/8260	520438		
60267331004	**TB-02-20180403**	EPA 5030B/8260	520438		

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Sample Condition Upon Receipt

WO# : 60267331

60267331

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: 266 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 3.1 **Corr. Factor** +0.2 **Corrected** 3.3

Date and initials of person examining contents: 4/4/18

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	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: 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	
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: | of

Section A Required Client Information:

Company:	Ramboll
Address:	7500 College Blvd., Ste. 925
	Overland Park, KS 66210
Email To:	thouseknight@ramboll
Phone: 913-553-5926	Fax:
Requested Due Date/TAT:	same day TAT

Section B Required Project Information:

Report To:	Tamara House-Knight
Copy To:	mwilson@ramboll.com
	nzerweller@ramboll.com
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:	Richard Mannz
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	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Analysis Test: 8260 VOCs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TMW-32-20180403	WT	G			4-3-18	1645	-	3				X					X			36067331 01
2	TMW-33-20180403	WT	G			4-3-18	1610	-	3				X					X			02
3	TMW-31-20180403	WT	G			4-3-18	1720	-	3				X					X			03
4	TB-02-20180403	WT	G			4-3-18	1750	-	2				X					X			36067331 04
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

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)
same day TAT!!	JoPawlowsky/Ramboll	4-3-18	1600	PACE	4/4/18	0630	3.3	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Johanna Pawlowsky

SIGNATURE of SAMPLER: Jo Pawlowsky DATE Signed (MM/DD/YY): 04/03/18

*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
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(913)599-5665

April 05, 2018

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

RE: Project: FORT SMITH, AR
Pace Project No.: 60267451

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on April 05, 2018. 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: Kristen Drucquer, Ramboll
Tamara House-Knight, Ramboll Environ
M. Wilson

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CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60267451

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.: 60267451

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60267451001	**TB-03-20180404**	Water	04/04/18 17:30	04/05/18 06:30
60267451002	**HP-02-20180404**	Water	04/04/18 15:05	04/05/18 06:30
60267451003	**HP-03-20180404**	Water	04/04/18 16:10	04/05/18 06:30
60267451004	**HP-04-20180404**	Water	04/04/18 16:50	04/05/18 06:30
60267451005	**HP-05-20180404**	Water	04/04/18 10:55	04/05/18 06:30
60267451006	**HP-06-20180404**	Water	04/04/18 10:00	04/05/18 06:30

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60267451

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60267451001	**TB-03-20180404**	EPA 5030B/8260	PGH	38	PASI-K
60267451002	**HP-02-20180404**	EPA 5030B/8260	PGH	38	PASI-K
60267451003	**HP-03-20180404**	EPA 5030B/8260	PGH	38	PASI-K
60267451004	**HP-04-20180404**	EPA 5030B/8260	PGH	38	PASI-K
60267451005	**HP-05-20180404**	EPA 5030B/8260	PGH	38	PASI-K
60267451006	**HP-06-20180404**	EPA 5030B/8260	PGH	38	PASI-K

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60267451

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 05, 2018

General Information:
6 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: 520582

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, AR
Pace Project No.: 60267451

Sample: TB-03-20180404 **Lab ID: 60267451001** Collected: 04/04/18 17:30 Received: 04/05/18 06:30 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		04/05/18 12:36	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/05/18 12:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/05/18 12:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/05/18 12:36	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/05/18 12:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/05/18 12:36	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/05/18 12:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/05/18 12:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/05/18 12:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/05/18 12:36	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/05/18 12:36	67-66-3	
Chloromethane	**0.20J**	ug/L	1.0	0.080	1		04/05/18 12:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/05/18 12:36	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/05/18 12:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/05/18 12:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/05/18 12:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/05/18 12:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/05/18 12:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/05/18 12:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/05/18 12:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/05/18 12:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/05/18 12:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/05/18 12:36	591-78-6	
Methylene chloride	**0.34J**	ug/L	1.0	0.15	1		04/05/18 12:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/05/18 12:36	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/05/18 12:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/05/18 12:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/05/18 12:36	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/05/18 12:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/05/18 12:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/05/18 12:36	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/05/18 12:36	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/05/18 12:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/05/18 12:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/05/18 12:36	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	80-117		1		04/05/18 12:36	17060-07-0	
Toluene-d8 (S)	92	%	80-115		1		04/05/18 12:36	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/05/18 12:36		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267451

Sample: HP-02-20180404 **Lab ID: 60267451002** Collected: 04/04/18 15:05 Received: 04/05/18 06:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**4.6J**	ug/L	10.0	1.9	1		04/05/18 12:51	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/05/18 12:51	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/05/18 12:51	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/05/18 12:51	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/05/18 12:51	74-83-9	
2-Butanone (MEK)	**6.5J**	ug/L	10.0	0.59	1		04/05/18 12:51	78-93-3	
Carbon disulfide	**0.15J**	ug/L	5.0	0.12	1		04/05/18 12:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/05/18 12:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/05/18 12:51	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/05/18 12:51	75-00-3	
Chloroform	**0.33J**	ug/L	1.0	0.14	1		04/05/18 12:51	67-66-3	
Chloromethane	**0.25J**	ug/L	1.0	0.080	1		04/05/18 12:51	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/05/18 12:51	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/05/18 12:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/05/18 12:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/05/18 12:51	75-35-4	
cis-1,2-Dichloroethene	**5.9**	ug/L	1.0	0.080	1		04/05/18 12:51	156-59-2	
trans-1,2-Dichloroethene	**0.28J**	ug/L	1.0	0.20	1		04/05/18 12:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/05/18 12:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/05/18 12:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/05/18 12:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/05/18 12:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/05/18 12:51	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/05/18 12:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/05/18 12:51	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/05/18 12:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/05/18 12:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/05/18 12:51	127-18-4	
Toluene	**0.34J**	ug/L	1.0	0.17	1		04/05/18 12:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/05/18 12:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/05/18 12:51	79-00-5	
Trichloroethene	**63.4**	ug/L	1.0	0.17	1		04/05/18 12:51	79-01-6	
Vinyl chloride	**0.16J**	ug/L	1.0	0.13	1		04/05/18 12:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/05/18 12:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/05/18 12:51	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/05/18 12:51	17060-07-0	
Toluene-d8 (S)	96	%	80-115		1		04/05/18 12:51	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/05/18 12:51		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267451

Sample: HP-03-20180404 **Lab ID: 60267451003** Collected: 04/04/18 16:10 Received: 04/05/18 06:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**6.1J**	ug/L	10.0	1.9	1		04/05/18 13:05	67-64-1	
Benzene	**0.15J**	ug/L	1.0	0.060	1		04/05/18 13:05	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/05/18 13:05	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/05/18 13:05	75-25-2	
Bromomethane	**0.53J**	ug/L	5.0	0.16	1		04/05/18 13:05	74-83-9	
2-Butanone (MEK)	**5.1J**	ug/L	10.0	0.59	1		04/05/18 13:05	78-93-3	
Carbon disulfide	**0.14J**	ug/L	5.0	0.12	1		04/05/18 13:05	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/05/18 13:05	56-23-5	
Chlorobenzene	**0.65J**	ug/L	1.0	0.21	1		04/05/18 13:05	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/05/18 13:05	75-00-3	
Chloroform	**0.57J**	ug/L	1.0	0.14	1		04/05/18 13:05	67-66-3	
Chloromethane	**0.12J**	ug/L	1.0	0.080	1		04/05/18 13:05	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/05/18 13:05	124-48-1	
1,1-Dichloroethane	**0.18J**	ug/L	1.0	0.050	1		04/05/18 13:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/05/18 13:05	107-06-2	
1,1-Dichloroethene	**0.42J**	ug/L	1.0	0.20	1		04/05/18 13:05	75-35-4	
cis-1,2-Dichloroethene	**7.9**	ug/L	1.0	0.080	1		04/05/18 13:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/05/18 13:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/05/18 13:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/05/18 13:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/05/18 13:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/05/18 13:05	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/05/18 13:05	591-78-6	
Methylene chloride	**0.37J**	ug/L	1.0	0.15	1		04/05/18 13:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/05/18 13:05	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/05/18 13:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/05/18 13:05	79-34-5	
Tetrachloroethene	**0.15J**	ug/L	1.0	0.10	1		04/05/18 13:05	127-18-4	
Toluene	**0.30J**	ug/L	1.0	0.17	1		04/05/18 13:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/05/18 13:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/05/18 13:05	79-00-5	
Trichloroethene	**244**	ug/L	5.0	0.85	5		04/05/18 14:01	79-01-6	
Vinyl chloride	**0.29J**	ug/L	1.0	0.13	1		04/05/18 13:05	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/05/18 13:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/05/18 13:05	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/05/18 13:05	17060-07-0	
Toluene-d8 (S)	94	%	80-115		1		04/05/18 13:05	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/05/18 13:05		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267451

Sample: HP-04-20180404 **Lab ID: 60267451004** Collected: 04/04/18 16:50 Received: 04/05/18 06:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**6.2J**	ug/L	10.0	1.9	1		04/05/18 13:19	67-64-1	
Benzene	**0.11J**	ug/L	1.0	0.060	1		04/05/18 13:19	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/05/18 13:19	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/05/18 13:19	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/05/18 13:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/05/18 13:19	78-93-3	
Carbon disulfide	**0.50J**	ug/L	5.0	0.12	1		04/05/18 13:19	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/05/18 13:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/05/18 13:19	108-90-7	
Chloroethane	**0.69J**	ug/L	1.0	0.15	1		04/05/18 13:19	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/05/18 13:19	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/05/18 13:19	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/05/18 13:19	124-48-1	
1,1-Dichloroethane	**0.67J**	ug/L	1.0	0.050	1		04/05/18 13:19	75-34-3	
1,2-Dichloroethane	**1.1**	ug/L	1.0	0.12	1		04/05/18 13:19	107-06-2	
1,1-Dichloroethene	**0.21J**	ug/L	1.0	0.20	1		04/05/18 13:19	75-35-4	
cis-1,2-Dichloroethene	**2.2**	ug/L	1.0	0.080	1		04/05/18 13:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/05/18 13:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/05/18 13:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/05/18 13:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/05/18 13:19	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/05/18 13:19	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/05/18 13:19	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/05/18 13:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/05/18 13:19	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/05/18 13:19	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/05/18 13:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/05/18 13:19	127-18-4	
Toluene	**1.6**	ug/L	1.0	0.17	1		04/05/18 13:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/05/18 13:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/05/18 13:19	79-00-5	
Trichloroethene	**6.6**	ug/L	1.0	0.17	1		04/05/18 13:19	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/05/18 13:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/05/18 13:19	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/05/18 13:19	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	80-117		1		04/05/18 13:19	17060-07-0	
Toluene-d8 (S)	96	%	80-115		1		04/05/18 13:19	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/05/18 13:19		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267451

Sample: HP-05-20180404 **Lab ID: 60267451005** Collected: 04/04/18 10:55 Received: 04/05/18 06:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**3.8J**	ug/L	10.0	1.9	1		04/05/18 13:33	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/05/18 13:33	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/05/18 13:33	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/05/18 13:33	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/05/18 13:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/05/18 13:33	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/05/18 13:33	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/05/18 13:33	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/05/18 13:33	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/05/18 13:33	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/05/18 13:33	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/05/18 13:33	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/05/18 13:33	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/05/18 13:33	75-34-3	
1,2-Dichloroethane	**0.68J**	ug/L	1.0	0.12	1		04/05/18 13:33	107-06-2	
1,1-Dichloroethene	**0.54J**	ug/L	1.0	0.20	1		04/05/18 13:33	75-35-4	
cis-1,2-Dichloroethene	**5.8**	ug/L	1.0	0.080	1		04/05/18 13:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/05/18 13:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/05/18 13:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/05/18 13:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/05/18 13:33	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/05/18 13:33	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/05/18 13:33	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/05/18 13:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/05/18 13:33	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/05/18 13:33	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/05/18 13:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/05/18 13:33	127-18-4	
Toluene	**0.48J**	ug/L	1.0	0.17	1		04/05/18 13:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/05/18 13:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/05/18 13:33	79-00-5	
Trichloroethene	**10.9**	ug/L	1.0	0.17	1		04/05/18 13:33	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/05/18 13:33	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/05/18 13:33	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/05/18 13:33	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	80-117		1		04/05/18 13:33	17060-07-0	
Toluene-d8 (S)	89	%	80-115		1		04/05/18 13:33	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/05/18 13:33		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267451

Sample: HP-06-20180404 **Lab ID: 60267451006** Collected: 04/04/18 10:00 Received: 04/05/18 06:30 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		04/05/18 13:47	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/05/18 13:47	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/05/18 13:47	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/05/18 13:47	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/05/18 13:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/05/18 13:47	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/05/18 13:47	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/05/18 13:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/05/18 13:47	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/05/18 13:47	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/05/18 13:47	67-66-3	
Chloromethane	**0.16J**	ug/L	1.0	0.080	1		04/05/18 13:47	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/05/18 13:47	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/05/18 13:47	75-34-3	
1,2-Dichloroethane	**0.58J**	ug/L	1.0	0.12	1		04/05/18 13:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/05/18 13:47	75-35-4	
cis-1,2-Dichloroethene	**2.7**	ug/L	1.0	0.080	1		04/05/18 13:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/05/18 13:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/05/18 13:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/05/18 13:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/05/18 13:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/05/18 13:47	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/05/18 13:47	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/05/18 13:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/05/18 13:47	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/05/18 13:47	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/05/18 13:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/05/18 13:47	127-18-4	
Toluene	**0.55J**	ug/L	1.0	0.17	1		04/05/18 13:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/05/18 13:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/05/18 13:47	79-00-5	
Trichloroethene	**7.4**	ug/L	1.0	0.17	1		04/05/18 13:47	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/05/18 13:47	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/05/18 13:47	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/05/18 13:47	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/05/18 13:47	17060-07-0	
Toluene-d8 (S)	105	%	80-115		1		04/05/18 13:47	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/05/18 13:47		

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60267451

QC Batch: 520582 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60267451001, 60267451002, 60267451003, 60267451004, 60267451005, 60267451006

METHOD BLANK: 2130773 Matrix: Water
Associated Lab Samples: 60267451001, 60267451002, 60267451003, 60267451004, 60267451005, 60267451006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/05/18 12:22	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/05/18 12:22	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/05/18 12:22	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/05/18 12:22	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/05/18 12:22	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/05/18 12:22	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/05/18 12:22	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/05/18 12:22	
2-Hexanone	ug/L	ND	10.0	1.2	04/05/18 12:22	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/05/18 12:22	
Acetone	ug/L	ND	10.0	1.9	04/05/18 12:22	
Benzene	ug/L	ND	1.0	0.060	04/05/18 12:22	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/05/18 12:22	
Bromoform	ug/L	ND	1.0	0.070	04/05/18 12:22	
Bromomethane	ug/L	ND	5.0	0.16	04/05/18 12:22	
Carbon disulfide	ug/L	ND	5.0	0.12	04/05/18 12:22	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/05/18 12:22	
Chlorobenzene	ug/L	ND	1.0	0.21	04/05/18 12:22	
Chloroethane	ug/L	ND	1.0	0.15	04/05/18 12:22	
Chloroform	ug/L	ND	1.0	0.14	04/05/18 12:22	
Chloromethane	ug/L	ND	1.0	0.080	04/05/18 12:22	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/05/18 12:22	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/05/18 12:22	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/05/18 12:22	
Ethylbenzene	ug/L	ND	1.0	0.18	04/05/18 12:22	
Methylene chloride	ug/L	ND	1.0	0.15	04/05/18 12:22	
Styrene	ug/L	ND	1.0	0.12	04/05/18 12:22	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/05/18 12:22	
Toluene	ug/L	ND	1.0	0.17	04/05/18 12:22	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/05/18 12:22	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/05/18 12:22	
Trichloroethene	ug/L	ND	1.0	0.17	04/05/18 12:22	
Vinyl chloride	ug/L	ND	1.0	0.13	04/05/18 12:22	
Xylene (Total)	ug/L	ND	3.0	0.42	04/05/18 12:22	
1,2-Dichloroethane-d4 (S)	%	104	80-117		04/05/18 12:22	
4-Bromofluorobenzene (S)	%	99	80-119		04/05/18 12:22	
Toluene-d8 (S)	%	98	80-115		04/05/18 12:22	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60267451

LABORATORY CONTROL SAMPLE: 2130774

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.8	104	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	18.5	92	74-121	
1,1,2-Trichloroethane	ug/L	20	18.9	95	83-119	
1,1-Dichloroethane	ug/L	20	20.5	102	85-128	
1,1-Dichloroethene	ug/L	20	22.4	112	85-123	
1,2-Dichloroethane	ug/L	20	22.8	114	77-120	
1,2-Dichloropropane	ug/L	20	23.7	118	81-126	
2-Butanone (MEK)	ug/L	100	122	122	65-134	
2-Hexanone	ug/L	100	101	101	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	121	121	66-139	
Acetone	ug/L	100	126	126	62-142	
Benzene	ug/L	20	20.8	104	81-118	
Bromodichloromethane	ug/L	20	21.7	109	85-123	
Bromoform	ug/L	20	18.9	94	83-123	
Bromomethane	ug/L	20	18.6	93	39-149	
Carbon disulfide	ug/L	20	21.5	108	85-124	
Carbon tetrachloride	ug/L	20	21.4	107	85-126	
Chlorobenzene	ug/L	20	19.8	99	87-118	
Chloroethane	ug/L	20	16.9	84	73-134	
Chloroform	ug/L	20	21.4	107	85-119	
Chloromethane	ug/L	20	17.7	89	20-174	
cis-1,2-Dichloroethene	ug/L	20	19.7	98	84-121	
cis-1,3-Dichloropropene	ug/L	20	22.6	113	80-124	
Dibromochloromethane	ug/L	20	18.5	92	83-122	
Ethylbenzene	ug/L	20	19.6	98	80-118	
Methylene chloride	ug/L	20	21.2	106	81-126	
Styrene	ug/L	20	19.9	100	85-120	
Tetrachloroethene	ug/L	20	19.0	95	87-120	
Toluene	ug/L	20	19.2	96	82-118	
trans-1,2-Dichloroethene	ug/L	20	20.8	104	83-121	
trans-1,3-Dichloropropene	ug/L	20	20.1	101	80-122	
Trichloroethene	ug/L	20	21.1	106	82-120	
Vinyl chloride	ug/L	20	22.3	112	74-147	
Xylene (Total)	ug/L	60	59.4	99	81-120	
1,2-Dichloroethane-d4 (S)	%			104	80-117	
4-Bromofluorobenzene (S)	%			97	80-119	
Toluene-d8 (S)	%			95	80-115	

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.

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QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60267451

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: 520582

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60267451

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60267451001	**TB-03-20180404**	EPA 5030B/8260	520582		
60267451002	**HP-02-20180404**	EPA 5030B/8260	520582		
60267451003	**HP-03-20180404**	EPA 5030B/8260	520582		
60267451004	**HP-04-20180404**	EPA 5030B/8260	520582		
60267451005	**HP-05-20180404**	EPA 5030B/8260	520582		
60267451006	**HP-06-20180404**	EPA 5030B/8260	520582		

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Sample Condition Upon Receipt

WO# : 60267451

60267451

Client Name: 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: T-2604 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 2.2 **Corr. Factor** +0.2 **Corrected** 2.4

Date and initials of person examining contents: ~~4/4/18~~ RE 4/5/18 RM

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~~ 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	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks:		
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	
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:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Ramboll	Report To:	Tamara House-Knight	Attention:	Tamara House-Knight
Address:	7500 College Blvd., Ste. 925	Copy To:	mwilson@ramboll.com	Company Name:	Environ
	Overland Park, KS 66210		nzurweller@ramboll.com	Address:	124 W. Capitol Avenue
Email To:	thouseknight@ramboll.com	Purchase Order No.:	NA	Pace Quote Reference:	Little Rock, AR 72201
Phone: 913-553-5926	Fax:	Project Name:	Fort Smith, AR	Pace Project Manager:	Richard Mannz
Requested Due Date/TAT:	same day	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 Grab ~~COMPOSITE~~ START/END DATE	TIME	COMPOSITE END/GRAB DATE	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 VOCs		Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60267451
1	TB-03-20180404	WT	G	4-4-18	1730				2				X						X	2 DGAH (TB)		001
2	HP-02-20180404	WT	G		1505				3				X						X	3 DGAH		002
3	HP-03-20180404	WT	G		1610				3				X						X			003
4	HP-04-20180404	WT	G		1650				3				X						X			004
5	HP-05-20180404	WT	G		1055				3				X						X			005
6	HP-06-20180404	WT	G		1000				3				X						X			006
7																						
8																						
9																						
10																						
11																						
12																						

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)
same day TAT	Jo Pavlowsky / Ramboll	4/4/18	1800	[signature] Cathy pas1	4/5/18 ~~4/4/18~~ 4/5/18	AR 0630	2.4	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Johanna Pavlowsky

SIGNATURE of SAMPLER: Jo Pavlowsky

DATE Signed (MM/DD/YY): 04/04/2018

*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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April 06, 2018

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

RE: Project: FORT SMITH, AR
Pace Project No.: 60267576

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on April 06, 2018. 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: Kristen Drucquer, Ramboll
Tamara House-Knight, Ramboll Environ
M. Wilson

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CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60267576

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.: 60267576

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60267576001	**TB-03-20180405**	Water	04/05/18 08:20	04/06/18 06:30
60267576002	**HP-08-20180405**	Water	04/05/18 08:20	04/06/18 06:30
60267576003	**HP-07-20180405**	Water	04/05/18 09:30	04/06/18 06:30
60267576004	**TMW-33-SHALLOW-20180405**	Water	04/05/18 12:30	04/06/18 06:30

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60267576

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60267576001	**TB-03-20180405**	EPA 5030B/8260	PGH	38	PASI-K
60267576002	**HP-08-20180405**	EPA 5030B/8260	PGH	38	PASI-K
60267576003	**HP-07-20180405**	EPA 5030B/8260	PGH	38	PASI-K
60267576004	**TMW-33-SHALLOW-20180405**	EPA 5030B/8260	PGH	38	PASI-K

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60267576

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 06, 2018

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.

QC Batch: 520784

B: Analyte was detected in the associated method blank.

- BLANK for HBN 520784 [MSV/8853 (Lab ID: 2131586)
  - Carbon disulfide
  - Chloromethane

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: 520784

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, AR
Pace Project No.: 60267576

Sample: TB-03-20180405 **Lab ID: 60267576001** Collected: 04/05/18 08:20 Received: 04/06/18 06:30 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		04/06/18 13:51	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/06/18 13:51	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/06/18 13:51	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/06/18 13:51	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/06/18 13:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/06/18 13:51	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/06/18 13:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/06/18 13:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/06/18 13:51	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/06/18 13:51	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/06/18 13:51	67-66-3	
Chloromethane	**0.23J**	ug/L	1.0	0.080	1		04/06/18 13:51	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/06/18 13:51	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/06/18 13:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/06/18 13:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/06/18 13:51	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/06/18 13:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/06/18 13:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/06/18 13:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/06/18 13:51	10061-01-5	
trans-1,3-Dichloropropene	**0.13J**	ug/L	1.0	0.12	1		04/06/18 13:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/06/18 13:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/06/18 13:51	591-78-6	
Methylene chloride	**0.39J**	ug/L	1.0	0.15	1		04/06/18 13:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/06/18 13:51	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/06/18 13:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/06/18 13:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/06/18 13:51	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/06/18 13:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/06/18 13:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/06/18 13:51	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/06/18 13:51	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/06/18 13:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/06/18 13:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-119		1		04/06/18 13:51	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/06/18 13:51	17060-07-0	
Toluene-d8 (S)	95	%	80-115		1		04/06/18 13:51	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/06/18 13:51		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267576

Sample: HP-08-20180405 **Lab ID: 60267576002** Collected: 04/05/18 08:20 Received: 04/06/18 06:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**4.5J**	ug/L	10.0	1.9	1		04/06/18 14:05	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/06/18 14:05	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/06/18 14:05	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/06/18 14:05	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/06/18 14:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/06/18 14:05	78-93-3	
Carbon disulfide	**0.17J**	ug/L	5.0	0.12	1		04/06/18 14:05	75-15-0	B
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/06/18 14:05	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/06/18 14:05	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/06/18 14:05	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/06/18 14:05	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/06/18 14:05	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/06/18 14:05	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/06/18 14:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/06/18 14:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/06/18 14:05	75-35-4	
cis-1,2-Dichloroethene	**0.34J**	ug/L	1.0	0.080	1		04/06/18 14:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/06/18 14:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/06/18 14:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/06/18 14:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/06/18 14:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/06/18 14:05	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/06/18 14:05	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/06/18 14:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/06/18 14:05	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/06/18 14:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/06/18 14:05	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/06/18 14:05	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/06/18 14:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/06/18 14:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/06/18 14:05	79-00-5	
Trichloroethene	**0.30J**	ug/L	1.0	0.17	1		04/06/18 14:05	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/06/18 14:05	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/06/18 14:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/06/18 14:05	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/06/18 14:05	17060-07-0	
Toluene-d8 (S)	96	%	80-115		1		04/06/18 14:05	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/06/18 14:05		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267576

Sample: HP-07-20180405 **Lab ID: 60267576003** Collected: 04/05/18 09:30 Received: 04/06/18 06:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.3J**	ug/L	10.0	1.9	1		04/06/18 14:19	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/06/18 14:19	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/06/18 14:19	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/06/18 14:19	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/06/18 14:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/06/18 14:19	78-93-3	
Carbon disulfide	**0.32J**	ug/L	5.0	0.12	1		04/06/18 14:19	75-15-0	B
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/06/18 14:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/06/18 14:19	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/06/18 14:19	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/06/18 14:19	67-66-3	
Chloromethane	**0.37J**	ug/L	1.0	0.080	1		04/06/18 14:19	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/06/18 14:19	124-48-1	
1,1-Dichloroethane	**0.70J**	ug/L	1.0	0.050	1		04/06/18 14:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/06/18 14:19	107-06-2	
1,1-Dichloroethene	**0.46J**	ug/L	1.0	0.20	1		04/06/18 14:19	75-35-4	
cis-1,2-Dichloroethene	**3.2**	ug/L	1.0	0.080	1		04/06/18 14:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/06/18 14:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/06/18 14:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/06/18 14:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/06/18 14:19	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/06/18 14:19	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/06/18 14:19	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/06/18 14:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/06/18 14:19	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/06/18 14:19	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/06/18 14:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/06/18 14:19	127-18-4	
Toluene	**0.22J**	ug/L	1.0	0.17	1		04/06/18 14:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/06/18 14:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/06/18 14:19	79-00-5	
Trichloroethene	**4.6**	ug/L	1.0	0.17	1		04/06/18 14:19	79-01-6	
Vinyl chloride	**0.14J**	ug/L	1.0	0.13	1		04/06/18 14:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/06/18 14:19	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/06/18 14:19	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/06/18 14:19	17060-07-0	
Toluene-d8 (S)	107	%	80-115		1		04/06/18 14:19	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/06/18 14:19		

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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267576

Sample: TMW-33-SHALLOW-20180405 **Lab ID: 60267576004** Collected: 04/05/18 12:30 Received: 04/06/18 06:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.9J**	ug/L	10.0	1.9	1		04/06/18 14:33	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/06/18 14:33	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/06/18 14:33	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/06/18 14:33	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/06/18 14:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/06/18 14:33	78-93-3	
Carbon disulfide	**0.17J**	ug/L	5.0	0.12	1		04/06/18 14:33	75-15-0	B
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/06/18 14:33	56-23-5	
Chlorobenzene	**0.45J**	ug/L	1.0	0.21	1		04/06/18 14:33	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/06/18 14:33	75-00-3	
Chloroform	**0.34J**	ug/L	1.0	0.14	1		04/06/18 14:33	67-66-3	
Chloromethane	**0.19J**	ug/L	1.0	0.080	1		04/06/18 14:33	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/06/18 14:33	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/06/18 14:33	75-34-3	
1,2-Dichloroethane	**0.15J**	ug/L	1.0	0.12	1		04/06/18 14:33	107-06-2	
1,1-Dichloroethene	**0.60J**	ug/L	1.0	0.20	1		04/06/18 14:33	75-35-4	
cis-1,2-Dichloroethene	**3.0**	ug/L	1.0	0.080	1		04/06/18 14:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/06/18 14:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/06/18 14:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/06/18 14:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/06/18 14:33	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/06/18 14:33	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/06/18 14:33	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/06/18 14:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/06/18 14:33	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/06/18 14:33	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/06/18 14:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/06/18 14:33	127-18-4	
Toluene	**0.27J**	ug/L	1.0	0.17	1		04/06/18 14:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/06/18 14:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/06/18 14:33	79-00-5	
Trichloroethene	**156**	ug/L	1.0	0.17	1		04/06/18 14:33	79-01-6	
Vinyl chloride	**0.26J**	ug/L	1.0	0.13	1		04/06/18 14:33	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/06/18 14:33	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-119		1		04/06/18 14:33	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/06/18 14:33	17060-07-0	
Toluene-d8 (S)	90	%	80-115		1		04/06/18 14:33	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/06/18 14:33		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60267576

QC Batch: 520784 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60267576001, 60267576002, 60267576003, 60267576004

METHOD BLANK: 2131586 Matrix: Water
Associated Lab Samples: 60267576001, 60267576002, 60267576003, 60267576004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/06/18 13:37	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/06/18 13:37	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/06/18 13:37	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/06/18 13:37	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/06/18 13:37	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/06/18 13:37	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/06/18 13:37	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/06/18 13:37	
2-Hexanone	ug/L	ND	10.0	1.2	04/06/18 13:37	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/06/18 13:37	
Acetone	ug/L	ND	10.0	1.9	04/06/18 13:37	
Benzene	ug/L	ND	1.0	0.060	04/06/18 13:37	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/06/18 13:37	
Bromoform	ug/L	ND	1.0	0.070	04/06/18 13:37	
Bromomethane	ug/L	ND	5.0	0.16	04/06/18 13:37	
Carbon disulfide	ug/L	0.23J	5.0	0.12	04/06/18 13:37	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/06/18 13:37	
Chlorobenzene	ug/L	ND	1.0	0.21	04/06/18 13:37	
Chloroethane	ug/L	ND	1.0	0.15	04/06/18 13:37	
Chloroform	ug/L	ND	1.0	0.14	04/06/18 13:37	
Chloromethane	ug/L	0.19J	1.0	0.080	04/06/18 13:37	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/06/18 13:37	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/06/18 13:37	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/06/18 13:37	
Ethylbenzene	ug/L	ND	1.0	0.18	04/06/18 13:37	
Methylene chloride	ug/L	ND	1.0	0.15	04/06/18 13:37	
Styrene	ug/L	ND	1.0	0.12	04/06/18 13:37	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/06/18 13:37	
Toluene	ug/L	ND	1.0	0.17	04/06/18 13:37	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/06/18 13:37	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/06/18 13:37	
Trichloroethene	ug/L	ND	1.0	0.17	04/06/18 13:37	
Vinyl chloride	ug/L	ND	1.0	0.13	04/06/18 13:37	
Xylene (Total)	ug/L	ND	3.0	0.42	04/06/18 13:37	
1,2-Dichloroethane-d4 (S)	%	97	80-117		04/06/18 13:37	
4-Bromofluorobenzene (S)	%	103	80-119		04/06/18 13:37	
Toluene-d8 (S)	%	99	80-115		04/06/18 13:37	

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.: 60267576

LABORATORY CONTROL SAMPLE: 2131587

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.4	97	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	19.3	97	74-121	
1,1,2-Trichloroethane	ug/L	20	19.4	97	83-119	
1,1-Dichloroethane	ug/L	20	20.3	101	85-128	
1,1-Dichloroethene	ug/L	20	18.2	91	85-123	
1,2-Dichloroethane	ug/L	20	20.8	104	77-120	
1,2-Dichloropropane	ug/L	20	20.9	105	81-126	
2-Butanone (MEK)	ug/L	100	105	105	65-134	
2-Hexanone	ug/L	100	109	109	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	108	108	66-139	
Acetone	ug/L	100	88.3	88	62-142	
Benzene	ug/L	20	20.2	101	81-118	
Bromodichloromethane	ug/L	20	19.9	99	85-123	
Bromoform	ug/L	20	20.5	102	83-123	
Bromomethane	ug/L	20	19.0	95	39-149	
Carbon disulfide	ug/L	20	19.6	98	85-124	
Carbon tetrachloride	ug/L	20	20.3	101	85-126	
Chlorobenzene	ug/L	20	19.7	99	87-118	
Chloroethane	ug/L	20	15.6	78	73-134	
Chloroform	ug/L	20	20.4	102	85-119	
Chloromethane	ug/L	20	18.6	93	20-174	
cis-1,2-Dichloroethene	ug/L	20	20.2	101	84-121	
cis-1,3-Dichloropropene	ug/L	20	20.6	103	80-124	
Dibromochloromethane	ug/L	20	20.6	103	83-122	
Ethylbenzene	ug/L	20	20.0	100	80-118	
Methylene chloride	ug/L	20	19.5	98	81-126	
Styrene	ug/L	20	21.1	106	85-120	
Tetrachloroethene	ug/L	20	19.9	99	87-120	
Toluene	ug/L	20	19.7	98	82-118	
trans-1,2-Dichloroethene	ug/L	20	20.5	102	83-121	
trans-1,3-Dichloropropene	ug/L	20	20.0	100	80-122	
Trichloroethene	ug/L	20	19.4	97	82-120	
Vinyl chloride	ug/L	20	21.9	109	74-147	
Xylene (Total)	ug/L	60	59.9	100	81-120	
1,2-Dichloroethane-d4 (S)	%			103	80-117	
4-Bromofluorobenzene (S)	%			100	80-119	
Toluene-d8 (S)	%			101	80-115	

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.

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QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60267576

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: 520784

[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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60267576

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60267576001	**TB-03-20180405**	EPA 5030B/8260	520784		
60267576002	**HP-08-20180405**	EPA 5030B/8260	520784		
60267576003	**HP-07-20180405**	EPA 5030B/8260	520784		
60267576004	**TMW-33-SHALLOW-20180405**	EPA 5030B/8260	520784		

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Sample Condition Upon Receipt

WO# : 60267576

60267576

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: 266 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 3.5 **Corr. Factor** +0.2 **Corrected** 3.7

Date and initials of person examining contents: JM 4/6/18

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	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: 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	
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: of

Section A Required Client Information:

Company: Ramboll
Address: 7500 College Blvd., Ste. 925
Overland Park, KS 66210
Email To: thouseknight@ramboll.com
Phone: 913-553-5926 Fax:
Requested Due Date/TAT: Same Day TAT

Section B Required Project Information:

Report To: Tamara House-Knight
Copy To: nzurweller@ramboll.com
mmilson@ramboll.com
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: Richard Mannz
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	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: 8260 VOCs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TB-03-20180405	WT	G			4-5-18	-		2				X				X			60267576 2(DEAH) 01
2	HP-08-20180405	WT	G				0820		3				X				X			3(DEAH) 02
3*	HP-07-20180405	WT	G				0930		3				X				X			03
4	MW-33-SHALLOW-20180405	WT	G				1230		3				X				X			04
5	HP-09-20180405	WT	G				1550		~~2~~ 3				X				X			2(DEAH) 05
6																				
7																				
8																				
9																				
10																				
11																				
12																				

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)
Same Day TAT	Nick Zurweller/Ramboll	4/5/18	1800	[signature] /PACE	4/6/18	0630	3.7	Y	Y	Y
*line item 3 is "HP-07-20180405"										
Hold ~~HP-07-20180405~~, NT2										
~~HP-08-20180405~~ + NT2										
HP-09-20180405 ← Hold										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nick Zurweller
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 4/5/18

*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

April 19, 2018

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

RE: Project: FORT SMITH, AR
Pace Project No.: 60267577

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on April 06, 2018. 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: Kristen Drucquer, Ramboll
Tamara House-Knight, Ramboll Environ
M. Wilson

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Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: FORT SMITH, AR
Pace Project No.: 60267577

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60267577001	**TMW-32-SL(23-24FT)-040318**	Solid	04/03/18 11:15	04/06/18 06:30
60267577002	**TMW-33-SL(23-24FT)-040318**	Solid	04/03/18 11:15	04/06/18 06:30

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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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Pace Analytical®
www.pacelabs.com

Sample Condition Upon Receipt

WO# : 60267577

60267577

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: 166 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 4.6 **Corr. Factor** +0.2 **Corrected** 4.8

Date and initials of person examining contents: CJ 4/6/18

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: 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	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: 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	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State: AR	☐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.

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:	Standard

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. Capital Avenue
Pace Quote Reference:	Little Rock, AR 72201
Pace Project Manager:	Richard Mannz
Pace Profile #:	7444

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	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Analysis Test: TOC 9060A	CO2 Calc (Alkalinity +pH)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TMW-32-SL(23-24FT)-040318	SL	G			4/3/18	1115		1	X								X	X			WEKW 60567577 001
2	TMW-33-SL(23-24FT)-040518	SL	G			4/5/18	1115		1	X								X	X			002
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

Requested Analysis Filtered (Y/N)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Level IV data package required	Ramboll	4/5/18	1800	PACE	4/6/18	0830	4.8	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nick Zurmeller

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 4/5/18

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.

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: 490-149734-1
Client Project/Site: Fort Smith, AR

For:
Pace Analytical Services, LLC
9608 Loiret Boulevard
Lenexa, Kansas 66219

Attn: Richard Mannz

Roxanne Cisneros

Authorized for release by:
4/19/2018 10:42:21 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Certification Summary 12
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Sample Summary

Client: Pace Analytical Services, LLC
Project/Site: Fort Smith, AR

TestAmerica Job ID: 490-149734-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-149734-1	TMW-32-SL(23-24FT)-040318	Solid	04/03/18 11:15	04/10/18 09:20
490-149734-2	TMW-33-SL(23-24FT)-040318	Solid	04/03/18 11:15	04/10/18 09:20

Case Narrative

Client: Pace Analytical Services, LLC
Project/Site: Fort Smith, AR

TestAmerica Job ID: 490-149734-1

Job ID: 490-149734-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-149734-1

Comments
No additional comments.

Receipt
The samples were received on 4/10/2018 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.6º C.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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: Fort Smith, AR

TestAmerica Job ID: 490-149734-1

Client Sample ID: TMW-32-SL(23-24FT)-040318
Date Collected: 04/03/18 11:15
Date Received: 04/10/18 09:20

Lab Sample ID: 490-149734-1
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1000	600	mg/Kg			04/18/18 09:34	1

Client: Pace Analytical Services, LLC
Project/Site: Fort Smith, AR

TestAmerica Job ID: 490-149734-1

Client Sample ID: TMW-33-SL(23-24FT)-040318
Date Collected: 04/03/18 11:15
Date Received: 04/10/18 09:20

Lab Sample ID: 490-149734-2
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1000	600	mg/Kg			04/18/18 09:34	1

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 490-508517/3
Matrix: Solid
Analysis Batch: 508517

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			04/16/18 09:38	1

Lab Sample ID: LCS 490-508517/2
Matrix: Solid
Analysis Batch: 508517

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	31520		mg/Kg		105	80 - 120		

Lab Sample ID: 500-142986-A-27 DU
Matrix: Solid
Analysis Batch: 508517

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	50500			51100		mg/Kg				1	20

QC Association Summary

Client: Pace Analytical Services, LLC
Project/Site: Fort Smith, AR

TestAmerica Job ID: 490-149734-1

General Chemistry

Analysis Batch: 508517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-149734-1	TMW-32-SL(23-24FT)-040318	Total/NA	Solid	9060A	
490-149734-2	TMW-33-SL(23-24FT)-040318	Total/NA	Solid	9060A	
MB 490-508517/3	Method Blank	Total/NA	Solid	9060A	
LCS 490-508517/2	Lab Control Sample	Total/NA	Solid	9060A	
500-142986-A-27 DU	Duplicate	Total/NA	Solid	9060A	

Lab Chronicle

Client: Pace Analytical Services, LLC
Project/Site: Fort Smith, AR

TestAmerica Job ID: 490-149734-1

Client Sample ID: TMW-32-SL(23-24FT)-040318

Lab Sample ID: 490-149734-1

Date Collected: 04/03/18 11:15

Matrix: Solid

Date Received: 04/10/18 09:20

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			508517	04/18/18 09:34	CLJ	TAL NSH

Client Sample ID: TMW-33-SL(23-24FT)-040318

Lab Sample ID: 490-149734-2

Date Collected: 04/03/18 11:15

Matrix: Solid

Date Received: 04/10/18 09:20

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			508517	04/18/18 09:34	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: Fort Smith, AR

TestAmerica Job ID: 490-149734-1

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: Fort Smith, AR

TestAmerica Job ID: 490-149734-1

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	10-31-18

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
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Nashville, TN

COOLER RECEIPT FORM

490-149734 Chain of Custody

Cooler Received/Opened On 4/10/2018 @ 0920

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 0840 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID _____160406069_____ pH Strip Lot_____ Chlorine Strip Lot_____

2. Temperature of rep. sample or temp blank when opened: 2.6 *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: 1 (Front)

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) 2.2

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 # NA

I certify that I unloaded the cooler and answered questions 7-14 (intial) EA

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) EA

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) EA

I certify that I attached a label with the unique LIMS number to each container (intial) EA

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: 60267577 **Workorder Name:** FORT SMITH, AR **Results Requested By:** 4/20/2018

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 State of Sample Origin:	Test America Nashville 2960 Foster Creighton Drive Nashville, TN 37204 (615)726-0177 Attention: Sample receiving PM: Roxanne Cisneros	P.O._____

Requested Analysis

Loc: 490
149734

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	TOC 9060A	LAB USE ONLY
1	TMW-32-SL(23-24FT)-040318	4/3/2018 11:15	60267577001	Solid		X	
2	TMW-33-SL(23-24FT)-040318	4/3/2018 11:15	60267577002	Solid		X	
3							
4							
5							

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	E Brockett / Pasi	4/9/18 1629	[signature] TA-NAS	4-10-18 920	2.6
2					
3					

Cooler Temperature on Receipt ____ °C | Custody Seal Y or N | Received on Ice Y or N | Samples Intact Y or N

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

April 26, 2018

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

RE: Project: FORT SMITH, AR
Pace Project No.: 60268487

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on April 18, 2018. 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: Kristen Drucquer, Ramboll
Tamara House-Knight, Ramboll Environ
M. Wilson

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

CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60268487

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

SAMPLE SUMMARY

Project: FORT SMITH, AR
Pace Project No.: 60268487

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60268487001	**MW-196-201804**	Water	04/17/18 12:10	04/18/18 06:45
60268487002	**MW-195-201804**	Water	04/17/18 13:50	04/18/18 06:45
60268487003	**DUP-02-201804**	Water	04/17/18 13:50	04/18/18 06:45
60268487004	**MW-68-201804**	Water	04/17/18 15:15	04/18/18 06:45
60268487005	**TMW-20-201804**	Water	04/17/18 12:45	04/18/18 06:45
60268487006	**TMW-29-201804**	Water	04/17/18 15:00	04/18/18 06:45
60268487007	**MW-60R-201804**	Water	04/17/18 12:55	04/18/18 06:45
60268487008	**MW-61R-201804**	Water	04/17/18 14:00	04/18/18 06:45
60268487009	**MW-62R-201804**	Water	04/17/18 15:10	04/18/18 06:45
60268487010	**MW-194-201804**	Water	04/17/18 16:00	04/18/18 06:45
60268487011	**TMW-11-201804**	Water	04/17/18 12:50	04/18/18 06:45
60268487012	**MW-50R-201804**	Water	04/17/18 14:45	04/18/18 06:45
60268487013	**MW-176-201804**	Water	04/17/18 13:50	04/18/18 06:45
60268487014	**EB-01-201804**	Water	04/17/18 16:10	04/18/18 06:45
60268487015	**MW-63R-201804**	Water	04/17/18 16:20	04/18/18 06:45
60268487016	**DUP-01-201804**	Water	04/17/18 16:20	04/18/18 06:45
60268487017	**MW-40R-201804**	Water	04/17/18 16:18	04/18/18 06:45
60268487018	**EB-02-201804**	Water	04/17/18 16:30	04/18/18 06:45
60268487019	**TB-01-201804**	Water	04/17/18 12:10	04/18/18 06:45

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60268487

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60268487001	MW-196-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487002	MW-195-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487003	DUP-02-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487004	MW-68-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487005	TMW-20-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487006	TMW-29-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487007	MW-60R-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487008	MW-61R-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487009	MW-62R-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487010	MW-194-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487011	TMW-11-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487012	MW-50R-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487013	MW-176-201804	EPA 5030B/8260	JTK, PGH	38	PASI-K
60268487014	EB-01-201804	EPA 5030B/8260	JTK	38	PASI-K
60268487015	MW-63R-201804	EPA 5030B/8260	JTK	38	PASI-K
60268487016	DUP-01-201804	EPA 5030B/8260	JTK	38	PASI-K
60268487017	MW-40R-201804	EPA 5030B/8260	JTK	38	PASI-K
60268487018	EB-02-201804	EPA 5030B/8260	JTK	38	PASI-K
60268487019	TB-01-201804	EPA 5030B/8260	JTK	38	PASI-K

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60268487

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 26, 2018

General Information:
19 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: 522579

B: Analyte was detected in the associated method blank.
- BLANK for HBN 522579 [MSV/8880 (Lab ID: 2139391)
  - Bromomethane

QC Batch: 522630

B: Analyte was detected in the associated method blank.
- BLANK for HBN 522630 [MSV/8880 (Lab ID: 2139687)
  - 1,2-Dichloroethane

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

QC Batch: 522630

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
- LCS (Lab ID: 2139688)
  - Chloroethane

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

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60268487

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 26, 2018

QC Batch: 522579

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60268487001,60268487011

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

- MSD (Lab ID: 2139396)
  - Chloroethane

R1: RPD value was outside control limits.

- MSD (Lab ID: 2139396)
  - 1,1-Dichloroethene
  - Chlorobenzene
  - Chloroethane
  - Tetrachloroethene

QC Batch: 522630

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60268532011

R1: RPD value was outside control limits.

- MSD (Lab ID: 2139690)
  - 1,1,1-Trichloroethane
  - 1,1,2-Trichloroethane
  - 1,1-Dichloroethane
  - 1,1-Dichloroethene
  - 1,2-Dichloropropane
  - 2-Hexanone
  - 4-Methyl-2-pentanone (MIBK)
  - Bromodichloromethane
  - Bromoform
  - Carbon disulfide
  - Chlorobenzene
  - Chloroform
  - Dibromochloromethane
  - Tetrachloroethene
  - Trichloroethene
  - cis-1,2-Dichloroethene
  - cis-1,3-Dichloropropene
  - trans-1,2-Dichloroethene
  - trans-1,3-Dichloropropene

QC Batch: 523156

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, AR
Pace Project No.: 60268487

Sample: MW-196-201804 **Lab ID: 60268487001** Collected: 04/17/18 12:10 Received: 04/18/18 06:45 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		04/20/18 18:20	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 18:20	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 18:20	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 18:20	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 18:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 18:20	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 18:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 18:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 18:20	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 18:20	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 18:20	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 18:20	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 18:20	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 18:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 18:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 18:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 18:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 18:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 18:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 18:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 18:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 18:20	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 18:20	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 18:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 18:20	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 18:20	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 18:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 18:20	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 18:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 18:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 18:20	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 18:20	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 18:20	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 18:20	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-119		1		04/20/18 18:20	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/20/18 18:20	17060-07-0	
Toluene-d8 (S)	102	%	80-115		1		04/20/18 18:20	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 18:20		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-195-201804 **Lab ID: 60268487002** Collected: 04/17/18 13:50 Received: 04/18/18 06:45 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		04/20/18 19:02	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 19:02	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 19:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 19:02	75-25-2	
Bromomethane	**0.61J**	ug/L	5.0	0.16	1		04/20/18 19:02	74-83-9	B
2-Butanone (MEK)	**1.4J**	ug/L	10.0	0.59	1		04/20/18 19:02	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 19:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 19:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 19:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:02	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 19:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 19:02	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 19:02	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 19:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 19:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 19:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 19:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 19:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 19:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 19:02	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 19:02	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 19:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	**1.1J**	ug/L	10.0	0.42	1		04/20/18 19:02	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 19:02	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 19:02	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 19:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 19:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 19:02	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 19:02	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 19:02	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 19:02	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-119		1		04/20/18 19:02	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/20/18 19:02	17060-07-0	
Toluene-d8 (S)	103	%	80-115		1		04/20/18 19:02	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 19:02		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: DUP-02-201804 **Lab ID: 60268487003** Collected: 04/17/18 13:50 Received: 04/18/18 06:45 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		04/20/18 19:16	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 19:16	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 19:16	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 19:16	75-25-2	
Bromomethane	**0.52J**	ug/L	5.0	0.16	1		04/20/18 19:16	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 19:16	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 19:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 19:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 19:16	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:16	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 19:16	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 19:16	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 19:16	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 19:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 19:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 19:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 19:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 19:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 19:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 19:16	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 19:16	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 19:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 19:16	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 19:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 19:16	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 19:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 19:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 19:16	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 19:16	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 19:16	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 19:16	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-119		1		04/20/18 19:16	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/20/18 19:16	17060-07-0	
Toluene-d8 (S)	103	%	80-115		1		04/20/18 19:16	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 19:16		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-68-201804 **Lab ID: 60268487004** Collected: 04/17/18 15:15 Received: 04/18/18 06:45 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		04/20/18 19:30	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 19:30	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 19:30	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 19:30	75-25-2	
Bromomethane	**0.44J**	ug/L	5.0	0.16	1		04/20/18 19:30	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 19:30	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 19:30	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 19:30	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 19:30	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:30	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 19:30	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 19:30	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 19:30	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 19:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 19:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 19:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 19:30	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 19:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 19:30	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 19:30	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 19:30	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 19:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 19:30	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 19:30	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:30	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 19:30	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 19:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 19:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 19:30	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 19:30	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 19:30	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 19:30	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-119		1		04/20/18 19:30	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-117		1		04/20/18 19:30	17060-07-0	
Toluene-d8 (S)	103	%	80-115		1		04/20/18 19:30	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 19:30		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: TMW-20-201804 **Lab ID: 60268487005** Collected: 04/17/18 12:45 Received: 04/18/18 06:45 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		04/20/18 19:44	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 19:44	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 19:44	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 19:44	75-25-2	
Bromomethane	**0.41J**	ug/L	5.0	0.16	1		04/20/18 19:44	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 19:44	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 19:44	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 19:44	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 19:44	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:44	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 19:44	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 19:44	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 19:44	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 19:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 19:44	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 19:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 19:44	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 19:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 19:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 19:44	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 19:44	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 19:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 19:44	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 19:44	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:44	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 19:44	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 19:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 19:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 19:44	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 19:44	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 19:44	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 19:44	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-119		1		04/20/18 19:44	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/20/18 19:44	17060-07-0	
Toluene-d8 (S)	103	%	80-115		1		04/20/18 19:44	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 19:44		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: TMW-29-201804 **Lab ID: 60268487006** Collected: 04/17/18 15:00 Received: 04/18/18 06:45 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		04/20/18 19:59	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 19:59	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 19:59	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 19:59	75-25-2	
Bromomethane	**0.47J**	ug/L	5.0	0.16	1		04/20/18 19:59	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 19:59	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 19:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 19:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 19:59	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:59	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 19:59	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 19:59	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 19:59	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 19:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 19:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 19:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 19:59	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 19:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 19:59	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 19:59	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 19:59	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 19:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 19:59	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 19:59	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 19:59	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 19:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 19:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 19:59	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 19:59	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 19:59	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 19:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	92	%	80-119		1		04/20/18 19:59	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/20/18 19:59	17060-07-0	
Toluene-d8 (S)	102	%	80-115		1		04/20/18 19:59	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 19:59		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-60R-201804 **Lab ID: 60268487007** Collected: 04/17/18 12:55 Received: 04/18/18 06:45 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		04/20/18 20:13	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 20:13	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 20:13	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 20:13	75-25-2	
Bromomethane	**0.30J**	ug/L	5.0	0.16	1		04/20/18 20:13	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 20:13	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 20:13	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 20:13	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 20:13	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 20:13	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 20:13	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 20:13	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 20:13	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 20:13	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 20:13	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 20:13	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 20:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 20:13	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 20:13	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 20:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 20:13	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 20:13	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 20:13	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 20:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 20:13	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 20:13	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 20:13	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 20:13	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 20:13	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 20:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 20:13	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 20:13	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 20:13	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 20:13	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-119		1		04/20/18 20:13	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/20/18 20:13	17060-07-0	
Toluene-d8 (S)	103	%	80-115		1		04/20/18 20:13	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 20:13		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-61R-201804 **Lab ID: 60268487008** Collected: 04/17/18 14:00 Received: 04/18/18 06:45 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		04/20/18 21:51	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 21:51	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 21:51	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 21:51	75-25-2	
Bromomethane	**0.80J**	ug/L	5.0	0.16	1		04/20/18 21:51	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 21:51	78-93-3	
Carbon disulfide	**0.46J**	ug/L	5.0	0.12	1		04/20/18 21:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 21:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 21:51	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 21:51	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 21:51	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 21:51	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 21:51	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 21:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 21:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 21:51	75-35-4	
cis-1,2-Dichloroethene	**1.9**	ug/L	1.0	0.080	1		04/20/18 21:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 21:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 21:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 21:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 21:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 21:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 21:51	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 21:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	**0.93J**	ug/L	10.0	0.42	1		04/20/18 21:51	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 21:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 21:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 21:51	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 21:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 21:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 21:51	79-00-5	
Trichloroethene	**4.0**	ug/L	1.0	0.17	1		04/20/18 21:51	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 21:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 21:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-119		1		04/20/18 21:51	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/20/18 21:51	17060-07-0	
Toluene-d8 (S)	104	%	80-115		1		04/20/18 21:51	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 21:51		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-62R-201804 **Lab ID: 60268487009** Collected: 04/17/18 15:10 Received: 04/18/18 06:45 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		04/20/18 20:27	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 20:27	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 20:27	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 20:27	75-25-2	
Bromomethane	**0.46J**	ug/L	5.0	0.16	1		04/20/18 20:27	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 20:27	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 20:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 20:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 20:27	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 20:27	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 20:27	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 20:27	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 20:27	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 20:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 20:27	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 20:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 20:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 20:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 20:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 20:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 20:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 20:27	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 20:27	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 20:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 20:27	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 20:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 20:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 20:27	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 20:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 20:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 20:27	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 20:27	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 20:27	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 20:27	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-119		1		04/20/18 20:27	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/20/18 20:27	17060-07-0	
Toluene-d8 (S)	103	%	80-115		1		04/20/18 20:27	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 20:27		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-194-201804 **Lab ID: 60268487010** Collected: 04/17/18 16:00 Received: 04/18/18 06:45 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		04/20/18 20:41	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 20:41	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 20:41	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 20:41	75-25-2	
Bromomethane	**0.37J**	ug/L	5.0	0.16	1		04/20/18 20:41	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 20:41	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 20:41	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 20:41	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 20:41	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 20:41	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 20:41	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 20:41	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 20:41	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 20:41	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 20:41	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 20:41	75-35-4	
cis-1,2-Dichloroethene	**0.57J**	ug/L	1.0	0.080	1		04/20/18 20:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 20:41	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 20:41	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 20:41	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 20:41	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 20:41	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 20:41	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 20:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 20:41	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 20:41	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 20:41	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 20:41	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 20:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 20:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 20:41	79-00-5	
Trichloroethene	**9.4**	ug/L	1.0	0.17	1		04/20/18 20:41	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 20:41	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 20:41	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-119		1		04/20/18 20:41	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/20/18 20:41	17060-07-0	
Toluene-d8 (S)	103	%	80-115		1		04/20/18 20:41	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 20:41		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: TMW-11-201804 **Lab ID: 60268487011** Collected: 04/17/18 12:50 Received: 04/18/18 06:45 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		04/20/18 21:09	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 21:09	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 21:09	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 21:09	75-25-2	
Bromomethane	**0.42J**	ug/L	5.0	0.16	1		04/20/18 21:09	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 21:09	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 21:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 21:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 21:09	108-90-7	R1
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 21:09	75-00-3	M1,R1
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 21:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 21:09	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 21:09	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 21:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 21:09	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 21:09	75-35-4	R1
cis-1,2-Dichloroethene	**1.2**	ug/L	1.0	0.080	1		04/20/18 21:09	156-59-2	
trans-1,2-Dichloroethene	**0.22J**	ug/L	1.0	0.20	1		04/20/18 21:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 21:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 21:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 21:09	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 21:09	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 21:09	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 21:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 21:09	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 21:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 21:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 21:09	127-18-4	R1
Toluene	**0.43J**	ug/L	1.0	0.17	1		04/20/18 21:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 21:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 21:09	79-00-5	
Trichloroethene	**0.67J**	ug/L	1.0	0.17	1		04/20/18 21:09	79-01-6	
Vinyl chloride	**0.59J**	ug/L	1.0	0.13	1		04/20/18 21:09	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 21:09	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-119		1		04/20/18 21:09	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/20/18 21:09	17060-07-0	
Toluene-d8 (S)	104	%	80-115		1		04/20/18 21:09	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 21:09		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-50R-201804 **Lab ID: 60268487012** Collected: 04/17/18 14:45 Received: 04/18/18 06:45 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		04/20/18 20:55	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 20:55	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 20:55	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 20:55	75-25-2	
Bromomethane	**0.38J**	ug/L	5.0	0.16	1		04/20/18 20:55	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 20:55	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 20:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 20:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 20:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 20:55	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 20:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 20:55	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 20:55	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 20:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 20:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 20:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 20:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 20:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 20:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 20:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 20:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 20:55	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 20:55	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 20:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 20:55	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 20:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 20:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 20:55	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 20:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 20:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 20:55	79-00-5	
Trichloroethene	**0.61J**	ug/L	1.0	0.17	1		04/20/18 20:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 20:55	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 20:55	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-119		1		04/20/18 20:55	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/20/18 20:55	17060-07-0	
Toluene-d8 (S)	103	%	80-115		1		04/20/18 20:55	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 20:55		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-176-201804 **Lab ID: 60268487013** Collected: 04/17/18 13:50 Received: 04/18/18 06:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**33.2**	ug/L	10.0	1.9	1		04/21/18 01:26	67-64-1	
Benzene	**0.27J**	ug/L	1.0	0.060	1		04/21/18 01:26	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 01:26	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 01:26	75-25-2	
Bromomethane	**1.5J**	ug/L	5.0	0.16	1		04/21/18 01:26	74-83-9	
2-Butanone (MEK)	**1.7J**	ug/L	10.0	0.59	1		04/21/18 01:26	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 01:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 01:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 01:26	108-90-7	
Chloroethane	**0.31J**	ug/L	1.0	0.15	1		04/21/18 01:26	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 01:26	67-66-3	
Chloromethane	**0.16J**	ug/L	1.0	0.080	1		04/21/18 01:26	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 01:26	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 01:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/21/18 01:26	107-06-2	
1,1-Dichloroethene	**2.8**	ug/L	1.0	0.20	1		04/21/18 01:26	75-35-4	
cis-1,2-Dichloroethene	**105**	ug/L	1.0	0.080	1		04/21/18 01:26	156-59-2	
trans-1,2-Dichloroethene	**1.6**	ug/L	1.0	0.20	1		04/21/18 01:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 01:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 01:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 01:26	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 01:26	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 01:26	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 01:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 01:26	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 01:26	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 01:26	79-34-5	
Tetrachloroethene	**0.17J**	ug/L	1.0	0.10	1		04/21/18 01:26	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 01:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 01:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 01:26	79-00-5	
Trichloroethene	**426**	ug/L	10.0	1.7	10		04/25/18 14:51	79-01-6	
Vinyl chloride	**1.1**	ug/L	1.0	0.13	1		04/21/18 01:26	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 01:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 01:26	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/21/18 01:26	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/21/18 01:26	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 01:26		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: EB-01-201804 **Lab ID: 60268487014** Collected: 04/17/18 16:10 Received: 04/18/18 06:45 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		04/21/18 01:41	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 01:41	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 01:41	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 01:41	75-25-2	
Bromomethane	**1.5J**	ug/L	5.0	0.16	1		04/21/18 01:41	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 01:41	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 01:41	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 01:41	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 01:41	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 01:41	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 01:41	67-66-3	
Chloromethane	**0.10J**	ug/L	1.0	0.080	1		04/21/18 01:41	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 01:41	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 01:41	75-34-3	
1,2-Dichloroethane	**0.25J**	ug/L	1.0	0.12	1		04/21/18 01:41	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 01:41	75-35-4	
cis-1,2-Dichloroethene	**0.18J**	ug/L	1.0	0.080	1		04/21/18 01:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 01:41	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 01:41	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 01:41	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 01:41	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 01:41	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 01:41	591-78-6	
Methylene chloride	**0.46J**	ug/L	1.0	0.15	1		04/21/18 01:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 01:41	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 01:41	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 01:41	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 01:41	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 01:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 01:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 01:41	79-00-5	
Trichloroethene	**0.50J**	ug/L	1.0	0.17	1		04/21/18 01:41	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 01:41	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 01:41	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 01:41	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 01:41	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 01:41	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 01:41		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-63R-201804 **Lab ID: 60268487015** Collected: 04/17/18 16:20 Received: 04/18/18 06:45 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		04/21/18 01:56	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 01:56	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 01:56	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 01:56	75-25-2	
Bromomethane	**1.4J**	ug/L	5.0	0.16	1		04/21/18 01:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 01:56	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 01:56	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 01:56	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 01:56	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 01:56	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 01:56	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 01:56	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 01:56	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 01:56	75-34-3	
1,2-Dichloroethane	**0.22J**	ug/L	1.0	0.12	1		04/21/18 01:56	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 01:56	75-35-4	
cis-1,2-Dichloroethene	**0.44J**	ug/L	1.0	0.080	1		04/21/18 01:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 01:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 01:56	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 01:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 01:56	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 01:56	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 01:56	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 01:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 01:56	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 01:56	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 01:56	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 01:56	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 01:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 01:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 01:56	79-00-5	
Trichloroethene	**4.8**	ug/L	1.0	0.17	1		04/21/18 01:56	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 01:56	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 01:56	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 01:56	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 01:56	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 01:56	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 01:56		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: DUP-01-201804 **Lab ID: 60268487016** Collected: 04/17/18 16:20 Received: 04/18/18 06:45 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		04/21/18 02:11	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 02:11	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 02:11	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 02:11	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 02:11	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 02:11	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 02:11	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 02:11	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 02:11	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 02:11	75-00-3	L2
Chloroform	**0.15J**	ug/L	1.0	0.14	1		04/21/18 02:11	67-66-3	
Chloromethane	**0.13J**	ug/L	1.0	0.080	1		04/21/18 02:11	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 02:11	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 02:11	75-34-3	
1,2-Dichloroethane	**0.20J**	ug/L	1.0	0.12	1		04/21/18 02:11	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 02:11	75-35-4	
cis-1,2-Dichloroethene	**0.38J**	ug/L	1.0	0.080	1		04/21/18 02:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 02:11	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 02:11	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 02:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 02:11	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 02:11	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 02:11	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 02:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 02:11	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 02:11	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 02:11	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 02:11	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 02:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 02:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 02:11	79-00-5	
Trichloroethene	**4.9**	ug/L	1.0	0.17	1		04/21/18 02:11	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 02:11	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 02:11	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 02:11	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 02:11	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 02:11	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 02:11		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-40R-201804 **Lab ID: 60268487017** Collected: 04/17/18 16:18 Received: 04/18/18 06:45 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		04/21/18 02:26	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 02:26	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 02:26	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 02:26	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 02:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 02:26	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 02:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 02:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 02:26	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 02:26	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 02:26	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 02:26	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 02:26	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 02:26	75-34-3	
1,2-Dichloroethane	**0.22J**	ug/L	1.0	0.12	1		04/21/18 02:26	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 02:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 02:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 02:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 02:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 02:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 02:26	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 02:26	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 02:26	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 02:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 02:26	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 02:26	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 02:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 02:26	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 02:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 02:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 02:26	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 02:26	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 02:26	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 02:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 02:26	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 02:26	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 02:26	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 02:26		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: EB-02-201804 **Lab ID: 60268487018** Collected: 04/17/18 16:30 Received: 04/18/18 06:45 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		04/21/18 02:41	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 02:41	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 02:41	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 02:41	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 02:41	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 02:41	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 02:41	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 02:41	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 02:41	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 02:41	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 02:41	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 02:41	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 02:41	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 02:41	75-34-3	
1,2-Dichloroethane	**0.23J**	ug/L	1.0	0.12	1		04/21/18 02:41	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 02:41	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 02:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 02:41	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 02:41	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 02:41	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 02:41	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 02:41	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 02:41	591-78-6	
Methylene chloride	**0.47J**	ug/L	1.0	0.15	1		04/21/18 02:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 02:41	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 02:41	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 02:41	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 02:41	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 02:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 02:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 02:41	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 02:41	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 02:41	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 02:41	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/21/18 02:41	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 02:41	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 02:41	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 02:41		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: TB-01-201804 **Lab ID: 60268487019** Collected: 04/17/18 12:10 Received: 04/18/18 06:45 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		04/21/18 02:57	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 02:57	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 02:57	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 02:57	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 02:57	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 02:57	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 02:57	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 02:57	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 02:57	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 02:57	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 02:57	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 02:57	74-87-3	
Dibromochloromethane	**0.22J**	ug/L	1.0	0.21	1		04/21/18 02:57	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 02:57	75-34-3	
1,2-Dichloroethane	**0.22J**	ug/L	1.0	0.12	1		04/21/18 02:57	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 02:57	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 02:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 02:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 02:57	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 02:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 02:57	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 02:57	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 02:57	591-78-6	
Methylene chloride	**0.48J**	ug/L	1.0	0.15	1		04/21/18 02:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 02:57	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 02:57	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 02:57	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 02:57	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 02:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 02:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 02:57	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 02:57	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 02:57	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 02:57	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/21/18 02:57	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 02:57	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 02:57	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 02:57		

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268487

QC Batch: 522579 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268487001, 60268487002, 60268487003, 60268487004, 60268487005, 60268487006, 60268487007, 60268487008, 60268487009, 60268487010, 60268487011, 60268487012

METHOD BLANK: 2139391 Matrix: Water
Associated Lab Samples: 60268487001, 60268487002, 60268487003, 60268487004, 60268487005, 60268487006, 60268487007, 60268487008, 60268487009, 60268487010, 60268487011, 60268487012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/20/18 17:23	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/20/18 17:23	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/20/18 17:23	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/20/18 17:23	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/20/18 17:23	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/20/18 17:23	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/20/18 17:23	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/20/18 17:23	
2-Hexanone	ug/L	ND	10.0	1.2	04/20/18 17:23	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/20/18 17:23	
Acetone	ug/L	ND	10.0	1.9	04/20/18 17:23	
Benzene	ug/L	ND	1.0	0.060	04/20/18 17:23	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/20/18 17:23	
Bromoform	ug/L	ND	1.0	0.070	04/20/18 17:23	
Bromomethane	ug/L	0.47J	5.0	0.16	04/20/18 17:23	
Carbon disulfide	ug/L	ND	5.0	0.12	04/20/18 17:23	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/20/18 17:23	
Chlorobenzene	ug/L	ND	1.0	0.21	04/20/18 17:23	
Chloroethane	ug/L	ND	1.0	0.15	04/20/18 17:23	
Chloroform	ug/L	ND	1.0	0.14	04/20/18 17:23	
Chloromethane	ug/L	ND	1.0	0.080	04/20/18 17:23	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/20/18 17:23	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/20/18 17:23	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/20/18 17:23	
Ethylbenzene	ug/L	ND	1.0	0.18	04/20/18 17:23	
Methylene chloride	ug/L	ND	1.0	0.15	04/20/18 17:23	
Styrene	ug/L	ND	1.0	0.12	04/20/18 17:23	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/20/18 17:23	
Toluene	ug/L	ND	1.0	0.17	04/20/18 17:23	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/20/18 17:23	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/20/18 17:23	
Trichloroethene	ug/L	ND	1.0	0.17	04/20/18 17:23	
Vinyl chloride	ug/L	ND	1.0	0.13	04/20/18 17:23	
Xylene (Total)	ug/L	ND	3.0	0.42	04/20/18 17:23	
1,2-Dichloroethane-d4 (S)	%	99	80-117		04/20/18 17:23	
4-Bromofluorobenzene (S)	%	92	80-119		04/20/18 17:23	
Toluene-d8 (S)	%	103	80-115		04/20/18 17:23	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268487

LABORATORY CONTROL SAMPLE: 2139392

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.5	97	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	17.5	87	74-121	
1,1,2-Trichloroethane	ug/L	20	20.7	103	83-119	
1,1-Dichloroethane	ug/L	20	18.5	92	85-128	
1,1-Dichloroethene	ug/L	20	22.9	114	85-123	
1,2-Dichloroethane	ug/L	20	19.9	100	77-120	
1,2-Dichloropropane	ug/L	20	18.9	94	81-126	
2-Butanone (MEK)	ug/L	100	94.0	94	65-134	
2-Hexanone	ug/L	100	94.7	95	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	91.7	92	66-139	
Acetone	ug/L	100	97.7	98	62-142	
Benzene	ug/L	20	19.1	95	81-118	
Bromodichloromethane	ug/L	20	20.5	102	85-123	
Bromoform	ug/L	20	22.9	114	83-123	
Bromomethane	ug/L	20	20.4	102	39-149	
Carbon disulfide	ug/L	20	20.6	103	85-124	
Carbon tetrachloride	ug/L	20	21.0	105	85-126	
Chlorobenzene	ug/L	20	20.3	101	87-118	
Chloroethane	ug/L	20	17.0	85	73-134	
Chloroform	ug/L	20	19.1	95	85-119	
Chloromethane	ug/L	20	21.0	105	20-174	
cis-1,2-Dichloroethene	ug/L	20	19.9	99	84-121	
cis-1,3-Dichloropropene	ug/L	20	20.0	100	80-124	
Dibromochloromethane	ug/L	20	23.1	116	83-122	
Ethylbenzene	ug/L	20	20.2	101	80-118	
Methylene chloride	ug/L	20	18.8	94	81-126	
Styrene	ug/L	20	20.6	103	85-120	
Tetrachloroethene	ug/L	20	21.4	107	87-120	
Toluene	ug/L	20	20.7	104	82-118	
trans-1,2-Dichloroethene	ug/L	20	20.1	101	83-121	
trans-1,3-Dichloropropene	ug/L	20	21.1	105	80-122	
Trichloroethene	ug/L	20	20.4	102	82-120	
Vinyl chloride	ug/L	20	22.5	112	74-147	
Xylene (Total)	ug/L	60	61.9	103	81-120	
1,2-Dichloroethane-d4 (S)	%			99	80-117	
4-Bromofluorobenzene (S)	%			95	80-119	
Toluene-d8 (S)	%			104	80-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2139393 2139394

Parameter	Units	60268487001 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	19.4	20.0	97	100	79-135	3	11	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	17.5	17.2	88	86	49-144	2	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	19.4	19.9	97	99	71-124	2	14	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268487

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		2139393			2139394							
Parameter	Units	60268487001 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	17.5	18.2	88	91	77-135	4	12	
1,1-Dichloroethene	ug/L	ND	20	20	20.5	22.0	103	110	77-138	7	14	
1,2-Dichloroethane	ug/L	ND	20	20	18.5	19.2	93	96	47-152	4	27	
1,2-Dichloropropane	ug/L	ND	20	20	18.2	18.4	91	92	74-128	1	13	
2-Butanone (MEK)	ug/L	ND	100	100	89.0	82.0	89	82	60-125	8	17	
2-Hexanone	ug/L	ND	100	100	94.6	85.6	95	86	53-133	10	15	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	93.7	86.9	94	87	62-134	8	15	
Acetone	ug/L	ND	100	100	85.2	79.7	85	80	50-127	7	28	
Benzene	ug/L	ND	20	20	18.3	19.1	91	96	62-138	5	34	
Bromodichloromethane	ug/L	ND	20	20	19.7	20.4	98	102	75-126	4	12	
Bromoform	ug/L	ND	20	20	21.7	21.2	109	106	70-122	3	14	
Bromomethane	ug/L	ND	20	20	18.1	18.8	90	94	41-155	4	42	
Carbon disulfide	ug/L	ND	20	20	17.9	19.5	89	97	70-148	8	14	
Carbon tetrachloride	ug/L	ND	20	20	21.0	21.9	105	110	78-139	4	23	
Chlorobenzene	ug/L	ND	20	20	19.9	20.7	99	103	74-130	4	10	
Chloroethane	ug/L	ND	20	20	15.7	19.4	78	97	67-153	21	27	
Chloroform	ug/L	ND	20	20	18.4	19.1	92	96	75-127	4	12	
Chloromethane	ug/L	ND	20	20	12.3	14.7	62	73	22-188	17	68	
cis-1,2-Dichloroethene	ug/L	ND	20	20	18.6	19.4	93	97	69-135	4	15	
cis-1,3-Dichloropropene	ug/L	ND	20	20	19.8	19.5	99	98	61-129	1	11	
Dibromochloromethane	ug/L	ND	20	20	21.4	21.9	107	109	60-133	2	14	
Ethylbenzene	ug/L	ND	20	20	20.5	21.0	103	105	60-140	2	32	
Methylene chloride	ug/L	ND	20	20	17.7	18.8	88	94	72-131	6	16	
Styrene	ug/L	ND	20	20	20.7	21.2	104	106	59-142	2	12	
Tetrachloroethene	ug/L	ND	20	20	21.7	21.7	108	109	72-136	0	15	
Toluene	ug/L	ND	20	20	20.1	20.7	100	104	65-135	3	32	
trans-1,2-Dichloroethene	ug/L	ND	20	20	19.2	19.8	96	99	75-137	3	15	
trans-1,3-Dichloropropene	ug/L	ND	20	20	20.4	20.2	102	101	60-128	1	13	
Trichloroethene	ug/L	ND	20	20	19.9	20.5	99	102	66-136	3	15	
Vinyl chloride	ug/L	ND	20	20	15.6	17.6	78	88	65-164	12	16	
Xylene (Total)	ug/L	ND	60	60	62.9	63.4	105	106	69-133	1	31	
1,2-Dichloroethane-d4 (S)	%						99	97	80-117			
4-Bromofluorobenzene (S)	%						93	93	80-119			
Toluene-d8 (S)	%						102	103	80-115			
Preservation pH		1.0			1.0	1.0				0		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		2139395			2139396							
Parameter	Units	60268487011 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	20.4	92	102	79-135	10	11	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	16.2	18.7	81	93	49-144	14	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	18.6	20.8	93	104	71-124	11	14	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268487

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2139395 2139396

Parameter	Units	60268487011 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	17.0	18.4	85	92	77-135	8	12	
1,1-Dichloroethene	ug/L	ND	20	20	19.3	22.5	96	113	77-138	15	14	R1
1,2-Dichloroethane	ug/L	ND	20	20	17.4	19.4	87	97	47-152	10	27	
1,2-Dichloropropane	ug/L	ND	20	20	16.7	18.3	84	92	74-128	9	13	
2-Butanone (MEK)	ug/L	ND	100	100	80.0	90.8	80	91	60-125	13	17	
2-Hexanone	ug/L	ND	100	100	82.7	94.7	83	95	53-133	13	15	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	79.7	90.2	80	90	62-134	12	15	
Acetone	ug/L	ND	100	100	81.8	94.2	82	94	50-127	14	28	
Benzene	ug/L	ND	20	20	17.5	19.1	88	95	62-138	9	34	
Bromodichloromethane	ug/L	ND	20	20	18.5	20.6	93	103	75-126	10	12	
Bromoform	ug/L	ND	20	20	19.9	22.2	99	111	70-122	11	14	
Bromomethane	ug/L	0.42J	20	20	17.4	19.1	85	93	41-155	9	42	
Carbon disulfide	ug/L	ND	20	20	18.1	20.2	90	101	70-148	11	14	
Carbon tetrachloride	ug/L	ND	20	20	19.6	21.7	98	109	78-139	10	23	
Chlorobenzene	ug/L	ND	20	20	18.6	20.9	93	104	74-130	11	10	R1
Chloroethane	ug/L	ND	20	20	18.3	37.5	92	187	67-153	69	27	M1,R1
Chloroform	ug/L	ND	20	20	17.8	19.5	89	98	75-127	9	12	
Chloromethane	ug/L	ND	20	20	13.7	13.9	69	70	22-188	1	68	
cis-1,2-Dichloroethene	ug/L	1.2	20	20	18.9	21.3	88	100	69-135	12	15	
cis-1,3-Dichloropropene	ug/L	ND	20	20	17.3	19.3	87	96	61-129	11	11	
Dibromochloromethane	ug/L	ND	20	20	20.6	22.8	103	114	60-133	10	14	
Ethylbenzene	ug/L	ND	20	20	18.6	20.9	93	105	60-140	12	32	
Methylene chloride	ug/L	ND	20	20	16.5	18.5	82	93	72-131	12	16	
Styrene	ug/L	ND	20	20	18.9	21.1	94	105	59-142	11	12	
Tetrachloroethene	ug/L	ND	20	20	19.0	22.2	95	111	72-136	16	15	R1
Toluene	ug/L	0.43J	20	20	19.4	21.0	95	103	65-135	8	32	
trans-1,2-Dichloroethene	ug/L	0.22J	20	20	18.1	19.7	89	98	75-137	9	15	
trans-1,3-Dichloropropene	ug/L	ND	20	20	18.5	20.4	93	102	60-128	10	13	
Trichloroethene	ug/L	0.67J	20	20	18.8	21.3	90	103	66-136	13	15	
Vinyl chloride	ug/L	0.59J	20	20	16.5	18.2	80	88	65-164	10	16	
Xylene (Total)	ug/L	ND	60	60	56.0	63.1	93	105	69-133	12	31	
1,2-Dichloroethane-d4 (S)	%						98	98	80-117			
4-Bromofluorobenzene (S)	%						94	94	80-119			
Toluene-d8 (S)	%						105	104	80-115			
Preservation pH		1.0			1.0	1.0				0		

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268487

QC Batch: 522630 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268487013, 60268487014, 60268487015, 60268487016, 60268487017, 60268487018, 60268487019

METHOD BLANK: 2139687 Matrix: Water
Associated Lab Samples: 60268487013, 60268487014, 60268487015, 60268487016, 60268487017, 60268487018, 60268487019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/21/18 01:10	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/21/18 01:10	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/21/18 01:10	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/21/18 01:10	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/21/18 01:10	
1,2-Dichloroethane	ug/L	0.21J	1.0	0.12	04/21/18 01:10	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/21/18 01:10	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/21/18 01:10	
2-Hexanone	ug/L	ND	10.0	1.2	04/21/18 01:10	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/21/18 01:10	
Acetone	ug/L	ND	10.0	1.9	04/21/18 01:10	
Benzene	ug/L	ND	1.0	0.060	04/21/18 01:10	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/21/18 01:10	
Bromoform	ug/L	ND	1.0	0.070	04/21/18 01:10	
Bromomethane	ug/L	ND	5.0	0.16	04/21/18 01:10	
Carbon disulfide	ug/L	ND	5.0	0.12	04/21/18 01:10	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/21/18 01:10	
Chlorobenzene	ug/L	ND	1.0	0.21	04/21/18 01:10	
Chloroethane	ug/L	ND	1.0	0.15	04/21/18 01:10	
Chloroform	ug/L	ND	1.0	0.14	04/21/18 01:10	
Chloromethane	ug/L	ND	1.0	0.080	04/21/18 01:10	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/21/18 01:10	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/21/18 01:10	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/21/18 01:10	
Ethylbenzene	ug/L	ND	1.0	0.18	04/21/18 01:10	
Methylene chloride	ug/L	ND	1.0	0.15	04/21/18 01:10	
Styrene	ug/L	ND	1.0	0.12	04/21/18 01:10	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/21/18 01:10	
Toluene	ug/L	ND	1.0	0.17	04/21/18 01:10	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/21/18 01:10	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/21/18 01:10	
Trichloroethene	ug/L	ND	1.0	0.17	04/21/18 01:10	
Vinyl chloride	ug/L	ND	1.0	0.13	04/21/18 01:10	
Xylene (Total)	ug/L	ND	3.0	0.42	04/21/18 01:10	
1,2-Dichloroethane-d4 (S)	%	101	80-117		04/21/18 01:10	
4-Bromofluorobenzene (S)	%	100	80-119		04/21/18 01:10	
Toluene-d8 (S)	%	100	80-115		04/21/18 01:10	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268487

LABORATORY CONTROL SAMPLE: 2139688

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.6	98	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	20.0	100	74-121	
1,1,2-Trichloroethane	ug/L	20	21.2	106	83-119	
1,1-Dichloroethane	ug/L	20	19.3	97	85-128	
1,1-Dichloroethene	ug/L	20	19.8	99	85-123	
1,2-Dichloroethane	ug/L	20	20.9	104	77-120	
1,2-Dichloropropane	ug/L	20	19.7	99	81-126	
2-Butanone (MEK)	ug/L	100	102	102	65-134	
2-Hexanone	ug/L	100	100	100	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.9	97	66-139	
Acetone	ug/L	100	98.4	98	62-142	
Benzene	ug/L	20	19.6	98	81-118	
Bromodichloromethane	ug/L	20	20.8	104	85-123	
Bromoform	ug/L	20	20.5	103	83-123	
Bromomethane	ug/L	20	17.4	87	39-149	
Carbon disulfide	ug/L	20	17.7	88	85-124	
Carbon tetrachloride	ug/L	20	20.2	101	85-126	
Chlorobenzene	ug/L	20	21.4	107	87-118	
Chloroethane	ug/L	20	14.0	70	73-134	L2
Chloroform	ug/L	20	19.9	99	85-119	
Chloromethane	ug/L	20	16.4	82	20-174	
cis-1,2-Dichloroethene	ug/L	20	19.4	97	84-121	
cis-1,3-Dichloropropene	ug/L	20	19.4	97	80-124	
Dibromochloromethane	ug/L	20	20.7	103	83-122	
Ethylbenzene	ug/L	20	20.2	101	80-118	
Methylene chloride	ug/L	20	19.3	97	81-126	
Styrene	ug/L	20	19.8	99	85-120	
Tetrachloroethene	ug/L	20	19.8	99	87-120	
Toluene	ug/L	20	20.0	100	82-118	
trans-1,2-Dichloroethene	ug/L	20	19.4	97	83-121	
trans-1,3-Dichloropropene	ug/L	20	20.5	102	80-122	
Trichloroethene	ug/L	20	22.1	111	82-120	
Vinyl chloride	ug/L	20	18.5	92	74-147	
Xylene (Total)	ug/L	60	59.2	99	81-120	
1,2-Dichloroethane-d4 (S)	%			99	80-117	
4-Bromofluorobenzene (S)	%			99	80-119	
Toluene-d8 (S)	%			100	80-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2139689 2139690

Parameter	Units	60268532011 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	21.2	17.9	106	90	79-135	17	11	R1
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	20.4	17.2	102	86	49-144	17	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	20.9	17.5	105	87	71-124	18	14	R1

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268487

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		2139689			2139690							
Parameter	Units	60268532011 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	17.4	101	87	77-135	15	12	R1
1,1-Dichloroethene	ug/L	ND	20	20	21.6	17.5	108	88	77-138	21	14	R1
1,2-Dichloroethane	ug/L	0.23J	20	20	20.8	17.9	103	89	47-152	15	27	
1,2-Dichloropropane	ug/L	ND	20	20	19.8	16.8	99	84	74-128	16	13	R1
2-Butanone (MEK)	ug/L	ND	100	100	96.7	82.5	97	83	60-125	16	17	
2-Hexanone	ug/L	ND	100	100	96.2	79.7	96	80	53-133	19	15	R1
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	95.0	79.2	95	79	62-134	18	15	R1
Acetone	ug/L	ND	100	100	96.9	79.9	97	80	50-127	19	28	
Benzene	ug/L	ND	20	20	20.6	17.5	103	88	62-138	16	34	
Bromodichloromethane	ug/L	ND	20	20	20.6	17.5	103	88	75-126	16	12	R1
Bromoform	ug/L	ND	20	20	19.5	16.8	97	84	70-122	15	14	R1
Bromomethane	ug/L	1.4J	20	20	17.8	16.8	82	77	41-155	6	42	
Carbon disulfide	ug/L	ND	20	20	19.7	17.0	99	85	70-148	15	14	R1
Carbon tetrachloride	ug/L	ND	20	20	22.5	18.5	113	93	78-139	19	23	
Chlorobenzene	ug/L	ND	20	20	21.1	17.6	106	88	74-130	18	10	R1
Chloroethane	ug/L	ND	20	20	16.3	13.7	81	68	67-153	17	27	
Chloroform	ug/L	ND	20	20	20.2	17.5	101	87	75-127	14	12	R1
Chloromethane	ug/L	ND	20	20	18.4	16.1	92	81	22-188	13	68	
cis-1,2-Dichloroethene	ug/L	ND	20	20	20.0	16.9	100	85	69-135	17	15	R1
cis-1,3-Dichloropropene	ug/L	ND	20	20	18.6	15.6	93	78	61-129	17	11	R1
Dibromochloromethane	ug/L	ND	20	20	20.4	17.3	102	87	60-133	16	14	R1
Ethylbenzene	ug/L	ND	20	20	20.1	16.6	100	83	60-140	19	32	
Methylene chloride	ug/L	ND	20	20	19.8	16.9	99	85	72-131	16	16	
Styrene	ug/L	ND	20	20	14.7	13.0	74	65	59-142	12	12	
Tetrachloroethene	ug/L	ND	20	20	20.1	16.2	100	81	72-136	21	15	R1
Toluene	ug/L	ND	20	20	20.3	16.9	102	85	65-135	18	32	
trans-1,2-Dichloroethene	ug/L	ND	20	20	20.7	17.6	104	88	75-137	16	15	R1
trans-1,3-Dichloropropene	ug/L	ND	20	20	19.6	16.3	98	81	60-128	18	13	R1
Trichloroethene	ug/L	ND	20	20	21.5	18.3	107	91	66-136	16	15	R1
Vinyl chloride	ug/L	ND	20	20	21.3	18.6	107	93	65-164	14	16	
Xylene (Total)	ug/L	ND	60	60	59.7	48.7	99	81	69-133	20	31	
1,2-Dichloroethane-d4 (S)	%						100	99	80-117			
4-Bromofluorobenzene (S)	%						97	100	80-119			
Toluene-d8 (S)	%						99	99	80-115			
Preservation pH		1.0			1.0	1.0				0		

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268487

QC Batch: 523156
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268487013

METHOD BLANK: 2141662
Matrix: Water
Associated Lab Samples: 60268487013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichloroethene	ug/L	ND	1.0	0.17	04/25/18 10:26	
1,2-Dichloroethane-d4 (S)	%	93	80-117		04/25/18 10:26	
4-Bromofluorobenzene (S)	%	99	80-119		04/25/18 10:26	
Toluene-d8 (S)	%	96	80-115		04/25/18 10:26	

LABORATORY CONTROL SAMPLE: 2141663

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/L	20	20.8	104	82-120	
1,2-Dichloroethane-d4 (S)	%			96	80-117	
4-Bromofluorobenzene (S)	%			98	80-119	
Toluene-d8 (S)	%			97	80-115	

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QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60268487

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.

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TNI - The NELAC Institute.

LABORATORIES

PASI-K	Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: 523156

[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.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60268487

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60268487001	**MW-196-201804**	EPA 5030B/8260	522579		
60268487002	**MW-195-201804**	EPA 5030B/8260	522579		
60268487003	**DUP-02-201804**	EPA 5030B/8260	522579		
60268487004	**MW-68-201804**	EPA 5030B/8260	522579		
60268487005	**TMW-20-201804**	EPA 5030B/8260	522579		
60268487006	**TMW-29-201804**	EPA 5030B/8260	522579		
60268487007	**MW-60R-201804**	EPA 5030B/8260	522579		
60268487008	**MW-61R-201804**	EPA 5030B/8260	522579		
60268487009	**MW-62R-201804**	EPA 5030B/8260	522579		
60268487010	**MW-194-201804**	EPA 5030B/8260	522579		
60268487011	**TMW-11-201804**	EPA 5030B/8260	522579		
60268487012	**MW-50R-201804**	EPA 5030B/8260	522579		
60268487013	**MW-176-201804**	EPA 5030B/8260	522630		
60268487013	**MW-176-201804**	EPA 5030B/8260	523156		
60268487014	**EB-01-201804**	EPA 5030B/8260	522630		
60268487015	**MW-63R-201804**	EPA 5030B/8260	522630		
60268487016	**DUP-01-201804**	EPA 5030B/8260	522630		
60268487017	**MW-40R-201804**	EPA 5030B/8260	522630		
60268487018	**EB-02-201804**	EPA 5030B/8260	522630		
60268487019	**TB-01-201804**	EPA 5030B/8260	522630		

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Sample Condition Upon Receipt

WO# : 60268487

60268487

Client Name: 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: 301 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 3.8 **Corr. Factor** +1.0 **Corrected** 4.8

Date and initials of person examining contents: JB 4/4/19

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	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks:		
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	
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.

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Section A Required Client Information:

Company: ~~Environ~~ Ramboll
Address: 7500 College Blvd., Ste. 925
Overland Park, KS 66210
Email To: ~~victoriestreet@environcorp.com~~
Phone: 913-553-5926 Fax:
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: ~~Wendy Stonestreet~~ Tamara House-Knight
Copy To: ~~Tammy Gleason~~
Purchase Order No.: NA
Project Name: Fort Smith, AR
Project Number:

Section C Invoice Information:

Attention: ~~Tammy Gleason~~ Tamara House Knight
Company Name: Environ
Address: ~~HA 250 Monroe Ave. NW Grand Rapids~~ 124 W. Capitol Ave
Pace Quote Reference: ~~Michigan, 49503~~ Little Rock, AR 72201
Pace Project Manager: ~~Colleen Clyne~~ Richard Mannz
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	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	8260 VOCs	Alkalinity	TOC	Chloride, Sulfate	8015 Chloroethanol (Pace Dallas)	8010-Iron/Mn	Ferric Iron calc. (send field Ferrous)	Ammonia	Nitrate+Nitrite	Total Phosphate (Pace Dallas)	Sulfide	CO2 Calc (Alkalinity + field pH)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60268487
1	MW-196-201804	WT	G			4/17/18	1210		3				3					X												(6) DGH
2	MW-196-201804-MS/MSD	"	"			"	1210		"				"					"												-
3	MW-195-201804						1350																								(7) DGH
4	DUP-02-201804						1350																								
5	MW-68-201804						1515																								
6	TMW-20-201804						1245																								
7	TMW-29-201804						1500																								
8	MW-60R-201804						1255																								
9	MW-61R-201804						1400																								
10	MW-62R-201804						1510																								
11	MW-194-201804						1600																								(6) DGH
12	TMW-11-201804						1250																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Haley Anlers / Ramboll	4/17/18	1800		4/18	0645	4.8 Y Y Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Haley Anlers
SIGNATURE of SAMPLER: Haley Anlers
DATE Signed (MM/DD/YY): 4/17/18

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

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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Section A Required Client Information:

Company:	~~Environ~~ Ramboll
Address:	7500 College Blvd., Ste. 925
	Overland Park, KS 66210
Email To:	~~wstonestreet@environcorp.com~~
Phone: 913-553-5926	Fax:
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	~~Wendy Stonestreet~~ 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:	
Address:	124 W. Capitol Ave
Pace Quote Reference:	Little Rock, AR 72201
Pace Project Manager:	~~Colleen Clyne~~ Richard Mann
Pace Profile #:	7444, line 1

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

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	8260 VOCs	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	TMW-11-201804-MS/MSD	WT	G			4/17/18	1250		3				3						X						60268487
2	MW-50R-201804						1445																		(3) D6H 012
3	MW-176-201804						1350																		013
4	EB-01-201804						1610																		014
5	MW-63R-201804						1620																		015
6	DUP-01-201804						1620																		016
7	MW-40R-201804						1618																		017
8	EB-02-201804						1630																		018
9	TB-01-201804																								(2) D6H TO 019
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Level IV data package required	Haley Anlers/Ramboll	4/17/18	1800		4/18	0645

SAMPLE CONDITIONS			
4.8	X	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: Haley Anlers

SIGNATURE of SAMPLER: Haley Anlers DATE Signed (MM/DD/YY): 4/17/18

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

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

April 27, 2018

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

RE: Project: FORT SMITH, AR
Pace Project No.: 60268532

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on April 19, 2018. 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: Kristen Drucquer, Ramboll
Tamara House-Knight, Ramboll Environ
M. Wilson

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CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60268532

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.: 60268532

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60268532001	MW-99-201804	Water	04/18/18 09:30	04/19/18 08:35
60268532002	MW-184-201804	Water	04/18/18 11:05	04/19/18 08:35
60268532003	MW-98-201804	Water	04/18/18 12:40	04/19/18 08:35
60268532004	TMW-24-201804	Water	04/18/18 14:00	04/19/18 08:35
60268532005	MW-183-201804	Water	04/18/18 15:25	04/19/18 08:35
60268532006	IW-73-201804	Water	04/18/18 09:20	04/19/18 08:35
60268532007	IW-77-201804	Water	04/18/18 10:50	04/19/18 08:35
60268532008	RW-69-201804	Water	04/18/18 12:50	04/19/18 08:35
60268532009	MW-26-201804	Water	04/18/18 13:50	04/19/18 08:35
60268532010	MW-187-201804	Water	04/18/18 15:15	04/19/18 08:35
60268532011	ITMW-20-201804	Water	04/18/18 08:50	04/19/18 08:35
60268532012	MW-175-201804	Water	04/18/18 09:40	04/19/18 08:35
60268532013	MW-55R-201804	Water	04/18/18 11:22	04/19/18 08:35
60268532014	DUP-05-201804	Water	04/18/18 11:22	04/19/18 08:35
60268532015	MW-46R-201804	Water	04/18/18 13:25	04/19/18 08:35
60268532016	MW-178-201804	Water	04/18/18 14:15	04/19/18 08:35
60268532017	TMW-27-201804	Water	04/18/18 16:10	04/19/18 08:35
60268532018	MW-39R-201804	Water	04/18/18 09:40	04/19/18 08:35
60268532019	TMW-23-201804	Water	04/18/18 11:25	04/19/18 08:35
60268532020	TMW-10-201804	Water	04/18/18 13:10	04/19/18 08:35
60268532021	TMW-22-201804	Water	04/18/18 14:50	04/19/18 08:35
60268532022	TMW-14-201804	Water	04/18/18 09:30	04/19/18 08:35
60268532023	DUP-03-201804	Water	04/18/18 09:35	04/19/18 08:35
60268532024	TMW-12-201804	Water	04/18/18 10:42	04/19/18 08:35
60268532025	MW-190-201804	Water	04/18/18 13:50	04/19/18 08:35
60268532026	MW-191-201804	Water	04/18/18 15:10	04/19/18 08:35
60268532027	MW-192-201804	Water	04/18/18 16:40	04/19/18 08:35
60268532028	MW-84-201804	Water	04/18/18 16:55	04/19/18 08:35
60268532029	TMW-21-201804	Water	04/18/18 16:05	04/19/18 08:35
60268532030	TMW-32-201804	Water	04/18/18 16:30	04/19/18 08:35
60268532031	EB-03-201804	Water	04/18/18 17:00	04/19/18 08:35
60268532032	EB-04-201804	Water	04/18/18 17:15	04/19/18 08:35
60268532033	TB-02-201804	Water	04/18/18 08:50	04/19/18 08:35
60268532034	TB-03-201804	Water	04/18/18 08:50	04/19/18 08:35

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60268532

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60268532001	MW-99-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532002	MW-184-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532003	MW-98-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532004	TMW-24-201804	EPA 5030B/8260	JTK, PGH	38	PASI-K
60268532005	MW-183-201804	EPA 5030B/8260	JTK, PGH	38	PASI-K
60268532006	IW-73-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532007	IW-77-201804	EPA 5030B/8260	PGH	38	PASI-K
60268532008	RW-69-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532009	MW-26-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532010	MW-187-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532011	ITMW-20-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532012	MW-175-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532013	MW-55R-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532014	DUP-05-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532015	MW-46R-201804	EPA 5030B/8260	JTK, PGH	38	PASI-K
60268532016	MW-178-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532017	TMW-27-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532018	MW-39R-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532019	TMW-23-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532020	TMW-10-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532021	TMW-22-201804	EPA 5030B/8260	JTK, PGH	38	PASI-K
60268532022	TMW-14-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532023	DUP-03-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532024	TMW-12-201804	EPA 5030B/8260	JTK, PGH	38	PASI-K
60268532025	MW-190-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532026	MW-191-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532027	MW-192-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532028	MW-84-201804	EPA 5030B/8260	PGH	38	PASI-K
60268532029	TMW-21-201804	EPA 5030B/8260	JTK, PGH	38	PASI-K
60268532030	TMW-32-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532031	EB-03-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532032	EB-04-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532033	TB-02-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532034	TB-03-201804	EPA 5030B/8260	JTK	38	PASI-K

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60268532

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 27, 2018

General Information:
34 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: 522628

B: Analyte was detected in the associated method blank.
- BLANK for HBN 522628 [MSV/8880 (Lab ID: 2139660)
  - 1,2-Dichloroethane
  - Chloromethane

QC Batch: 522630

B: Analyte was detected in the associated method blank.
- BLANK for HBN 522630 [MSV/8880 (Lab ID: 2139687)
  - 1,2-Dichloroethane

QC Batch: 522636

B: Analyte was detected in the associated method blank.
- BLANK for HBN 522636 [MSV/8880 (Lab ID: 2139748)
  - 1,2-Dichloroethane
  - Bromomethane
  - Chloromethane

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

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Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60268532

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 27, 2018

QC Batch: 522628

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- LCS (Lab ID: 2139661)
  - Chloroethane

QC Batch: 522630

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- LCS (Lab ID: 2139688)
  - Chloroethane

QC Batch: 522636

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- LCS (Lab ID: 2139749)
  - Chloroethane

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

QC Batch: 522628

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

QC Batch: 522630

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60268532011

R1: RPD value was outside control limits.

- MSD (Lab ID: 2139690)
  - 1,1,1-Trichloroethane
  - 1,1,2-Trichloroethane
  - 1,1-Dichloroethane
  - 1,1-Dichloroethene
  - 1,2-Dichloropropane
  - 2-Hexanone
  - 4-Methyl-2-pentanone (MIBK)
  - Bromodichloromethane
  - Bromoform
  - Carbon disulfide
  - Chlorobenzene
  - Chloroform
  - Dibromochloromethane
  - Tetrachloroethene
  - Trichloroethene
  - cis-1,2-Dichloroethene
  - cis-1,3-Dichloropropene
  - trans-1,2-Dichloroethene
  - trans-1,3-Dichloropropene

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60268532

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 27, 2018

QC Batch: 522636

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

QC Batch: 523154

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

QC Batch: 523156

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, AR
Pace Project No.: 60268532

Sample: MW-99-201804 **Lab ID: 60268532001** Collected: 04/18/18 09:30 Received: 04/19/18 08:35 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		04/20/18 21:53	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 21:53	71-43-2	
Bromodichloromethane	**0.41J**	ug/L	1.0	0.19	1		04/20/18 21:53	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 21:53	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 21:53	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 21:53	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 21:53	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 21:53	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 21:53	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 21:53	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 21:53	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 21:53	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 21:53	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 21:53	75-34-3	
1,2-Dichloroethane	**0.22J**	ug/L	1.0	0.12	1		04/20/18 21:53	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 21:53	75-35-4	
cis-1,2-Dichloroethene	**0.12J**	ug/L	1.0	0.080	1		04/20/18 21:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 21:53	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 21:53	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 21:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 21:53	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 21:53	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 21:53	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 21:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 21:53	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 21:53	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 21:53	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 21:53	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 21:53	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 21:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 21:53	79-00-5	
Trichloroethene	**1.3**	ug/L	1.0	0.17	1		04/20/18 21:53	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 21:53	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 21:53	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/20/18 21:53	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/20/18 21:53	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/20/18 21:53	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 21:53		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-184-201804 **Lab ID: 60268532002** Collected: 04/18/18 11:05 Received: 04/19/18 08:35 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		04/20/18 22:08	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 22:08	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 22:08	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 22:08	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 22:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 22:08	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 22:08	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 22:08	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 22:08	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 22:08	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 22:08	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 22:08	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 22:08	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 22:08	75-34-3	
1,2-Dichloroethane	**0.24J**	ug/L	1.0	0.12	1		04/20/18 22:08	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 22:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 22:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 22:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 22:08	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 22:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 22:08	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 22:08	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 22:08	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 22:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 22:08	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 22:08	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 22:08	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 22:08	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 22:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 22:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 22:08	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 22:08	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 22:08	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 22:08	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/20/18 22:08	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/20/18 22:08	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/20/18 22:08	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 22:08		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-98-201804 **Lab ID: 60268532003** Collected: 04/18/18 12:40 Received: 04/19/18 08:35 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		04/20/18 22:24	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 22:24	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 22:24	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 22:24	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 22:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 22:24	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 22:24	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 22:24	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 22:24	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 22:24	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 22:24	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 22:24	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 22:24	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 22:24	75-34-3	
1,2-Dichloroethane	**0.24J**	ug/L	1.0	0.12	1		04/20/18 22:24	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 22:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 22:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 22:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 22:24	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 22:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 22:24	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 22:24	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 22:24	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 22:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 22:24	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 22:24	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 22:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 22:24	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 22:24	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 22:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 22:24	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 22:24	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 22:24	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 22:24	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/20/18 22:24	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/20/18 22:24	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/20/18 22:24	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 22:24		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TMW-24-201804 **Lab ID: 60268532004** Collected: 04/18/18 14:00 Received: 04/19/18 08:35 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		04/20/18 22:39	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 22:39	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 22:39	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 22:39	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 22:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 22:39	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 22:39	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 22:39	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 22:39	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 22:39	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 22:39	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 22:39	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 22:39	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 22:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 22:39	107-06-2	
1,1-Dichloroethene	**1.4**	ug/L	1.0	0.20	1		04/20/18 22:39	75-35-4	
cis-1,2-Dichloroethene	**11.9**	ug/L	1.0	0.080	1		04/20/18 22:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 22:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 22:39	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 22:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 22:39	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 22:39	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 22:39	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 22:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 22:39	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 22:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 22:39	79-34-5	
Tetrachloroethene	**0.12J**	ug/L	1.0	0.10	1		04/20/18 22:39	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 22:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 22:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 22:39	79-00-5	
Trichloroethene	**601**	ug/L	10.0	1.7	10		04/25/18 13:41	79-01-6	
Vinyl chloride	**0.25J**	ug/L	1.0	0.13	1		04/20/18 22:39	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 22:39	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/20/18 22:39	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/20/18 22:39	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/20/18 22:39	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 22:39		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-183-201804 **Lab ID: 60268532005** Collected: 04/18/18 15:25 Received: 04/19/18 08:35 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		04/20/18 22:54	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 22:54	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 22:54	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 22:54	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 22:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 22:54	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 22:54	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 22:54	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 22:54	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 22:54	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 22:54	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 22:54	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 22:54	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 22:54	75-34-3	
1,2-Dichloroethane	**0.22J**	ug/L	1.0	0.12	1		04/20/18 22:54	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 22:54	75-35-4	
cis-1,2-Dichloroethene	**0.14J**	ug/L	1.0	0.080	1		04/20/18 22:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 22:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 22:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 22:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 22:54	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 22:54	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 22:54	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 22:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 22:54	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 22:54	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 22:54	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 22:54	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 22:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 22:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 22:54	79-00-5	
Trichloroethene	**1.9**	ug/L	1.0	0.17	1		04/25/18 13:27	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 22:54	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 22:54	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/20/18 22:54	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/20/18 22:54	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/20/18 22:54	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 22:54		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: IW-73-201804 **Lab ID: 60268532006** Collected: 04/18/18 09:20 Received: 04/19/18 08:35 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		04/20/18 23:09	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 23:09	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 23:09	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 23:09	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 23:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 23:09	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 23:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 23:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 23:09	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 23:09	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 23:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 23:09	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 23:09	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 23:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 23:09	107-06-2	
1,1-Dichloroethene	**0.51J**	ug/L	1.0	0.20	1		04/20/18 23:09	75-35-4	
cis-1,2-Dichloroethene	**4.0**	ug/L	1.0	0.080	1		04/20/18 23:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 23:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 23:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 23:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 23:09	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 23:09	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 23:09	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 23:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 23:09	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 23:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 23:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 23:09	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 23:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 23:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 23:09	79-00-5	
Trichloroethene	**176**	ug/L	1.0	0.17	1		04/20/18 23:09	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 23:09	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 23:09	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/20/18 23:09	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/20/18 23:09	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/20/18 23:09	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 23:09		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: IW-77-201804 **Lab ID: 60268532007** Collected: 04/18/18 10:50 Received: 04/19/18 08:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**5.3J**	ug/L	10.0	1.9	1		04/25/18 11:50	67-64-1	
Benzene	**0.10J**	ug/L	1.0	0.060	1		04/25/18 11:50	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/25/18 11:50	75-27-4	
Bromoform	**0.43J**	ug/L	1.0	0.070	1		04/25/18 11:50	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/25/18 11:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/25/18 11:50	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/25/18 11:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/25/18 11:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/25/18 11:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/25/18 11:50	75-00-3	
Chloroform	**0.20J**	ug/L	1.0	0.14	1		04/25/18 11:50	67-66-3	
Chloromethane	**0.091J**	ug/L	1.0	0.080	1		04/25/18 11:50	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/25/18 11:50	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/25/18 11:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/18 11:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/25/18 11:50	75-35-4	
cis-1,2-Dichloroethene	**3.6**	ug/L	1.0	0.080	1		04/25/18 11:50	156-59-2	
trans-1,2-Dichloroethene	**0.50J**	ug/L	1.0	0.20	1		04/25/18 11:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/25/18 11:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/25/18 11:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/25/18 11:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/25/18 11:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/25/18 11:50	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/25/18 11:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/25/18 11:50	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/25/18 11:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/25/18 11:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/25/18 11:50	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/25/18 11:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/25/18 11:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/25/18 11:50	79-00-5	
Trichloroethene	**181**	ug/L	1.0	0.17	1		04/25/18 11:50	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/25/18 11:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/25/18 11:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/25/18 11:50	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	80-117		1		04/25/18 11:50	17060-07-0	
Toluene-d8 (S)	98	%	80-115		1		04/25/18 11:50	2037-26-5	
Preservation pH	**7.0**		0.10	0.10	1		04/25/18 11:50		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: RW-69-201804 **Lab ID: 60268532008** Collected: 04/18/18 12:50 Received: 04/19/18 08:35 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		04/20/18 23:25	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 23:25	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 23:25	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 23:25	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 23:25	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 23:25	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 23:25	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 23:25	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 23:25	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 23:25	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 23:25	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 23:25	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 23:25	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 23:25	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 23:25	107-06-2	
1,1-Dichloroethene	**0.70J**	ug/L	1.0	0.20	1		04/20/18 23:25	75-35-4	
cis-1,2-Dichloroethene	**5.0**	ug/L	1.0	0.080	1		04/20/18 23:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 23:25	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 23:25	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 23:25	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 23:25	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 23:25	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 23:25	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 23:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 23:25	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 23:25	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 23:25	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 23:25	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 23:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 23:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 23:25	79-00-5	
Trichloroethene	**110**	ug/L	1.0	0.17	1		04/20/18 23:25	79-01-6	
Vinyl chloride	**0.19J**	ug/L	1.0	0.13	1		04/20/18 23:25	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 23:25	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/20/18 23:25	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/20/18 23:25	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/20/18 23:25	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 23:25		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-26-201804 **Lab ID: 60268532009** Collected: 04/18/18 13:50 Received: 04/19/18 08:35 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		04/20/18 23:40	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 23:40	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 23:40	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 23:40	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 23:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 23:40	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 23:40	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 23:40	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 23:40	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 23:40	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 23:40	67-66-3	
Chloromethane	**0.13J**	ug/L	1.0	0.080	1		04/20/18 23:40	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 23:40	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 23:40	75-34-3	
1,2-Dichloroethane	**0.27J**	ug/L	1.0	0.12	1		04/20/18 23:40	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 23:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 23:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 23:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 23:40	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 23:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 23:40	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 23:40	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 23:40	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 23:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 23:40	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 23:40	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 23:40	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 23:40	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 23:40	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 23:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 23:40	79-00-5	
Trichloroethene	**1.0**	ug/L	1.0	0.17	1		04/20/18 23:40	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 23:40	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 23:40	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/20/18 23:40	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/20/18 23:40	17060-07-0	
Toluene-d8 (S)	102	%	80-115		1		04/20/18 23:40	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 23:40		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-187-201804 **Lab ID: 60268532010** Collected: 04/18/18 15:15 Received: 04/19/18 08:35 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		04/20/18 23:55	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 23:55	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 23:55	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 23:55	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 23:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 23:55	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 23:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 23:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 23:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 23:55	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 23:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 23:55	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 23:55	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 23:55	75-34-3	
1,2-Dichloroethane	**0.27J**	ug/L	1.0	0.12	1		04/20/18 23:55	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 23:55	75-35-4	
cis-1,2-Dichloroethene	**0.77J**	ug/L	1.0	0.080	1		04/20/18 23:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 23:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 23:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 23:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 23:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 23:55	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 23:55	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 23:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 23:55	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 23:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 23:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 23:55	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 23:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 23:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 23:55	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 23:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 23:55	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 23:55	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/20/18 23:55	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/20/18 23:55	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/20/18 23:55	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 23:55		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: ITMW-20-201804 **Lab ID: 60268532011** Collected: 04/18/18 08:50 Received: 04/19/18 08:35 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		04/21/18 03:12	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 03:12	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 03:12	75-27-4	R1
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 03:12	75-25-2	R1
Bromomethane	**1.4J**	ug/L	5.0	0.16	1		04/21/18 03:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 03:12	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 03:12	75-15-0	R1
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 03:12	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 03:12	108-90-7	R1
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 03:12	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 03:12	67-66-3	R1
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 03:12	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 03:12	124-48-1	R1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 03:12	75-34-3	R1
1,2-Dichloroethane	**0.23J**	ug/L	1.0	0.12	1		04/21/18 03:12	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 03:12	75-35-4	R1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 03:12	156-59-2	R1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 03:12	156-60-5	R1
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 03:12	78-87-5	R1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 03:12	10061-01-5	R1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 03:12	10061-02-6	R1
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 03:12	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 03:12	591-78-6	R1
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 03:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 03:12	108-10-1	R1
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 03:12	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 03:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 03:12	127-18-4	R1
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 03:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 03:12	71-55-6	R1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 03:12	79-00-5	R1
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 03:12	79-01-6	R1
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 03:12	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 03:12	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 03:12	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 03:12	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 03:12	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 03:12		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-175-201804 **Lab ID: 60268532012** Collected: 04/18/18 09:40 Received: 04/19/18 08:35 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		04/21/18 03:27	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 03:27	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 03:27	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 03:27	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 03:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 03:27	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 03:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 03:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 03:27	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 03:27	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 03:27	67-66-3	
Chloromethane	**0.14J**	ug/L	1.0	0.080	1		04/21/18 03:27	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 03:27	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 03:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/21/18 03:27	107-06-2	
1,1-Dichloroethene	**0.55J**	ug/L	1.0	0.20	1		04/21/18 03:27	75-35-4	
cis-1,2-Dichloroethene	**1.9**	ug/L	1.0	0.080	1		04/21/18 03:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 03:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 03:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 03:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 03:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 03:27	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 03:27	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 03:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 03:27	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 03:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 03:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 03:27	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 03:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 03:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 03:27	79-00-5	
Trichloroethene	**117**	ug/L	1.0	0.17	1		04/21/18 03:27	79-01-6	
Vinyl chloride	**0.15J**	ug/L	1.0	0.13	1		04/21/18 03:27	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 03:27	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/21/18 03:27	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/21/18 03:27	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 03:27	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 03:27		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-55R-201804 **Lab ID: 60268532013** Collected: 04/18/18 11:22 Received: 04/19/18 08:35 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		04/21/18 03:42	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 03:42	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 03:42	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 03:42	75-25-2	
Bromomethane	**1.4J**	ug/L	5.0	0.16	1		04/21/18 03:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 03:42	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 03:42	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 03:42	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 03:42	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 03:42	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 03:42	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 03:42	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 03:42	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 03:42	75-34-3	
1,2-Dichloroethane	**0.24J**	ug/L	1.0	0.12	1		04/21/18 03:42	107-06-2	B
1,1-Dichloroethene	**0.28J**	ug/L	1.0	0.20	1		04/21/18 03:42	75-35-4	
cis-1,2-Dichloroethene	**0.77J**	ug/L	1.0	0.080	1		04/21/18 03:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 03:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 03:42	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 03:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 03:42	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 03:42	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 03:42	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 03:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 03:42	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 03:42	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 03:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 03:42	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 03:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 03:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 03:42	79-00-5	
Trichloroethene	**17.0**	ug/L	1.0	0.17	1		04/21/18 03:42	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 03:42	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 03:42	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/21/18 03:42	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/21/18 03:42	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 03:42	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 03:42		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: DUP-05-201804 **Lab ID: 60268532014** Collected: 04/18/18 11:22 Received: 04/19/18 08:35 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		04/21/18 03:57	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 03:57	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 03:57	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 03:57	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 03:57	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 03:57	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 03:57	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 03:57	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 03:57	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 03:57	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 03:57	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 03:57	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 03:57	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 03:57	75-34-3	
1,2-Dichloroethane	**0.22J**	ug/L	1.0	0.12	1		04/21/18 03:57	107-06-2	B
1,1-Dichloroethene	**0.28J**	ug/L	1.0	0.20	1		04/21/18 03:57	75-35-4	
cis-1,2-Dichloroethene	**0.82J**	ug/L	1.0	0.080	1		04/21/18 03:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 03:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 03:57	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 03:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 03:57	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 03:57	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 03:57	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 03:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 03:57	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 03:57	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 03:57	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 03:57	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 03:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 03:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 03:57	79-00-5	
Trichloroethene	**18.1**	ug/L	1.0	0.17	1		04/21/18 03:57	79-01-6	
Vinyl chloride	**0.16J**	ug/L	1.0	0.13	1		04/21/18 03:57	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 03:57	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 03:57	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/21/18 03:57	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 03:57	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 03:57		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-46R-201804 **Lab ID: 60268532015** Collected: 04/18/18 13:25 Received: 04/19/18 08:35 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		04/21/18 04:13	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 04:13	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 04:13	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 04:13	75-25-2	
Bromomethane	**1.4J**	ug/L	5.0	0.16	1		04/21/18 04:13	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 04:13	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 04:13	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 04:13	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 04:13	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 04:13	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 04:13	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 04:13	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 04:13	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 04:13	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/21/18 04:13	107-06-2	
1,1-Dichloroethene	**1.4**	ug/L	1.0	0.20	1		04/21/18 04:13	75-35-4	
cis-1,2-Dichloroethene	**12.6**	ug/L	1.0	0.080	1		04/21/18 04:13	156-59-2	
trans-1,2-Dichloroethene	**0.40J**	ug/L	1.0	0.20	1		04/21/18 04:13	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 04:13	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 04:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 04:13	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 04:13	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 04:13	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 04:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 04:13	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 04:13	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 04:13	79-34-5	
Tetrachloroethene	**0.13J**	ug/L	1.0	0.10	1		04/21/18 04:13	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 04:13	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 04:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 04:13	79-00-5	
Trichloroethene	**520**	ug/L	10.0	1.7	10		04/25/18 13:55	79-01-6	
Vinyl chloride	**0.56J**	ug/L	1.0	0.13	1		04/21/18 04:13	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 04:13	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 04:13	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 04:13	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 04:13	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 04:13		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-178-201804 **Lab ID: 60268532016** Collected: 04/18/18 14:15 Received: 04/19/18 08:35 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		04/21/18 04:28	67-64-1	
Benzene	**0.21J**	ug/L	1.0	0.060	1		04/21/18 04:28	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 04:28	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 04:28	75-25-2	
Bromomethane	**1.4J**	ug/L	5.0	0.16	1		04/21/18 04:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 04:28	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 04:28	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 04:28	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 04:28	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 04:28	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 04:28	67-66-3	
Chloromethane	**0.11J**	ug/L	1.0	0.080	1		04/21/18 04:28	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 04:28	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 04:28	75-34-3	
1,2-Dichloroethane	**0.22J**	ug/L	1.0	0.12	1		04/21/18 04:28	107-06-2	B
1,1-Dichloroethene	**0.22J**	ug/L	1.0	0.20	1		04/21/18 04:28	75-35-4	
cis-1,2-Dichloroethene	**1.4**	ug/L	1.0	0.080	1		04/21/18 04:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 04:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 04:28	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 04:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 04:28	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 04:28	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 04:28	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 04:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 04:28	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 04:28	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 04:28	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 04:28	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 04:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 04:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 04:28	79-00-5	
Trichloroethene	**5.3**	ug/L	1.0	0.17	1		04/21/18 04:28	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 04:28	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 04:28	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 04:28	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 04:28	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 04:28	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 04:28		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TMW-27-201804 **Lab ID: 60268532017** Collected: 04/18/18 16:10 Received: 04/19/18 08:35 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		04/21/18 04:43	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 04:43	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 04:43	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 04:43	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 04:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 04:43	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 04:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 04:43	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 04:43	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 04:43	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 04:43	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 04:43	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 04:43	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 04:43	75-34-3	
1,2-Dichloroethane	**0.21J**	ug/L	1.0	0.12	1		04/21/18 04:43	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 04:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 04:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 04:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 04:43	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 04:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 04:43	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 04:43	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 04:43	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 04:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 04:43	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 04:43	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 04:43	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 04:43	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 04:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 04:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 04:43	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 04:43	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 04:43	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 04:43	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 04:43	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 04:43	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/21/18 04:43	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 04:43		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-39R-201804 **Lab ID: 60268532018** Collected: 04/18/18 09:40 Received: 04/19/18 08:35 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		04/21/18 04:58	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 04:58	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 04:58	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 04:58	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 04:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 04:58	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 04:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 04:58	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 04:58	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 04:58	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 04:58	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 04:58	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 04:58	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 04:58	75-34-3	
1,2-Dichloroethane	**0.24J**	ug/L	1.0	0.12	1		04/21/18 04:58	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 04:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 04:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 04:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 04:58	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 04:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 04:58	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 04:58	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 04:58	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 04:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 04:58	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 04:58	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 04:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 04:58	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 04:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 04:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 04:58	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 04:58	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 04:58	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 04:58	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 04:58	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 04:58	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 04:58	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 04:58		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TMW-23-201804 **Lab ID: 60268532019** Collected: 04/18/18 11:25 Received: 04/19/18 08:35 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		04/21/18 05:13	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 05:13	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 05:13	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 05:13	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 05:13	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 05:13	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 05:13	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 05:13	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 05:13	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 05:13	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 05:13	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 05:13	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 05:13	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 05:13	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/21/18 05:13	107-06-2	
1,1-Dichloroethene	**0.26J**	ug/L	1.0	0.20	1		04/21/18 05:13	75-35-4	
cis-1,2-Dichloroethene	**1.5**	ug/L	1.0	0.080	1		04/21/18 05:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 05:13	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 05:13	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 05:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 05:13	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 05:13	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 05:13	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 05:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 05:13	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 05:13	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 05:13	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 05:13	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 05:13	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 05:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 05:13	79-00-5	
Trichloroethene	**125**	ug/L	1.0	0.17	1		04/21/18 05:13	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 05:13	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 05:13	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 05:13	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/21/18 05:13	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 05:13	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 05:13		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TMW-10-201804 **Lab ID: 60268532020** Collected: 04/18/18 13:10 Received: 04/19/18 08:35 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		04/21/18 05:28	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 05:28	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 05:28	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 05:28	75-25-2	
Bromomethane	**1.4J**	ug/L	5.0	0.16	1		04/21/18 05:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 05:28	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 05:28	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 05:28	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 05:28	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 05:28	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 05:28	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 05:28	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 05:28	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 05:28	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/21/18 05:28	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 05:28	75-35-4	
cis-1,2-Dichloroethene	**5.2**	ug/L	1.0	0.080	1		04/21/18 05:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 05:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 05:28	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 05:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 05:28	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 05:28	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 05:28	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 05:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 05:28	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 05:28	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 05:28	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 05:28	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 05:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 05:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 05:28	79-00-5	
Trichloroethene	**85.0**	ug/L	1.0	0.17	1		04/21/18 05:28	79-01-6	
Vinyl chloride	**0.46J**	ug/L	1.0	0.13	1		04/21/18 05:28	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 05:28	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 05:28	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 05:28	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 05:28	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 05:28		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TMW-22-201804 **Lab ID: 60268532021** Collected: 04/18/18 14:50 Received: 04/19/18 08:35 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		04/21/18 05:43	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 05:43	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 05:43	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 05:43	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 05:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 05:43	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 05:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 05:43	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 05:43	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 05:43	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 05:43	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 05:43	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 05:43	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 05:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/21/18 05:43	107-06-2	
1,1-Dichloroethene	**0.61J**	ug/L	1.0	0.20	1		04/21/18 05:43	75-35-4	
cis-1,2-Dichloroethene	**20.1**	ug/L	1.0	0.080	1		04/21/18 05:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 05:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 05:43	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 05:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 05:43	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 05:43	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 05:43	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 05:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 05:43	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 05:43	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 05:43	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 05:43	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 05:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 05:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 05:43	79-00-5	
Trichloroethene	**224**	ug/L	5.0	0.85	5		04/25/18 14:09	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 05:43	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 05:43	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 05:43	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 05:43	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 05:43	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 05:43		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TMW-14-201804 **Lab ID: 60268532022** Collected: 04/18/18 09:30 Received: 04/19/18 08:35 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		04/21/18 05:58	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 05:58	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 05:58	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 05:58	75-25-2	
Bromomethane	**1.4J**	ug/L	5.0	0.16	1		04/21/18 05:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 05:58	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 05:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 05:58	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 05:58	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 05:58	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 05:58	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 05:58	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 05:58	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 05:58	75-34-3	
1,2-Dichloroethane	**0.26J**	ug/L	1.0	0.12	1		04/21/18 05:58	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 05:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 05:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 05:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 05:58	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 05:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 05:58	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 05:58	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 05:58	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 05:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 05:58	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 05:58	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 05:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 05:58	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 05:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 05:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 05:58	79-00-5	
Trichloroethene	**2.1**	ug/L	1.0	0.17	1		04/21/18 05:58	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 05:58	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 05:58	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 05:58	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 05:58	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 05:58	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 05:58		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: DUP-03-201804 **Lab ID: 60268532023** Collected: 04/18/18 09:35 Received: 04/19/18 08:35 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		04/21/18 06:14	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 06:14	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 06:14	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 06:14	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 06:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 06:14	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 06:14	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 06:14	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 06:14	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 06:14	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 06:14	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 06:14	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 06:14	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 06:14	75-34-3	
1,2-Dichloroethane	**0.22J**	ug/L	1.0	0.12	1		04/21/18 06:14	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 06:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 06:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 06:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 06:14	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 06:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 06:14	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 06:14	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 06:14	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 06:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 06:14	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 06:14	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 06:14	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 06:14	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 06:14	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 06:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 06:14	79-00-5	
Trichloroethene	**2.0**	ug/L	1.0	0.17	1		04/21/18 06:14	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 06:14	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 06:14	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 06:14	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-117		1		04/21/18 06:14	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 06:14	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 06:14		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TMW-12-201804 **Lab ID: 60268532024** Collected: 04/18/18 10:42 Received: 04/19/18 08:35 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		04/21/18 07:45	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 07:45	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 07:45	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 07:45	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 07:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 07:45	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 07:45	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 07:45	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 07:45	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 07:45	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 07:45	67-66-3	
Chloromethane	**0.13J**	ug/L	1.0	0.080	1		04/21/18 07:45	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 07:45	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 07:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/21/18 07:45	107-06-2	
1,1-Dichloroethene	**1.8**	ug/L	1.0	0.20	1		04/21/18 07:45	75-35-4	
cis-1,2-Dichloroethene	**12.0**	ug/L	1.0	0.080	1		04/21/18 07:45	156-59-2	
trans-1,2-Dichloroethene	**0.21J**	ug/L	1.0	0.20	1		04/21/18 07:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 07:45	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 07:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 07:45	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 07:45	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 07:45	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 07:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 07:45	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 07:45	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 07:45	79-34-5	
Tetrachloroethene	**0.15J**	ug/L	1.0	0.10	1		04/21/18 07:45	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 07:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 07:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 07:45	79-00-5	
Trichloroethene	**563**	ug/L	10.0	1.7	10		04/25/18 14:23	79-01-6	
Vinyl chloride	**0.37J**	ug/L	1.0	0.13	1		04/21/18 07:45	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 07:45	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 07:45	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/21/18 07:45	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 07:45	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 07:45		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-190-201804 **Lab ID: 60268532025** Collected: 04/18/18 13:50 Received: 04/19/18 08:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**3.4J**	ug/L	10.0	1.9	1		04/21/18 08:00	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 08:00	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 08:00	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 08:00	75-25-2	
Bromomethane	**1.7J**	ug/L	5.0	0.16	1		04/21/18 08:00	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 08:00	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 08:00	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 08:00	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 08:00	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 08:00	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 08:00	67-66-3	
Chloromethane	**0.18J**	ug/L	1.0	0.080	1		04/21/18 08:00	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 08:00	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 08:00	75-34-3	
1,2-Dichloroethane	**0.24J**	ug/L	1.0	0.12	1		04/21/18 08:00	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 08:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 08:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 08:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 08:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 08:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 08:00	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 08:00	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 08:00	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 08:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 08:00	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 08:00	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 08:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 08:00	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 08:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 08:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 08:00	79-00-5	
Trichloroethene	**0.58J**	ug/L	1.0	0.17	1		04/21/18 08:00	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 08:00	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 08:00	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 08:00	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 08:00	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 08:00	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 08:00		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-191-201804 **Lab ID: 60268532026** Collected: 04/18/18 15:10 Received: 04/19/18 08:35 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		04/21/18 08:15	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 08:15	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 08:15	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 08:15	75-25-2	
Bromomethane	**1.5J**	ug/L	5.0	0.16	1		04/21/18 08:15	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 08:15	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 08:15	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 08:15	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 08:15	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 08:15	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 08:15	67-66-3	
Chloromethane	**0.11J**	ug/L	1.0	0.080	1		04/21/18 08:15	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 08:15	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 08:15	75-34-3	
1,2-Dichloroethane	**0.26J**	ug/L	1.0	0.12	1		04/21/18 08:15	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 08:15	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 08:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 08:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 08:15	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 08:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 08:15	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 08:15	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 08:15	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 08:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 08:15	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 08:15	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 08:15	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 08:15	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 08:15	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 08:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 08:15	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 08:15	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 08:15	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 08:15	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 08:15	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 08:15	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 08:15	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 08:15		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-192-201804 **Lab ID: 60268532027** Collected: 04/18/18 16:40 Received: 04/19/18 08:35 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		04/21/18 08:31	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 08:31	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 08:31	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 08:31	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 08:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 08:31	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 08:31	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 08:31	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 08:31	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 08:31	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 08:31	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 08:31	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 08:31	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 08:31	75-34-3	
1,2-Dichloroethane	**0.26J**	ug/L	1.0	0.12	1		04/21/18 08:31	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 08:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 08:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 08:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 08:31	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 08:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 08:31	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 08:31	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 08:31	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 08:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 08:31	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 08:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 08:31	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 08:31	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 08:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 08:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 08:31	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 08:31	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 08:31	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 08:31	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 08:31	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 08:31	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 08:31	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 08:31		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-84-201804 **Lab ID: 60268532028** Collected: 04/18/18 16:55 Received: 04/19/18 08:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**7.0J**	ug/L	10.0	1.9	1		04/25/18 11:36	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/25/18 11:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/25/18 11:36	75-27-4	
Bromoform	**5.1**	ug/L	1.0	0.070	1		04/25/18 11:36	75-25-2	
Bromomethane	**1.2J**	ug/L	5.0	0.16	1		04/25/18 11:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/25/18 11:36	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/25/18 11:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/25/18 11:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/25/18 11:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/25/18 11:36	75-00-3	
Chloroform	**0.24J**	ug/L	1.0	0.14	1		04/25/18 11:36	67-66-3	
Chloromethane	**1.6**	ug/L	1.0	0.080	1		04/25/18 11:36	74-87-3	
Dibromochloromethane	**0.31J**	ug/L	1.0	0.21	1		04/25/18 11:36	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/25/18 11:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/18 11:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/25/18 11:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/25/18 11:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/25/18 11:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/25/18 11:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/25/18 11:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/25/18 11:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/25/18 11:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/25/18 11:36	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/25/18 11:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/25/18 11:36	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/25/18 11:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/25/18 11:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/25/18 11:36	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/25/18 11:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/25/18 11:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/25/18 11:36	79-00-5	
Trichloroethene	**0.54J**	ug/L	1.0	0.17	1		04/25/18 11:36	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/25/18 11:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/25/18 11:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/25/18 11:36	460-00-4	
1,2-Dichloroethane-d4 (S)	90	%	80-117		1		04/25/18 11:36	17060-07-0	
Toluene-d8 (S)	95	%	80-115		1		04/25/18 11:36	2037-26-5	
Preservation pH	**7.0**		0.10	0.10	1		04/25/18 11:36		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TMW-21-201804 **Lab ID: 60268532029** Collected: 04/18/18 16:05 Received: 04/19/18 08:35 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		04/21/18 08:46	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 08:46	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 08:46	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 08:46	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 08:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 08:46	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 08:46	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 08:46	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 08:46	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 08:46	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 08:46	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 08:46	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 08:46	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 08:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/21/18 08:46	107-06-2	
1,1-Dichloroethene	**0.86J**	ug/L	1.0	0.20	1		04/21/18 08:46	75-35-4	
cis-1,2-Dichloroethene	**7.4**	ug/L	1.0	0.080	1		04/21/18 08:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 08:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 08:46	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 08:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 08:46	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 08:46	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 08:46	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 08:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 08:46	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 08:46	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 08:46	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 08:46	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 08:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 08:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 08:46	79-00-5	
Trichloroethene	**340**	ug/L	5.0	0.85	5		04/25/18 14:37	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 08:46	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 08:46	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/21/18 08:46	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 08:46	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 08:46	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 08:46		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TMW-32-201804 **Lab ID: 60268532030** Collected: 04/18/18 16:30 Received: 04/19/18 08:35 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		04/21/18 09:01	67-64-1	
Benzene	**0.12J**	ug/L	1.0	0.060	1		04/21/18 09:01	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 09:01	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 09:01	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 09:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 09:01	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 09:01	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 09:01	56-23-5	
Chlorobenzene	**4.4**	ug/L	1.0	0.21	1		04/21/18 09:01	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 09:01	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 09:01	67-66-3	
Chloromethane	**0.13J**	ug/L	1.0	0.080	1		04/21/18 09:01	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 09:01	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 09:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/21/18 09:01	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 09:01	75-35-4	
cis-1,2-Dichloroethene	**3.7**	ug/L	1.0	0.080	1		04/21/18 09:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 09:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 09:01	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 09:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 09:01	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 09:01	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 09:01	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 09:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 09:01	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 09:01	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 09:01	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 09:01	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 09:01	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 09:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 09:01	79-00-5	
Trichloroethene	**101**	ug/L	1.0	0.17	1		04/21/18 09:01	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 09:01	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 09:01	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/21/18 09:01	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 09:01	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 09:01	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 09:01		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: EB-03-201804 **Lab ID: 60268532031** Collected: 04/18/18 17:00 Received: 04/19/18 08:35 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		04/21/18 09:16	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 09:16	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 09:16	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 09:16	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 09:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 09:16	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 09:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 09:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 09:16	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 09:16	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 09:16	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 09:16	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 09:16	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 09:16	75-34-3	
1,2-Dichloroethane	**0.23J**	ug/L	1.0	0.12	1		04/21/18 09:16	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 09:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 09:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 09:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 09:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 09:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 09:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 09:16	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 09:16	591-78-6	
Methylene chloride	**0.41J**	ug/L	1.0	0.15	1		04/21/18 09:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 09:16	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 09:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 09:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 09:16	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 09:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 09:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 09:16	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 09:16	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 09:16	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 09:16	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 09:16	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 09:16	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 09:16	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 09:16		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: EB-04-201804 **Lab ID: 60268532032** Collected: 04/18/18 17:15 Received: 04/19/18 08:35 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		04/21/18 09:31	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 09:31	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 09:31	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 09:31	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 09:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 09:31	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 09:31	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 09:31	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 09:31	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 09:31	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 09:31	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 09:31	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 09:31	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 09:31	75-34-3	
1,2-Dichloroethane	**0.25J**	ug/L	1.0	0.12	1		04/21/18 09:31	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 09:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 09:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 09:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 09:31	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 09:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 09:31	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 09:31	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 09:31	591-78-6	
Methylene chloride	**0.29J**	ug/L	1.0	0.15	1		04/21/18 09:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 09:31	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 09:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 09:31	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 09:31	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 09:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 09:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 09:31	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 09:31	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 09:31	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 09:31	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 09:31	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 09:31	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 09:31	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 09:31		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TB-02-201804 **Lab ID: 60268532033** Collected: 04/18/18 08:50 Received: 04/19/18 08:35 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		04/21/18 09:46	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 09:46	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 09:46	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 09:46	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 09:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 09:46	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 09:46	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 09:46	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 09:46	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 09:46	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 09:46	67-66-3	
Chloromethane	**0.13J**	ug/L	1.0	0.080	1		04/21/18 09:46	74-87-3	B
Dibromochloromethane	**0.22J**	ug/L	1.0	0.21	1		04/21/18 09:46	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 09:46	75-34-3	
1,2-Dichloroethane	**0.22J**	ug/L	1.0	0.12	1		04/21/18 09:46	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 09:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 09:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 09:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 09:46	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 09:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 09:46	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 09:46	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 09:46	591-78-6	
Methylene chloride	**0.49J**	ug/L	1.0	0.15	1		04/21/18 09:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 09:46	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 09:46	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 09:46	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 09:46	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 09:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 09:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 09:46	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 09:46	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 09:46	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 09:46	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 09:46	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 09:46	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/21/18 09:46	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 09:46		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TB-03-201804 **Lab ID: 60268532034** Collected: 04/18/18 08:50 Received: 04/19/18 08:35 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		04/21/18 10:02	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 10:02	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 10:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 10:02	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 10:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 10:02	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 10:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 10:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 10:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 10:02	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 10:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 10:02	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 10:02	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 10:02	75-34-3	
1,2-Dichloroethane	**0.21J**	ug/L	1.0	0.12	1		04/21/18 10:02	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 10:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 10:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 10:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 10:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 10:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 10:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 10:02	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 10:02	591-78-6	
Methylene chloride	**0.43J**	ug/L	1.0	0.15	1		04/21/18 10:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 10:02	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 10:02	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 10:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 10:02	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 10:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 10:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 10:02	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 10:02	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 10:02	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 10:02	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 10:02	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/21/18 10:02	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 10:02	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 10:02		

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268532

QC Batch: 522628 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268532001, 60268532002, 60268532003, 60268532004, 60268532005, 60268532006, 60268532008, 60268532009, 60268532010

METHOD BLANK: 2139660 Matrix: Water
Associated Lab Samples: 60268532001, 60268532002, 60268532003, 60268532004, 60268532005, 60268532006, 60268532008, 60268532009, 60268532010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/20/18 18:51	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/20/18 18:51	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/20/18 18:51	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/20/18 18:51	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/20/18 18:51	
1,2-Dichloroethane	ug/L	0.24J	1.0	0.12	04/20/18 18:51	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/20/18 18:51	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/20/18 18:51	
2-Hexanone	ug/L	ND	10.0	1.2	04/20/18 18:51	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/20/18 18:51	
Acetone	ug/L	ND	10.0	1.9	04/20/18 18:51	
Benzene	ug/L	ND	1.0	0.060	04/20/18 18:51	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/20/18 18:51	
Bromoform	ug/L	ND	1.0	0.070	04/20/18 18:51	
Bromomethane	ug/L	1.4J	5.0	0.16	04/20/18 18:51	
Carbon disulfide	ug/L	ND	5.0	0.12	04/20/18 18:51	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/20/18 18:51	
Chlorobenzene	ug/L	ND	1.0	0.21	04/20/18 18:51	
Chloroethane	ug/L	ND	1.0	0.15	04/20/18 18:51	
Chloroform	ug/L	ND	1.0	0.14	04/20/18 18:51	
Chloromethane	ug/L	0.12J	1.0	0.080	04/20/18 18:51	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/20/18 18:51	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/20/18 18:51	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/20/18 18:51	
Ethylbenzene	ug/L	ND	1.0	0.18	04/20/18 18:51	
Methylene chloride	ug/L	ND	1.0	0.15	04/20/18 18:51	
Styrene	ug/L	ND	1.0	0.12	04/20/18 18:51	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/20/18 18:51	
Toluene	ug/L	ND	1.0	0.17	04/20/18 18:51	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/20/18 18:51	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/20/18 18:51	
Trichloroethene	ug/L	ND	1.0	0.17	04/20/18 18:51	
Vinyl chloride	ug/L	ND	1.0	0.13	04/20/18 18:51	
Xylene (Total)	ug/L	ND	3.0	0.42	04/20/18 18:51	
1,2-Dichloroethane-d4 (S)	%	98	80-117		04/20/18 18:51	
4-Bromofluorobenzene (S)	%	100	80-119		04/20/18 18:51	
Toluene-d8 (S)	%	100	80-115		04/20/18 18:51	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268532

LABORATORY CONTROL SAMPLE: 2139661

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.0	100	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	20.8	104	74-121	
1,1,2-Trichloroethane	ug/L	20	21.1	105	83-119	
1,1-Dichloroethane	ug/L	20	19.5	98	85-128	
1,1-Dichloroethene	ug/L	20	19.3	97	85-123	
1,2-Dichloroethane	ug/L	20	20.9	105	77-120	
1,2-Dichloropropane	ug/L	20	19.8	99	81-126	
2-Butanone (MEK)	ug/L	100	99.2	99	65-134	
2-Hexanone	ug/L	100	101	101	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	98.1	98	66-139	
Acetone	ug/L	100	94.2	94	62-142	
Benzene	ug/L	20	20.1	101	81-118	
Bromodichloromethane	ug/L	20	20.8	104	85-123	
Bromoform	ug/L	20	19.9	100	83-123	
Bromomethane	ug/L	20	17.5	87	39-149	
Carbon disulfide	ug/L	20	18.5	92	85-124	
Carbon tetrachloride	ug/L	20	20.9	104	85-126	
Chlorobenzene	ug/L	20	20.9	105	87-118	
Chloroethane	ug/L	20	14.5	72	73-134	L2
Chloroform	ug/L	20	20.0	100	85-119	
Chloromethane	ug/L	20	16.8	84	20-174	
cis-1,2-Dichloroethene	ug/L	20	19.3	96	84-121	
cis-1,3-Dichloropropene	ug/L	20	19.4	97	80-124	
Dibromochloromethane	ug/L	20	20.7	103	83-122	
Ethylbenzene	ug/L	20	20.2	101	80-118	
Methylene chloride	ug/L	20	19.1	96	81-126	
Styrene	ug/L	20	19.9	100	85-120	
Tetrachloroethene	ug/L	20	19.8	99	87-120	
Toluene	ug/L	20	20.2	101	82-118	
trans-1,2-Dichloroethene	ug/L	20	20.1	100	83-121	
trans-1,3-Dichloropropene	ug/L	20	20.2	101	80-122	
Trichloroethene	ug/L	20	21.0	105	82-120	
Vinyl chloride	ug/L	20	19.3	96	74-147	
Xylene (Total)	ug/L	60	59.9	100	81-120	
1,2-Dichloroethane-d4 (S)	%			100	80-117	
4-Bromofluorobenzene (S)	%			99	80-119	
Toluene-d8 (S)	%			100	80-115	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268532

QC Batch: 522630 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268532011, 60268532012, 60268532013, 60268532014, 60268532015, 60268532016, 60268532017, 60268532018, 60268532019, 60268532020, 60268532021, 60268532022, 60268532023

METHOD BLANK: 2139687 Matrix: Water
Associated Lab Samples: 60268532011, 60268532012, 60268532013, 60268532014, 60268532015, 60268532016, 60268532017, 60268532018, 60268532019, 60268532020, 60268532021, 60268532022, 60268532023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/21/18 01:10	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/21/18 01:10	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/21/18 01:10	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/21/18 01:10	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/21/18 01:10	
1,2-Dichloroethane	ug/L	0.21J	1.0	0.12	04/21/18 01:10	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/21/18 01:10	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/21/18 01:10	
2-Hexanone	ug/L	ND	10.0	1.2	04/21/18 01:10	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/21/18 01:10	
Acetone	ug/L	ND	10.0	1.9	04/21/18 01:10	
Benzene	ug/L	ND	1.0	0.060	04/21/18 01:10	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/21/18 01:10	
Bromoform	ug/L	ND	1.0	0.070	04/21/18 01:10	
Bromomethane	ug/L	ND	5.0	0.16	04/21/18 01:10	
Carbon disulfide	ug/L	ND	5.0	0.12	04/21/18 01:10	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/21/18 01:10	
Chlorobenzene	ug/L	ND	1.0	0.21	04/21/18 01:10	
Chloroethane	ug/L	ND	1.0	0.15	04/21/18 01:10	
Chloroform	ug/L	ND	1.0	0.14	04/21/18 01:10	
Chloromethane	ug/L	ND	1.0	0.080	04/21/18 01:10	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/21/18 01:10	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/21/18 01:10	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/21/18 01:10	
Ethylbenzene	ug/L	ND	1.0	0.18	04/21/18 01:10	
Methylene chloride	ug/L	ND	1.0	0.15	04/21/18 01:10	
Styrene	ug/L	ND	1.0	0.12	04/21/18 01:10	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/21/18 01:10	
Toluene	ug/L	ND	1.0	0.17	04/21/18 01:10	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/21/18 01:10	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/21/18 01:10	
Trichloroethene	ug/L	ND	1.0	0.17	04/21/18 01:10	
Vinyl chloride	ug/L	ND	1.0	0.13	04/21/18 01:10	
Xylene (Total)	ug/L	ND	3.0	0.42	04/21/18 01:10	
1,2-Dichloroethane-d4 (S)	%	101	80-117		04/21/18 01:10	
4-Bromofluorobenzene (S)	%	100	80-119		04/21/18 01:10	
Toluene-d8 (S)	%	100	80-115		04/21/18 01:10	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268532

LABORATORY CONTROL SAMPLE: 2139688

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.6	98	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	20.0	100	74-121	
1,1,2-Trichloroethane	ug/L	20	21.2	106	83-119	
1,1-Dichloroethane	ug/L	20	19.3	97	85-128	
1,1-Dichloroethene	ug/L	20	19.8	99	85-123	
1,2-Dichloroethane	ug/L	20	20.9	104	77-120	
1,2-Dichloropropane	ug/L	20	19.7	99	81-126	
2-Butanone (MEK)	ug/L	100	102	102	65-134	
2-Hexanone	ug/L	100	100	100	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.9	97	66-139	
Acetone	ug/L	100	98.4	98	62-142	
Benzene	ug/L	20	19.6	98	81-118	
Bromodichloromethane	ug/L	20	20.8	104	85-123	
Bromoform	ug/L	20	20.5	103	83-123	
Bromomethane	ug/L	20	17.4	87	39-149	
Carbon disulfide	ug/L	20	17.7	88	85-124	
Carbon tetrachloride	ug/L	20	20.2	101	85-126	
Chlorobenzene	ug/L	20	21.4	107	87-118	
Chloroethane	ug/L	20	14.0	70	73-134	L2
Chloroform	ug/L	20	19.9	99	85-119	
Chloromethane	ug/L	20	16.4	82	20-174	
cis-1,2-Dichloroethene	ug/L	20	19.4	97	84-121	
cis-1,3-Dichloropropene	ug/L	20	19.4	97	80-124	
Dibromochloromethane	ug/L	20	20.7	103	83-122	
Ethylbenzene	ug/L	20	20.2	101	80-118	
Methylene chloride	ug/L	20	19.3	97	81-126	
Styrene	ug/L	20	19.8	99	85-120	
Tetrachloroethene	ug/L	20	19.8	99	87-120	
Toluene	ug/L	20	20.0	100	82-118	
trans-1,2-Dichloroethene	ug/L	20	19.4	97	83-121	
trans-1,3-Dichloropropene	ug/L	20	20.5	102	80-122	
Trichloroethene	ug/L	20	22.1	111	82-120	
Vinyl chloride	ug/L	20	18.5	92	74-147	
Xylene (Total)	ug/L	60	59.2	99	81-120	
1,2-Dichloroethane-d4 (S)	%			99	80-117	
4-Bromofluorobenzene (S)	%			99	80-119	
Toluene-d8 (S)	%			100	80-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2139689 2139690

Parameter	Units	60268532011 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	21.2	17.9	106	90	79-135	17	11	R1
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	20.4	17.2	102	86	49-144	17	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	20.9	17.5	105	87	71-124	18	14	R1

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268532

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2139689 2139690

Parameter	Units	60268532011 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	17.4	101	87	77-135	15	12	R1
1,1-Dichloroethene	ug/L	ND	20	20	21.6	17.5	108	88	77-138	21	14	R1
1,2-Dichloroethane	ug/L	0.23J	20	20	20.8	17.9	103	89	47-152	15	27	
1,2-Dichloropropane	ug/L	ND	20	20	19.8	16.8	99	84	74-128	16	13	R1
2-Butanone (MEK)	ug/L	ND	100	100	96.7	82.5	97	83	60-125	16	17	
2-Hexanone	ug/L	ND	100	100	96.2	79.7	96	80	53-133	19	15	R1
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	95.0	79.2	95	79	62-134	18	15	R1
Acetone	ug/L	ND	100	100	96.9	79.9	97	80	50-127	19	28	
Benzene	ug/L	ND	20	20	20.6	17.5	103	88	62-138	16	34	
Bromodichloromethane	ug/L	ND	20	20	20.6	17.5	103	88	75-126	16	12	R1
Bromoform	ug/L	ND	20	20	19.5	16.8	97	84	70-122	15	14	R1
Bromomethane	ug/L	1.4J	20	20	17.8	16.8	82	77	41-155	6	42	
Carbon disulfide	ug/L	ND	20	20	19.7	17.0	99	85	70-148	15	14	R1
Carbon tetrachloride	ug/L	ND	20	20	22.5	18.5	113	93	78-139	19	23	
Chlorobenzene	ug/L	ND	20	20	21.1	17.6	106	88	74-130	18	10	R1
Chloroethane	ug/L	ND	20	20	16.3	13.7	81	68	67-153	17	27	
Chloroform	ug/L	ND	20	20	20.2	17.5	101	87	75-127	14	12	R1
Chloromethane	ug/L	ND	20	20	18.4	16.1	92	81	22-188	13	68	
cis-1,2-Dichloroethene	ug/L	ND	20	20	20.0	16.9	100	85	69-135	17	15	R1
cis-1,3-Dichloropropene	ug/L	ND	20	20	18.6	15.6	93	78	61-129	17	11	R1
Dibromochloromethane	ug/L	ND	20	20	20.4	17.3	102	87	60-133	16	14	R1
Ethylbenzene	ug/L	ND	20	20	20.1	16.6	100	83	60-140	19	32	
Methylene chloride	ug/L	ND	20	20	19.8	16.9	99	85	72-131	16	16	
Styrene	ug/L	ND	20	20	14.7	13.0	74	65	59-142	12	12	
Tetrachloroethene	ug/L	ND	20	20	20.1	16.2	100	81	72-136	21	15	R1
Toluene	ug/L	ND	20	20	20.3	16.9	102	85	65-135	18	32	
trans-1,2-Dichloroethene	ug/L	ND	20	20	20.7	17.6	104	88	75-137	16	15	R1
trans-1,3-Dichloropropene	ug/L	ND	20	20	19.6	16.3	98	81	60-128	18	13	R1
Trichloroethene	ug/L	ND	20	20	21.5	18.3	107	91	66-136	16	15	R1
Vinyl chloride	ug/L	ND	20	20	21.3	18.6	107	93	65-164	14	16	
Xylene (Total)	ug/L	ND	60	60	59.7	48.7	99	81	69-133	20	31	
1,2-Dichloroethane-d4 (S)	%						100	99	80-117			
4-Bromofluorobenzene (S)	%						97	100	80-119			
Toluene-d8 (S)	%						99	99	80-115			
Preservation pH		1.0			1.0	1.0				0		

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268532

QC Batch: 522636 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268532024, 60268532025, 60268532026, 60268532027, 60268532029, 60268532030, 60268532031, 60268532032, 60268532033, 60268532034

METHOD BLANK: 2139748 Matrix: Water
Associated Lab Samples: 60268532024, 60268532025, 60268532026, 60268532027, 60268532029, 60268532030, 60268532031, 60268532032, 60268532033, 60268532034

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/21/18 07:29	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/21/18 07:29	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/21/18 07:29	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/21/18 07:29	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/21/18 07:29	
1,2-Dichloroethane	ug/L	0.24J	1.0	0.12	04/21/18 07:29	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/21/18 07:29	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/21/18 07:29	
2-Hexanone	ug/L	ND	10.0	1.2	04/21/18 07:29	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/21/18 07:29	
Acetone	ug/L	ND	10.0	1.9	04/21/18 07:29	
Benzene	ug/L	ND	1.0	0.060	04/21/18 07:29	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/21/18 07:29	
Bromoform	ug/L	ND	1.0	0.070	04/21/18 07:29	
Bromomethane	ug/L	1.5J	5.0	0.16	04/21/18 07:29	
Carbon disulfide	ug/L	ND	5.0	0.12	04/21/18 07:29	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/21/18 07:29	
Chlorobenzene	ug/L	ND	1.0	0.21	04/21/18 07:29	
Chloroethane	ug/L	ND	1.0	0.15	04/21/18 07:29	
Chloroform	ug/L	ND	1.0	0.14	04/21/18 07:29	
Chloromethane	ug/L	0.15J	1.0	0.080	04/21/18 07:29	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/21/18 07:29	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/21/18 07:29	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/21/18 07:29	
Ethylbenzene	ug/L	ND	1.0	0.18	04/21/18 07:29	
Methylene chloride	ug/L	ND	1.0	0.15	04/21/18 07:29	
Styrene	ug/L	ND	1.0	0.12	04/21/18 07:29	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/21/18 07:29	
Toluene	ug/L	ND	1.0	0.17	04/21/18 07:29	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/21/18 07:29	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/21/18 07:29	
Trichloroethene	ug/L	ND	1.0	0.17	04/21/18 07:29	
Vinyl chloride	ug/L	ND	1.0	0.13	04/21/18 07:29	
Xylene (Total)	ug/L	ND	3.0	0.42	04/21/18 07:29	
1,2-Dichloroethane-d4 (S)	%	100	80-117		04/21/18 07:29	
4-Bromofluorobenzene (S)	%	99	80-119		04/21/18 07:29	
Toluene-d8 (S)	%	100	80-115		04/21/18 07:29	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268532

LABORATORY CONTROL SAMPLE: 2139749

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.5	98	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	18.8	94	74-121	
1,1,2-Trichloroethane	ug/L	20	21.1	105	83-119	
1,1-Dichloroethane	ug/L	20	18.9	95	85-128	
1,1-Dichloroethene	ug/L	20	19.5	97	85-123	
1,2-Dichloroethane	ug/L	20	20.3	102	77-120	
1,2-Dichloropropane	ug/L	20	19.3	96	81-126	
2-Butanone (MEK)	ug/L	100	98.1	98	65-134	
2-Hexanone	ug/L	100	99.5	100	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.2	96	66-139	
Acetone	ug/L	100	92.9	93	62-142	
Benzene	ug/L	20	19.2	96	81-118	
Bromodichloromethane	ug/L	20	20.5	102	85-123	
Bromoform	ug/L	20	20.0	100	83-123	
Bromomethane	ug/L	20	18.4	92	39-149	
Carbon disulfide	ug/L	20	17.5	88	85-124	
Carbon tetrachloride	ug/L	20	20.3	102	85-126	
Chlorobenzene	ug/L	20	20.4	102	87-118	
Chloroethane	ug/L	20	14.1	71	73-134	L2
Chloroform	ug/L	20	19.4	97	85-119	
Chloromethane	ug/L	20	15.8	79	20-174	
cis-1,2-Dichloroethene	ug/L	20	18.8	94	84-121	
cis-1,3-Dichloropropene	ug/L	20	18.3	91	80-124	
Dibromochloromethane	ug/L	20	20.5	103	83-122	
Ethylbenzene	ug/L	20	19.4	97	80-118	
Methylene chloride	ug/L	20	18.6	93	81-126	
Styrene	ug/L	20	19.3	97	85-120	
Tetrachloroethene	ug/L	20	19.5	98	87-120	
Toluene	ug/L	20	19.2	96	82-118	
trans-1,2-Dichloroethene	ug/L	20	19.4	97	83-121	
trans-1,3-Dichloropropene	ug/L	20	19.4	97	80-122	
Trichloroethene	ug/L	20	21.3	106	82-120	
Vinyl chloride	ug/L	20	18.2	91	74-147	
Xylene (Total)	ug/L	60	57.6	96	81-120	
1,2-Dichloroethane-d4 (S)	%			101	80-117	
4-Bromofluorobenzene (S)	%			99	80-119	
Toluene-d8 (S)	%			99	80-115	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268532

QC Batch: 523156 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268532004, 60268532005, 60268532015, 60268532021, 60268532024, 60268532029

METHOD BLANK: 2141662 Matrix: Water
Associated Lab Samples: 60268532004, 60268532005, 60268532015, 60268532021, 60268532024, 60268532029

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichloroethene	ug/L	ND	1.0	0.17	04/25/18 10:26	
1,2-Dichloroethane-d4 (S)	%	93	80-117		04/25/18 10:26	
4-Bromofluorobenzene (S)	%	99	80-119		04/25/18 10:26	
Toluene-d8 (S)	%	96	80-115		04/25/18 10:26	

LABORATORY CONTROL SAMPLE: 2141663

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/L	20	20.8	104	82-120	
1,2-Dichloroethane-d4 (S)	%			96	80-117	
4-Bromofluorobenzene (S)	%			98	80-119	
Toluene-d8 (S)	%			97	80-115	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268532

QC Batch: 523154
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 7 day
Associated Lab Samples: 60268532007, 60268532028

METHOD BLANK: 2141660
Matrix: Water
Associated Lab Samples: 60268532007, 60268532028

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/25/18 10:26	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/25/18 10:26	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/25/18 10:26	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/25/18 10:26	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/25/18 10:26	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/25/18 10:26	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/25/18 10:26	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/25/18 10:26	
2-Hexanone	ug/L	ND	10.0	1.2	04/25/18 10:26	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/25/18 10:26	
Acetone	ug/L	ND	10.0	1.9	04/25/18 10:26	
Benzene	ug/L	ND	1.0	0.060	04/25/18 10:26	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/25/18 10:26	
Bromoform	ug/L	ND	1.0	0.070	04/25/18 10:26	
Bromomethane	ug/L	ND	5.0	0.16	04/25/18 10:26	
Carbon disulfide	ug/L	ND	5.0	0.12	04/25/18 10:26	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/25/18 10:26	
Chlorobenzene	ug/L	ND	1.0	0.21	04/25/18 10:26	
Chloroethane	ug/L	ND	1.0	0.15	04/25/18 10:26	
Chloroform	ug/L	ND	1.0	0.14	04/25/18 10:26	
Chloromethane	ug/L	ND	1.0	0.080	04/25/18 10:26	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/25/18 10:26	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/25/18 10:26	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/25/18 10:26	
Ethylbenzene	ug/L	ND	1.0	0.18	04/25/18 10:26	
Methylene chloride	ug/L	ND	1.0	0.15	04/25/18 10:26	
Styrene	ug/L	ND	1.0	0.12	04/25/18 10:26	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/25/18 10:26	
Toluene	ug/L	ND	1.0	0.17	04/25/18 10:26	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/25/18 10:26	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/25/18 10:26	
Trichloroethene	ug/L	ND	1.0	0.17	04/25/18 10:26	
Vinyl chloride	ug/L	ND	1.0	0.13	04/25/18 10:26	
Xylene (Total)	ug/L	ND	3.0	0.42	04/25/18 10:26	
1,2-Dichloroethane-d4 (S)	%	93	80-117		04/25/18 10:26	
4-Bromofluorobenzene (S)	%	99	80-119		04/25/18 10:26	
Toluene-d8 (S)	%	96	80-115		04/25/18 10:26	

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

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268532

LABORATORY CONTROL SAMPLE: 2141661

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.3	102	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	18.6	93	74-121	
1,1,2-Trichloroethane	ug/L	20	19.6	98	83-119	
1,1-Dichloroethane	ug/L	20	19.8	99	85-128	
1,1-Dichloroethene	ug/L	20	17.4	87	85-123	
1,2-Dichloroethane	ug/L	20	19.4	97	77-120	
1,2-Dichloropropane	ug/L	20	20.5	102	81-126	
2-Butanone (MEK)	ug/L	100	95.7	96	65-134	
2-Hexanone	ug/L	100	87.2	87	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	99.1	99	66-139	
Acetone	ug/L	100	87.0	87	62-142	
Benzene	ug/L	20	21.0	105	81-118	
Bromodichloromethane	ug/L	20	19.2	96	85-123	
Bromoform	ug/L	20	18.3	92	83-123	
Bromomethane	ug/L	20	22.4	112	39-149	
Carbon disulfide	ug/L	20	21.6	108	85-124	
Carbon tetrachloride	ug/L	20	19.5	97	85-126	
Chlorobenzene	ug/L	20	19.6	98	87-118	
Chloroethane	ug/L	20	17.2	86	73-134	
Chloroform	ug/L	20	20.6	103	85-119	
Chloromethane	ug/L	20	20.0	100	20-174	
cis-1,2-Dichloroethene	ug/L	20	20.6	103	84-121	
cis-1,3-Dichloropropene	ug/L	20	20.2	101	80-124	
Dibromochloromethane	ug/L	20	18.0	90	83-122	
Ethylbenzene	ug/L	20	18.9	94	80-118	
Methylene chloride	ug/L	20	21.0	105	81-126	
Styrene	ug/L	20	19.8	99	85-120	
Tetrachloroethene	ug/L	20	18.9	95	87-120	
Toluene	ug/L	20	19.2	96	82-118	
trans-1,2-Dichloroethene	ug/L	20	20.6	103	83-121	
trans-1,3-Dichloropropene	ug/L	20	18.3	92	80-122	
Trichloroethene	ug/L	20	20.8	104	82-120	
Vinyl chloride	ug/L	20	22.4	112	74-147	
Xylene (Total)	ug/L	60	58.1	97	81-120	
1,2-Dichloroethane-d4 (S)	%			96	80-117	
4-Bromofluorobenzene (S)	%			98	80-119	
Toluene-d8 (S)	%			97	80-115	

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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9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60268532

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: 522628

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 522636

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 523154

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 523156

[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.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
R1	RPD value was outside control limits.

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60268532

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60268532001	MW-99-201804	EPA 5030B/8260	522628		
60268532002	MW-184-201804	EPA 5030B/8260	522628		
60268532003	MW-98-201804	EPA 5030B/8260	522628		
60268532004	TMW-24-201804	EPA 5030B/8260	522628		
60268532004	TMW-24-201804	EPA 5030B/8260	523156		
60268532005	MW-183-201804	EPA 5030B/8260	522628		
60268532005	MW-183-201804	EPA 5030B/8260	523156		
60268532006	IW-73-201804	EPA 5030B/8260	522628		
60268532008	RW-69-201804	EPA 5030B/8260	522628		
60268532009	MW-26-201804	EPA 5030B/8260	522628		
60268532010	MW-187-201804	EPA 5030B/8260	522628		
60268532011	ITMW-20-201804	EPA 5030B/8260	522630		
60268532012	MW-175-201804	EPA 5030B/8260	522630		
60268532013	MW-55R-201804	EPA 5030B/8260	522630		
60268532014	DUP-05-201804	EPA 5030B/8260	522630		
60268532015	MW-46R-201804	EPA 5030B/8260	522630		
60268532015	MW-46R-201804	EPA 5030B/8260	523156		
60268532016	MW-178-201804	EPA 5030B/8260	522630		
60268532017	TMW-27-201804	EPA 5030B/8260	522630		
60268532018	MW-39R-201804	EPA 5030B/8260	522630		
60268532019	TMW-23-201804	EPA 5030B/8260	522630		
60268532020	TMW-10-201804	EPA 5030B/8260	522630		
60268532021	TMW-22-201804	EPA 5030B/8260	522630		
60268532021	TMW-22-201804	EPA 5030B/8260	523156		
60268532022	TMW-14-201804	EPA 5030B/8260	522630		
60268532023	DUP-03-201804	EPA 5030B/8260	522630		
60268532024	TMW-12-201804	EPA 5030B/8260	522636		
60268532024	TMW-12-201804	EPA 5030B/8260	523156		
60268532025	MW-190-201804	EPA 5030B/8260	522636		
60268532026	MW-191-201804	EPA 5030B/8260	522636		
60268532027	MW-192-201804	EPA 5030B/8260	522636		
60268532029	TMW-21-201804	EPA 5030B/8260	522636		
60268532029	TMW-21-201804	EPA 5030B/8260	523156		
60268532030	TMW-32-201804	EPA 5030B/8260	522636		
60268532031	EB-03-201804	EPA 5030B/8260	522636		
60268532032	EB-04-201804	EPA 5030B/8260	522636		
60268532033	TB-02-201804	EPA 5030B/8260	522636		
60268532034	TB-03-201804	EPA 5030B/8260	522636		
60268532007	IW-77-201804	EPA 5030B/8260	523154		
60268532028	MW-84-201804	EPA 5030B/8260	523154		

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Sample Condition Upon Receipt

WO# : 60268532

60268532

Client Name: Bambi

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: T-300 **Type of Ice:** ~~Wet~~ Blue None

Cooler Temperature (°C): **As-read** 0.4 **Corr. Factor** +1.2 **Corrected** 1.6

Date and initials of person examining contents: BM 4-19-18

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?	6M 4-19-18 ~~☑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	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: 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	
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

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

Page: 1 of 3 4

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Ramboll	Report To: Tamara House-Knight	Attention: Tamara House-Knight
Address: 124 W. Capitol Ave. Little Rock, AR 72201	Copy To:	Company Name: Ramboll
		Address: 124 W. Capitol Ave Little Rock, AR 72201
Email To:	Purchase Order No.: NA	Pace Quote Reference:
Phone: Fax:	Project Name: Fort Smith, AR	Pace Project Manager: Richard Mannz
Requested Due Date/TAT: Standard	Project Number:	Pace Profile #: 7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER

☐ UST ☐ RCRA ☒ OTHER _____

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	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	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-99-201804	WT	G			4/18/18	0930		3				3						X		60268532
2	MW-184-201804						1105														
3	MW-98-201804						1240														
4	TMW-24-201804						1400														
5	MW-183-201804						1525														
6	IW-73-201804						0920														
7	IW-77-201804						1050										3				
8	RW-69-201804						1250						3								
9	MW-26-201804						1350														
10	MW-187-201804						1515														
11	IW-73-201804-MS/MSD						0920														
12	~~DUP-04-201804~~						1250														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Haley Ahlers / Ramboll	4/18/18	1800		4-19-18	0835	16 Y Y Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Haley Ahlers

SIGNATURE of SAMPLER: Haley Ahlers DATE Signed (MM/DD/YY): 04/18/18

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

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

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

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Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Ramboll	Report To: Tamara House-Knight	Attention: Tamara House-Knight
Address: 124 W. Capitol Ave. Little Rock, AR 72201	Copy To:	Company Name: Ramboll
Email To:	Purchase Order No.: NA	Address: 124 W. Capitol Ave Little Rock, AR 72201
Phone: Fax:	Project Name: Fort Smith, AR	Pace Quote Reference:
Requested Due Date/TAT: Standard	Project Number:	Pace Project Manager: Richard Mannz
		Pace Profile #: 7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER _____

Site Location STATE: AR

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

ITEM #	Section D Required Client Information: 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	Requested Analysis Filtered (Y/N): Y/N	Analysis Test: 8240 VOCs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60268532
1	ITMW-20-201804	WT	G			4/18/18	0850		3				3						X		3-0G9H 011
2	ITMW-20-201804-MS/MSD	"	"			"	0850		"				"						"		-
3	MW-175-201804						0940														012
4	MW-55R-201804						1122														013
5	DUP-05-201804						1122														014
6	MW-46R-201804						1325														015
7	MW-178-201804						1415														016
8	TMW-27-201804						1610														017
9	MW-39R-201804						0940														018
10	TMW-23-201804						1125														019
11	TMW-10-201804						1310														020
12	TMW-22-201804	↓	↓			↓	1450		↓				↓						↓		021

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)
	Haley Ahlers / Ramboll	4/18/18	1800		4-19-18	0835	1.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Haley Ahlers

SIGNATURE of SAMPLER: Haley Ahlers DATE Signed (MM/DD/YY): 04/18/18

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

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

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Page: 3 of ~~3~~ 4 HA

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Ramboll	Report To: Tamara House-Knight	Attention: Tamara House-Knight
Address: 124 W. Capitol Ave. Little Rock, AR 72201	Copy To:	Company Name: Ramboll
		Address: 124 W. Capitol Ave
Email To:	Purchase Order No.: NA	Pace Quote Reference: Little Rock, AR 72201
Phone: Fax:	Project Name: Fort Smith, AR	Pace Project Manager: Richard Mannz
Requested Due Date/TAT: Standard	Project Number:	Pace Profile #: 7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER _____

Site Location STATE: AR

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other Ascorbic Acid	Analysis Test (Y/N) 8260 VOCs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TMW-14-201804	WT	G			4/18/18	0930		3				3					X		3-DG9H 022
2	DUP-03-201804						0935													023
3	TMW-12-201804						1042													024
4	MW-190-201804						1350													025
5	MW-191-201804						1510													026
6	MW-192-201804						1640													027
7	MW-84-201804						1655										3			DG9A 028
8	TMW-21-201804						~~1610~~ 1605 HA		5				3							3-DG9H 029
9	TMW-32-201804						1630													030
10	EB-03-201804						1700													031
11	EB-04-201804						1715													032
12																				HA

60268532

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)
				[signature]	4-19-18	0835	1.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Haley Ahlers

SIGNATURE of SAMPLER: Haley Ahlers

DATE Signed (MM/DD/YY): 04/18/18

*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:

Company:	Ramboll
Address:	124 W. Capitol Ave, Little Rock, AR 72201
Email To:	
Phone: / 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:	Ramboll
Address:	124 W. Capitol Ave Little Rock, AR 72201
Pace Quote Reference:	
Pace Project Manager:	Richard Mannz
Pace Profile #:	7444, line 1

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	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TB-02-201804																			60268532 0G9H 033
2	TB-03-201804																			60268532 0G9H 034
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Haley Ahlers / Ramboll	4/18/18	1800		4-19-18	0835	1.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Haley Ahlers

SIGNATURE of SAMPLER: Haley Ahlers DATE Signed (MM/DD/YY): 04/18/18

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
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Lenexa, KS 66219
(913)599-5665

April 27, 2018

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

RE: Project: FORT SMITH, AR
Pace Project No.: 60268614

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on April 20, 2018. 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: Kristen Drucquer, Ramboll
Tamara House-Knight, Ramboll Environ
M. Wilson

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CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60268614

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.: 60268614

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60268614001	**MW-97-201804**	Water	04/19/18 09:05	04/20/18 06:25
60268614002	**MW-96-201804**	Water	04/19/18 10:15	04/20/18 06:25
60268614003	**MW-29-201804**	Water	04/19/18 11:40	04/20/18 06:25
60268614004	**MW-185-201804**	Water	04/19/18 12:55	04/20/18 06:25
60268614005	**DUP-07-201804**	Water	04/19/18 12:55	04/20/18 06:25
60268614006	**MW-189-201804**	Water	04/19/18 14:45	04/20/18 06:25
60268614007	**MW-188-201804**	Water	04/19/18 09:15	04/20/18 06:25
60268614008	**DUP-04-201804**	Water	04/19/18 09:15	04/20/18 06:25
60268614009	**MW-186-201804**	Water	04/19/18 10:35	04/20/18 06:25
60268614010	**ITMW-7-201804**	Water	04/19/18 09:30	04/20/18 06:25
60268614011	**TMW-19-201804**	Water	04/19/18 12:40	04/20/18 06:25
60268614012	**TMW-26-201804**	Water	04/19/18 13:00	04/20/18 06:25
60268614013	**MW-86-201804**	Water	04/19/18 15:35	04/20/18 06:25
60268614014	**TMW-25-201804**	Water	04/19/18 14:10	04/20/18 06:25
60268614015	**ITMW-10-201804**	Water	04/19/18 11:15	04/20/18 06:25
60268614016	**ITMW-5-201804**	Water	04/19/18 15:25	04/20/18 06:25
60268614017	**ITMW-21-201804**	Water	04/19/18 14:10	04/20/18 06:25
60268614018	**TMW-16-201804**	Water	04/19/18 15:30	04/20/18 06:25
60268614019	**MW-182-201804**	Water	04/19/18 09:25	04/20/18 06:25
60268614020	**DUP-06-201804**	Water	04/19/18 09:30	04/20/18 06:25
60268614021	**TMW-21-201804**	Water	04/19/18 10:48	04/20/18 06:25
60268614022	**MW-91-201804**	Water	04/19/18 12:35	04/20/18 06:25
60268614023	**MW-38-201804**	Water	04/19/18 13:35	04/20/18 06:25
60268614024	**MW-95-201804**	Water	04/19/18 15:12	04/20/18 06:25
60268614025	**MW-179-201804**	Water	04/19/18 15:55	04/20/18 06:25
60268614026	**EB-05-201804**	Water	04/19/18 16:00	04/20/18 06:25
60268614027	**MW-93-201804**	Water	04/19/18 16:45	04/20/18 06:25
60268614028	**TB-04-201804**	Water	04/19/18 09:05	04/20/18 06:25
60268614029	**TB-05-201804**	Water	04/19/18 09:05	04/20/18 06:25

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60268614

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60268614001	MW-97-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614002	MW-96-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614003	MW-29-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614004	MW-185-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614005	DUP-07-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614006	MW-189-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614007	MW-188-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614008	DUP-04-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614009	MW-186-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614010	ITMW-7-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614011	TMW-19-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614012	TMW-26-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614013	MW-86-201804	EPA 5030B/8260	EAG, PGH	38	PASI-K
60268614014	TMW-25-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614015	ITMW-10-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614016	ITMW-5-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614017	ITMW-21-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614018	TMW-16-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614019	MW-182-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614020	DUP-06-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614021	TMW-21-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614022	MW-91-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614023	MW-38-201804	EPA 5030B/8260	EAG, PGH	38	PASI-K
60268614024	MW-95-201804	EPA 5030B/8260	EAG, PGH	38	PASI-K
60268614025	MW-179-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614026	EB-05-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614027	MW-93-201804	EPA 5030B/8260	EAG, PGH	38	PASI-K
60268614028	TB-04-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614029	TB-05-201804	EPA 5030B/8260	PGH	38	PASI-K

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60268614

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 27, 2018

General Information:
29 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: 522725

B: Analyte was detected in the associated method blank.
- BLANK for HBN 522725 [MSV/8881 (Lab ID: 2140287)
  - Acetone

QC Batch: 522727

B: Analyte was detected in the associated method blank.
- BLANK for HBN 522727 [MSV/8881 (Lab ID: 2140289)
  - Carbon disulfide

QC Batch: 523344

B: Analyte was detected in the associated method blank.
- BLANK for HBN 523344 [MSV/8889 (Lab ID: 2142612)
  - Bromomethane

QC Batch: 523345

B: Analyte was detected in the associated method blank.
- BLANK for HBN 523345 [MSV/8889 (Lab ID: 2142614)
  - Bromomethane

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

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60268614

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 27, 2018

QC Batch: 523344

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- LCS (Lab ID: 2142613)
  - Carbon disulfide

QC Batch: 523345

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- LCS (Lab ID: 2142615)
  - Carbon disulfide

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

QC Batch: 522725

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

QC Batch: 522727

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

QC Batch: 522958

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

QC Batch: 523154

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

QC Batch: 523344

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

QC Batch: 523345

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, AR
Pace Project No.: 60268614

Sample: MW-97-201804 **Lab ID: 60268614001** Collected: 04/19/18 09:05 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.9J**	ug/L	10.0	1.9	1		04/23/18 21:24	67-64-1	B
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 21:24	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 21:24	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 21:24	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 21:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 21:24	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 21:24	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 21:24	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 21:24	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 21:24	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 21:24	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 21:24	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 21:24	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 21:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 21:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 21:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 21:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 21:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 21:24	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 21:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 21:24	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 21:24	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 21:24	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 21:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 21:24	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 21:24	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 21:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 21:24	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 21:24	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 21:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 21:24	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/23/18 21:24	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 21:24	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 21:24	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/23/18 21:24	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/23/18 21:24	17060-07-0	
Toluene-d8 (S)	98	%	80-115		1		04/23/18 21:24	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 21:24		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-96-201804 **Lab ID: 60268614002** Collected: 04/19/18 10:15 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.8J**	ug/L	10.0	1.9	1		04/23/18 21:38	67-64-1	B
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 21:38	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 21:38	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 21:38	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 21:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 21:38	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 21:38	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 21:38	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 21:38	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 21:38	75-00-3	
Chloroform	**0.36J**	ug/L	1.0	0.14	1		04/23/18 21:38	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 21:38	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 21:38	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 21:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 21:38	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 21:38	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 21:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 21:38	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 21:38	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 21:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 21:38	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 21:38	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 21:38	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 21:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 21:38	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 21:38	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 21:38	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 21:38	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 21:38	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 21:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 21:38	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/23/18 21:38	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 21:38	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 21:38	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/23/18 21:38	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-117		1		04/23/18 21:38	17060-07-0	
Toluene-d8 (S)	98	%	80-115		1		04/23/18 21:38	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 21:38		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-29-201804 **Lab ID: 60268614003** Collected: 04/19/18 11:40 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**3.2J**	ug/L	10.0	1.9	1		04/23/18 21:52	67-64-1	B
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 21:52	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 21:52	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 21:52	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 21:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 21:52	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 21:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 21:52	56-23-5	
Chlorobenzene	**1.7**	ug/L	1.0	0.21	1		04/23/18 21:52	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 21:52	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 21:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 21:52	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 21:52	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 21:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 21:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 21:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 21:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 21:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 21:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 21:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 21:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 21:52	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 21:52	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 21:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 21:52	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 21:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 21:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 21:52	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 21:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 21:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 21:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/23/18 21:52	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 21:52	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 21:52	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/23/18 21:52	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	80-117		1		04/23/18 21:52	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/23/18 21:52	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 21:52		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-185-201804 **Lab ID: 60268614004** Collected: 04/19/18 12:55 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**3.0J**	ug/L	10.0	1.9	1		04/23/18 22:06	67-64-1	B
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 22:06	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 22:06	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 22:06	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 22:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 22:06	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 22:06	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 22:06	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 22:06	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 22:06	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 22:06	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 22:06	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 22:06	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 22:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 22:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 22:06	75-35-4	
cis-1,2-Dichloroethene	**1.4**	ug/L	1.0	0.080	1		04/23/18 22:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 22:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 22:06	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 22:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 22:06	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 22:06	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 22:06	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 22:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 22:06	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 22:06	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 22:06	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 22:06	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 22:06	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 22:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 22:06	79-00-5	
Trichloroethene	**12.0**	ug/L	1.0	0.17	1		04/23/18 22:06	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 22:06	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 22:06	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/23/18 22:06	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/23/18 22:06	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/23/18 22:06	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 22:06		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: DUP-07-201804 **Lab ID: 60268614005** Collected: 04/19/18 12:55 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**3.0J**	ug/L	10.0	1.9	1		04/23/18 23:02	67-64-1	B
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 23:02	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 23:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 23:02	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 23:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 23:02	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 23:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 23:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 23:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 23:02	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 23:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 23:02	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 23:02	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 23:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 23:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 23:02	75-35-4	
cis-1,2-Dichloroethene	**1.4**	ug/L	1.0	0.080	1		04/23/18 23:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 23:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 23:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 23:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 23:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 23:02	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 23:02	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 23:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 23:02	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 23:02	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 23:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 23:02	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 23:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 23:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 23:02	79-00-5	
Trichloroethene	**11.1**	ug/L	1.0	0.17	1		04/23/18 23:02	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 23:02	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 23:02	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/23/18 23:02	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-117		1		04/23/18 23:02	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/23/18 23:02	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 23:02		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-189-201804 **Lab ID: 60268614006** Collected: 04/19/18 14:45 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.4J**	ug/L	10.0	1.9	1		04/23/18 23:30	67-64-1	B
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 23:30	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 23:30	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 23:30	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 23:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 23:30	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 23:30	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 23:30	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 23:30	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 23:30	75-00-3	
Chloroform	**0.18J**	ug/L	1.0	0.14	1		04/23/18 23:30	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 23:30	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 23:30	124-48-1	
1,1-Dichloroethane	**1.6**	ug/L	1.0	0.050	1		04/23/18 23:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 23:30	107-06-2	
1,1-Dichloroethene	**1.8**	ug/L	1.0	0.20	1		04/23/18 23:30	75-35-4	
cis-1,2-Dichloroethene	**11.1**	ug/L	1.0	0.080	1		04/23/18 23:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 23:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 23:30	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 23:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 23:30	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 23:30	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 23:30	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 23:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 23:30	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 23:30	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 23:30	79-34-5	
Tetrachloroethene	**0.19J**	ug/L	1.0	0.10	1		04/23/18 23:30	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 23:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 23:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 23:30	79-00-5	
Trichloroethene	**385**	ug/L	5.0	0.85	5		04/24/18 22:05	79-01-6	
Vinyl chloride	**0.48J**	ug/L	1.0	0.13	1		04/23/18 23:30	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 23:30	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/23/18 23:30	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-117		1		04/23/18 23:30	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/23/18 23:30	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 23:30		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-188-201804 **Lab ID: 60268614007** Collected: 04/19/18 09:15 Received: 04/20/18 06:25 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		04/23/18 22:20	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 22:20	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 22:20	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 22:20	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 22:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 22:20	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 22:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 22:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 22:20	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 22:20	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 22:20	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 22:20	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 22:20	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 22:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 22:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 22:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 22:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 22:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 22:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 22:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 22:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 22:20	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 22:20	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 22:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 22:20	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 22:20	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 22:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 22:20	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 22:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 22:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 22:20	79-00-5	
Trichloroethene	**0.20J**	ug/L	1.0	0.17	1		04/23/18 22:20	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 22:20	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 22:20	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/23/18 22:20	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/23/18 22:20	17060-07-0	
Toluene-d8 (S)	98	%	80-115		1		04/23/18 22:20	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 22:20		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: DUP-04-201804 **Lab ID: 60268614008** Collected: 04/19/18 09:15 Received: 04/20/18 06:25 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		04/23/18 23:16	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 23:16	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 23:16	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 23:16	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 23:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 23:16	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 23:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 23:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 23:16	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 23:16	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 23:16	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 23:16	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 23:16	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 23:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 23:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 23:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 23:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 23:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 23:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 23:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 23:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 23:16	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 23:16	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 23:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 23:16	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 23:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 23:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 23:16	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 23:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 23:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 23:16	79-00-5	
Trichloroethene	**0.18J**	ug/L	1.0	0.17	1		04/23/18 23:16	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 23:16	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 23:16	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-119		1		04/23/18 23:16	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	80-117		1		04/23/18 23:16	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/23/18 23:16	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 23:16		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-186-201804 **Lab ID: 60268614009** Collected: 04/19/18 10:35 Received: 04/20/18 06:25 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		04/23/18 22:34	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 22:34	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 22:34	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 22:34	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 22:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 22:34	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 22:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 22:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 22:34	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 22:34	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 22:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 22:34	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 22:34	124-48-1	
1,1-Dichloroethane	**1.2**	ug/L	1.0	0.050	1		04/23/18 22:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 22:34	107-06-2	
1,1-Dichloroethene	**0.60J**	ug/L	1.0	0.20	1		04/23/18 22:34	75-35-4	
cis-1,2-Dichloroethene	**4.8**	ug/L	1.0	0.080	1		04/23/18 22:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 22:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 22:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 22:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 22:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 22:34	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 22:34	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 22:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 22:34	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 22:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 22:34	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 22:34	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 22:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 22:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 22:34	79-00-5	
Trichloroethene	**14.2**	ug/L	1.0	0.17	1		04/23/18 22:34	79-01-6	
Vinyl chloride	**0.23J**	ug/L	1.0	0.13	1		04/23/18 22:34	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 22:34	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/23/18 22:34	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/23/18 22:34	17060-07-0	
Toluene-d8 (S)	98	%	80-115		1		04/23/18 22:34	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 22:34		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: ITMW-7-201804 **Lab ID: 60268614010** Collected: 04/19/18 09:30 Received: 04/20/18 06:25 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		04/23/18 22:48	67-64-1	
Benzene	**0.13J**	ug/L	1.0	0.060	1		04/23/18 22:48	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 22:48	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 22:48	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 22:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 22:48	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 22:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 22:48	56-23-5	
Chlorobenzene	**2.6**	ug/L	1.0	0.21	1		04/23/18 22:48	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 22:48	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 22:48	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 22:48	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 22:48	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 22:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 22:48	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 22:48	75-35-4	
cis-1,2-Dichloroethene	**8.3**	ug/L	1.0	0.080	1		04/23/18 22:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 22:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 22:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 22:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 22:48	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 22:48	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 22:48	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 22:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 22:48	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 22:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 22:48	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 22:48	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 22:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 22:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 22:48	79-00-5	
Trichloroethene	**24.2**	ug/L	1.0	0.17	1		04/23/18 22:48	79-01-6	
Vinyl chloride	**0.13J**	ug/L	1.0	0.13	1		04/23/18 22:48	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 22:48	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/23/18 22:48	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/23/18 22:48	17060-07-0	
Toluene-d8 (S)	97	%	80-115		1		04/23/18 22:48	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 22:48		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: TMW-19-201804 **Lab ID: 60268614011** Collected: 04/19/18 12:40 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**6.5J**	ug/L	10.0	1.9	1		04/23/18 12:46	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 12:46	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 12:46	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 12:46	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 12:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 12:46	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 12:46	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 12:46	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 12:46	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 12:46	75-00-3	
Chloroform	**0.22J**	ug/L	1.0	0.14	1		04/23/18 12:46	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 12:46	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 12:46	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 12:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 12:46	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 12:46	75-35-4	
cis-1,2-Dichloroethene	**0.32J**	ug/L	1.0	0.080	1		04/23/18 12:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 12:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 12:46	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 12:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 12:46	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 12:46	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 12:46	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 12:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 12:46	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 12:46	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 12:46	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 12:46	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 12:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 12:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 12:46	79-00-5	
Trichloroethene	**0.41J**	ug/L	1.0	0.17	1		04/23/18 12:46	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 12:46	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 12:46	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/23/18 12:46	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	80-117		1		04/23/18 12:46	17060-07-0	
Toluene-d8 (S)	102	%	80-115		1		04/23/18 12:46	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 12:46		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: TMW-26-201804 **Lab ID: 60268614012** Collected: 04/19/18 13:00 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.5J**	ug/L	10.0	1.9	1		04/23/18 13:56	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 13:56	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 13:56	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 13:56	75-25-2	
Bromomethane	**1.4J**	ug/L	5.0	0.16	1		04/23/18 13:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 13:56	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 13:56	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 13:56	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 13:56	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:56	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 13:56	67-66-3	
Chloromethane	**0.086J**	ug/L	1.0	0.080	1		04/23/18 13:56	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 13:56	124-48-1	
1,1-Dichloroethane	**0.19J**	ug/L	1.0	0.050	1		04/23/18 13:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 13:56	107-06-2	
1,1-Dichloroethene	**0.21J**	ug/L	1.0	0.20	1		04/23/18 13:56	75-35-4	
cis-1,2-Dichloroethene	**1.1**	ug/L	1.0	0.080	1		04/23/18 13:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 13:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 13:56	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 13:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 13:56	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 13:56	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 13:56	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 13:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 13:56	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 13:56	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:56	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 13:56	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 13:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 13:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 13:56	79-00-5	
Trichloroethene	**28.3**	ug/L	1.0	0.17	1		04/23/18 13:56	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 13:56	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 13:56	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/23/18 13:56	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-117		1		04/23/18 13:56	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/23/18 13:56	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 13:56		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-86-201804 **Lab ID: 60268614013** Collected: 04/19/18 15:35 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**9.5J**	ug/L	10.0	1.9	1		04/26/18 13:30	67-64-1	
Benzene	**0.38J**	ug/L	1.0	0.060	1		04/26/18 13:30	71-43-2	
Bromodichloromethane	**2.9**	ug/L	1.0	0.19	1		04/26/18 13:30	75-27-4	
Bromoform	**6.5**	ug/L	1.0	0.070	1		04/26/18 13:30	75-25-2	
Bromomethane	**1.3J**	ug/L	5.0	0.16	1		04/26/18 13:30	74-83-9	B
2-Butanone (MEK)	**3.5J**	ug/L	10.0	0.59	1		04/26/18 13:30	78-93-3	
Carbon disulfide	**3.0J**	ug/L	5.0	0.12	1		04/26/18 13:30	75-15-0	L2
Carbon tetrachloride	**0.91J**	ug/L	1.0	0.18	1		04/26/18 13:30	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/26/18 13:30	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/26/18 13:30	75-00-3	
Chloroform	**23.0**	ug/L	1.0	0.14	1		04/26/18 13:30	67-66-3	
Chloromethane	**2.9**	ug/L	1.0	0.080	1		04/26/18 13:30	74-87-3	
Dibromochloromethane	**1.2**	ug/L	1.0	0.21	1		04/26/18 13:30	124-48-1	
1,1-Dichloroethane	**2.9**	ug/L	1.0	0.050	1		04/26/18 13:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/26/18 13:30	107-06-2	
1,1-Dichloroethene	**49.8**	ug/L	1.0	0.20	1		04/26/18 13:30	75-35-4	
cis-1,2-Dichloroethene	**2450**	ug/L	1000	80.0	1000		04/25/18 12:45	156-59-2	
trans-1,2-Dichloroethene	**304J**	ug/L	1000	200	1000		04/25/18 12:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/26/18 13:30	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/26/18 13:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/26/18 13:30	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/26/18 13:30	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/26/18 13:30	591-78-6	
Methylene chloride	**4.0**	ug/L	1.0	0.15	1		04/26/18 13:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/26/18 13:30	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/26/18 13:30	100-42-5	
1,1,2,2-Tetrachloroethane	**104**	ug/L	1.0	0.15	1		04/26/18 13:30	79-34-5	
Tetrachloroethene	**41.5**	ug/L	1.0	0.10	1		04/26/18 13:30	127-18-4	
Toluene	**3.4**	ug/L	1.0	0.17	1		04/26/18 13:30	108-88-3	
1,1,1-Trichloroethane	**87.7**	ug/L	1.0	0.11	1		04/26/18 13:30	71-55-6	
1,1,2-Trichloroethane	**2.8**	ug/L	1.0	0.20	1		04/26/18 13:30	79-00-5	
Trichloroethene	**61200**	ug/L	1000	170	1000		04/25/18 12:45	79-01-6	
Vinyl chloride	**171**	ug/L	1.0	0.13	1		04/26/18 13:30	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/26/18 13:30	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-119		1		04/26/18 13:30	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	80-117		1		04/26/18 13:30	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/26/18 13:30	2037-26-5	
Preservation pH	**6.0**		0.10	0.10	1		04/26/18 13:30		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: TMW-25-201804 **Lab ID: 60268614014** Collected: 04/19/18 14:10 Received: 04/20/18 06:25 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		04/23/18 14:24	67-64-1	
Benzene	**0.11J**	ug/L	1.0	0.060	1		04/23/18 14:24	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 14:24	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 14:24	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 14:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 14:24	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 14:24	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 14:24	56-23-5	
Chlorobenzene	**3.5**	ug/L	1.0	0.21	1		04/23/18 14:24	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 14:24	75-00-3	
Chloroform	**0.26J**	ug/L	1.0	0.14	1		04/23/18 14:24	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 14:24	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 14:24	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 14:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 14:24	107-06-2	
1,1-Dichloroethene	**0.31J**	ug/L	1.0	0.20	1		04/23/18 14:24	75-35-4	
cis-1,2-Dichloroethene	**10.9**	ug/L	1.0	0.080	1		04/23/18 14:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 14:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 14:24	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 14:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 14:24	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 14:24	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 14:24	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 14:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 14:24	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 14:24	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 14:24	79-34-5	
Tetrachloroethene	**0.14J**	ug/L	1.0	0.10	1		04/23/18 14:24	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 14:24	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 14:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 14:24	79-00-5	
Trichloroethene	**240**	ug/L	5.0	0.85	5		04/23/18 14:38	79-01-6	
Vinyl chloride	**0.29J**	ug/L	1.0	0.13	1		04/23/18 14:24	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 14:24	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/23/18 14:24	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/23/18 14:24	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/23/18 14:24	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 14:24		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: ITMW-10-201804 **Lab ID: 60268614015** Collected: 04/19/18 11:15 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**4.4J**	ug/L	10.0	1.9	1		04/23/18 13:28	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 13:28	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 13:28	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 13:28	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 13:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 13:28	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 13:28	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 13:28	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 13:28	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:28	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 13:28	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 13:28	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 13:28	124-48-1	
1,1-Dichloroethane	**0.78J**	ug/L	1.0	0.050	1		04/23/18 13:28	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 13:28	107-06-2	
1,1-Dichloroethene	**1.1**	ug/L	1.0	0.20	1		04/23/18 13:28	75-35-4	
cis-1,2-Dichloroethene	**12.2**	ug/L	1.0	0.080	1		04/23/18 13:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 13:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 13:28	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 13:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 13:28	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 13:28	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 13:28	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 13:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 13:28	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 13:28	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:28	79-34-5	
Tetrachloroethene	**0.27J**	ug/L	1.0	0.10	1		04/23/18 13:28	127-18-4	
Toluene	**1.3**	ug/L	1.0	0.17	1		04/23/18 13:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 13:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 13:28	79-00-5	
Trichloroethene	**65.4**	ug/L	1.0	0.17	1		04/23/18 13:28	79-01-6	
Vinyl chloride	**0.65J**	ug/L	1.0	0.13	1		04/23/18 13:28	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 13:28	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/23/18 13:28	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/23/18 13:28	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/23/18 13:28	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 13:28		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: ITMW-5-201804 **Lab ID: 60268614016** Collected: 04/19/18 15:25 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.5J**	ug/L	10.0	1.9	1		04/23/18 16:44	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 16:44	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 16:44	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 16:44	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 16:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 16:44	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 16:44	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 16:44	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 16:44	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 16:44	75-00-3	
Chloroform	**0.55J**	ug/L	1.0	0.14	1		04/23/18 16:44	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 16:44	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 16:44	124-48-1	
1,1-Dichloroethane	**1.6**	ug/L	1.0	0.050	1		04/23/18 16:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 16:44	107-06-2	
1,1-Dichloroethene	**4.9**	ug/L	1.0	0.20	1		04/23/18 16:44	75-35-4	
cis-1,2-Dichloroethene	**34.2**	ug/L	1.0	0.080	1		04/23/18 16:44	156-59-2	
trans-1,2-Dichloroethene	**0.37J**	ug/L	1.0	0.20	1		04/23/18 16:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 16:44	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 16:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 16:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 16:44	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 16:44	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 16:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 16:44	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 16:44	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 16:44	79-34-5	
Tetrachloroethene	**1.3**	ug/L	1.0	0.10	1		04/23/18 16:44	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 16:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 16:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 16:44	79-00-5	
Trichloroethene	**1590**	ug/L	20.0	3.4	20		04/23/18 16:58	79-01-6	
Vinyl chloride	**1.4**	ug/L	1.0	0.13	1		04/23/18 16:44	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 16:44	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/23/18 16:44	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/23/18 16:44	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/23/18 16:44	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 16:44		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: ITMW-21-201804 **Lab ID: 60268614017** Collected: 04/19/18 14:10 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**1.9J**	ug/L	10.0	1.9	1		04/23/18 13:00	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 13:00	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 13:00	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 13:00	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 13:00	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 13:00	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 13:00	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 13:00	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 13:00	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:00	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 13:00	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 13:00	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 13:00	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 13:00	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 13:00	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 13:00	75-35-4	
cis-1,2-Dichloroethene	**0.38J**	ug/L	1.0	0.080	1		04/23/18 13:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 13:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 13:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 13:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 13:00	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 13:00	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 13:00	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 13:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 13:00	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 13:00	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 13:00	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 13:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 13:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 13:00	79-00-5	
Trichloroethene	**13.2**	ug/L	1.0	0.17	1		04/23/18 13:00	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 13:00	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 13:00	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/23/18 13:00	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/23/18 13:00	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/23/18 13:00	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 13:00		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: TMW-16-201804 **Lab ID: 60268614018** Collected: 04/19/18 15:30 Received: 04/20/18 06:25 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		04/23/18 15:20	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 15:20	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 15:20	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 15:20	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 15:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 15:20	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 15:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 15:20	56-23-5	
Chlorobenzene	**0.31J**	ug/L	1.0	0.21	1		04/23/18 15:20	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 15:20	75-00-3	
Chloroform	**1.7**	ug/L	1.0	0.14	1		04/23/18 15:20	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 15:20	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 15:20	124-48-1	
1,1-Dichloroethane	**0.42J**	ug/L	1.0	0.050	1		04/23/18 15:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 15:20	107-06-2	
1,1-Dichloroethene	**1.4**	ug/L	1.0	0.20	1		04/23/18 15:20	75-35-4	
cis-1,2-Dichloroethene	**13.6**	ug/L	1.0	0.080	1		04/23/18 15:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 15:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 15:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 15:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 15:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 15:20	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 15:20	591-78-6	
Methylene chloride	**0.87J**	ug/L	1.0	0.15	1		04/23/18 15:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 15:20	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 15:20	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 15:20	79-34-5	
Tetrachloroethene	**0.35J**	ug/L	1.0	0.10	1		04/23/18 15:20	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 15:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 15:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 15:20	79-00-5	
Trichloroethene	**1030**	ug/L	10.0	1.7	10		04/23/18 15:34	79-01-6	
Vinyl chloride	**0.90J**	ug/L	1.0	0.13	1		04/23/18 15:20	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 15:20	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/23/18 15:20	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	80-117		1		04/23/18 15:20	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/23/18 15:20	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 15:20		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-182-201804 **Lab ID: 60268614019** Collected: 04/19/18 09:25 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.5J**	ug/L	10.0	1.9	1		04/23/18 14:52	67-64-1	
Benzene	**0.16J**	ug/L	1.0	0.060	1		04/23/18 14:52	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 14:52	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 14:52	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 14:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 14:52	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 14:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 14:52	56-23-5	
Chlorobenzene	**5.3**	ug/L	1.0	0.21	1		04/23/18 14:52	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 14:52	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 14:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 14:52	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 14:52	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 14:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 14:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 14:52	75-35-4	
cis-1,2-Dichloroethene	**3.9**	ug/L	1.0	0.080	1		04/23/18 14:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 14:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 14:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 14:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 14:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 14:52	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 14:52	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 14:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 14:52	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 14:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 14:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 14:52	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 14:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 14:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 14:52	79-00-5	
Trichloroethene	**58.3**	ug/L	1.0	0.17	1		04/23/18 14:52	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 14:52	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 14:52	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-119		1		04/23/18 14:52	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/23/18 14:52	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/23/18 14:52	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 14:52		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: DUP-06-201804 **Lab ID: 60268614020** Collected: 04/19/18 09:30 Received: 04/20/18 06:25 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		04/23/18 13:42	67-64-1	
Benzene	**0.17J**	ug/L	1.0	0.060	1		04/23/18 13:42	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 13:42	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 13:42	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 13:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 13:42	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 13:42	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 13:42	56-23-5	
Chlorobenzene	**5.2**	ug/L	1.0	0.21	1		04/23/18 13:42	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:42	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 13:42	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 13:42	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 13:42	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 13:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 13:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 13:42	75-35-4	
cis-1,2-Dichloroethene	**4.1**	ug/L	1.0	0.080	1		04/23/18 13:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 13:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 13:42	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 13:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 13:42	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 13:42	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 13:42	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 13:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 13:42	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 13:42	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 13:42	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 13:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 13:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 13:42	79-00-5	
Trichloroethene	**59.3**	ug/L	1.0	0.17	1		04/23/18 13:42	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 13:42	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 13:42	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/23/18 13:42	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/23/18 13:42	17060-07-0	
Toluene-d8 (S)	98	%	80-115		1		04/23/18 13:42	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 13:42		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: TMW-21-201804 **Lab ID: 60268614021** Collected: 04/19/18 10:48 Received: 04/20/18 06:25 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		04/23/18 15:48	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 15:48	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 15:48	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 15:48	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 15:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 15:48	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 15:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 15:48	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 15:48	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 15:48	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 15:48	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 15:48	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 15:48	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 15:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 15:48	107-06-2	
1,1-Dichloroethene	**1.1**	ug/L	1.0	0.20	1		04/23/18 15:48	75-35-4	
cis-1,2-Dichloroethene	**10.0**	ug/L	1.0	0.080	1		04/23/18 15:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 15:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 15:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 15:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 15:48	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 15:48	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 15:48	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 15:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 15:48	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 15:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 15:48	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 15:48	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 15:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 15:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 15:48	79-00-5	
Trichloroethene	**420**	ug/L	10.0	1.7	10		04/23/18 16:02	79-01-6	
Vinyl chloride	**0.21J**	ug/L	1.0	0.13	1		04/23/18 15:48	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 15:48	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/23/18 15:48	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/23/18 15:48	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/23/18 15:48	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 15:48		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-91-201804 **Lab ID: 60268614022** Collected: 04/19/18 12:35 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**4.4J**	ug/L	10.0	1.9	1		04/23/18 16:16	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 16:16	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 16:16	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 16:16	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 16:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 16:16	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 16:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 16:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 16:16	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 16:16	75-00-3	
Chloroform	**0.26J**	ug/L	1.0	0.14	1		04/23/18 16:16	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 16:16	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 16:16	124-48-1	
1,1-Dichloroethane	**1.7**	ug/L	1.0	0.050	1		04/23/18 16:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 16:16	107-06-2	
1,1-Dichloroethene	**4.3**	ug/L	1.0	0.20	1		04/23/18 16:16	75-35-4	
cis-1,2-Dichloroethene	**38.6**	ug/L	1.0	0.080	1		04/23/18 16:16	156-59-2	
trans-1,2-Dichloroethene	**0.76J**	ug/L	1.0	0.20	1		04/23/18 16:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 16:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 16:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 16:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 16:16	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 16:16	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 16:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 16:16	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 16:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 16:16	79-34-5	
Tetrachloroethene	**4.1**	ug/L	1.0	0.10	1		04/23/18 16:16	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 16:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 16:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 16:16	79-00-5	
Trichloroethene	**557**	ug/L	10.0	1.7	10		04/23/18 16:30	79-01-6	
Vinyl chloride	**0.21J**	ug/L	1.0	0.13	1		04/23/18 16:16	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 16:16	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/23/18 16:16	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-117		1		04/23/18 16:16	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/23/18 16:16	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 16:16		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-38-201804 **Lab ID: 60268614023** Collected: 04/19/18 13:35 Received: 04/20/18 06:25 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		04/26/18 12:47	67-64-1	
Benzene	**0.18J**	ug/L	1.0	0.060	1		04/26/18 12:47	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/26/18 12:47	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/26/18 12:47	75-25-2	
Bromomethane	**0.47J**	ug/L	5.0	0.16	1		04/26/18 12:47	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/26/18 12:47	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/26/18 12:47	75-15-0	L2
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/26/18 12:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/26/18 12:47	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/26/18 12:47	75-00-3	
Chloroform	**0.50J**	ug/L	1.0	0.14	1		04/26/18 12:47	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/26/18 12:47	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/26/18 12:47	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/26/18 12:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/26/18 12:47	107-06-2	
1,1-Dichloroethene	**9.8**	ug/L	1.0	0.20	1		04/26/18 12:47	75-35-4	
cis-1,2-Dichloroethene	**777**	ug/L	50.0	4.0	50		04/23/18 17:12	156-59-2	
trans-1,2-Dichloroethene	**10.5**	ug/L	1.0	0.20	1		04/26/18 12:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/26/18 12:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/26/18 12:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/26/18 12:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/26/18 12:47	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/26/18 12:47	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/26/18 12:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/26/18 12:47	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/26/18 12:47	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/26/18 12:47	79-34-5	
Tetrachloroethene	**0.42J**	ug/L	1.0	0.10	1		04/26/18 12:47	127-18-4	
Toluene	**0.32J**	ug/L	1.0	0.17	1		04/26/18 12:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/26/18 12:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/26/18 12:47	79-00-5	
Trichloroethene	**2560**	ug/L	50.0	8.5	50		04/23/18 17:12	79-01-6	
Vinyl chloride	**23.6**	ug/L	1.0	0.13	1		04/26/18 12:47	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/26/18 12:47	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-119		1		04/26/18 12:47	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	80-117		1		04/26/18 12:47	17060-07-0	
Toluene-d8 (S)	102	%	80-115		1		04/26/18 12:47	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/26/18 12:47		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-95-201804 **Lab ID: 60268614024** Collected: 04/19/18 15:12 Received: 04/20/18 06:25 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		04/26/18 13:02	67-64-1	
Benzene	**0.11J**	ug/L	1.0	0.060	1		04/26/18 13:02	71-43-2	
Bromodichloromethane	**0.37J**	ug/L	1.0	0.19	1		04/26/18 13:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/26/18 13:02	75-25-2	
Bromomethane	**0.93J**	ug/L	5.0	0.16	1		04/26/18 13:02	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/26/18 13:02	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/26/18 13:02	75-15-0	L2
Carbon tetrachloride	**0.28J**	ug/L	1.0	0.18	1		04/26/18 13:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/26/18 13:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/26/18 13:02	75-00-3	
Chloroform	**5.0**	ug/L	1.0	0.14	1		04/26/18 13:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/26/18 13:02	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/26/18 13:02	124-48-1	
1,1-Dichloroethane	**0.36J**	ug/L	1.0	0.050	1		04/26/18 13:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/26/18 13:02	107-06-2	
1,1-Dichloroethene	**36.3**	ug/L	1.0	0.20	1		04/26/18 13:02	75-35-4	
cis-1,2-Dichloroethene	**153**	ug/L	1.0	0.080	1		04/26/18 13:02	156-59-2	
trans-1,2-Dichloroethene	**5.0**	ug/L	1.0	0.20	1		04/26/18 13:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/26/18 13:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/26/18 13:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/26/18 13:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/26/18 13:02	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/26/18 13:02	591-78-6	
Methylene chloride	**1.2**	ug/L	1.0	0.15	1		04/26/18 13:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/26/18 13:02	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/26/18 13:02	100-42-5	
1,1,2,2-Tetrachloroethane	**0.19J**	ug/L	1.0	0.15	1		04/26/18 13:02	79-34-5	
Tetrachloroethene	**7.7**	ug/L	1.0	0.10	1		04/26/18 13:02	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/26/18 13:02	108-88-3	
1,1,1-Trichloroethane	**0.46J**	ug/L	1.0	0.11	1		04/26/18 13:02	71-55-6	
1,1,2-Trichloroethane	**1.7**	ug/L	1.0	0.20	1		04/26/18 13:02	79-00-5	
Trichloroethene	**24100**	ug/L	200	34.0	200		04/23/18 17:26	79-01-6	
Vinyl chloride	**13.1**	ug/L	1.0	0.13	1		04/26/18 13:02	75-01-4	
Xylene (Total)	ND	ug/L	600	84.0	200		04/23/18 17:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	92	%	80-119		1		04/26/18 13:02	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-117		1		04/26/18 13:02	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/26/18 13:02	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/26/18 13:02		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-179-201804 **Lab ID: 60268614025** Collected: 04/19/18 15:55 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.9J**	ug/L	10.0	1.9	1		04/23/18 13:14	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 13:14	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 13:14	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 13:14	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 13:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 13:14	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 13:14	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 13:14	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 13:14	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:14	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 13:14	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 13:14	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 13:14	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 13:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 13:14	107-06-2	
1,1-Dichloroethene	**0.27J**	ug/L	1.0	0.20	1		04/23/18 13:14	75-35-4	
cis-1,2-Dichloroethene	**0.85J**	ug/L	1.0	0.080	1		04/23/18 13:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 13:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 13:14	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 13:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 13:14	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 13:14	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 13:14	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 13:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 13:14	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 13:14	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:14	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 13:14	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 13:14	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 13:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 13:14	79-00-5	
Trichloroethene	**21.7**	ug/L	1.0	0.17	1		04/23/18 13:14	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 13:14	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 13:14	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/23/18 13:14	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-117		1		04/23/18 13:14	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/23/18 13:14	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 13:14		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: EB-05-201804 **Lab ID: 60268614026** Collected: 04/19/18 16:00 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.4J**	ug/L	10.0	1.9	1		04/23/18 12:04	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 12:04	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 12:04	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 12:04	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 12:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 12:04	78-93-3	
Carbon disulfide	**0.13J**	ug/L	5.0	0.12	1		04/23/18 12:04	75-15-0	B
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 12:04	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 12:04	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 12:04	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 12:04	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 12:04	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 12:04	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 12:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 12:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 12:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 12:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 12:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 12:04	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 12:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 12:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 12:04	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 12:04	591-78-6	
Methylene chloride	**0.27J**	ug/L	1.0	0.15	1		04/23/18 12:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 12:04	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 12:04	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 12:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 12:04	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 12:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 12:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 12:04	79-00-5	
Trichloroethene	**0.24J**	ug/L	1.0	0.17	1		04/23/18 12:04	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 12:04	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 12:04	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/23/18 12:04	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	80-117		1		04/23/18 12:04	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/23/18 12:04	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 12:04		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-93-201804 **Lab ID: 60268614027** Collected: 04/19/18 16:45 Received: 04/20/18 06:25 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		04/26/18 13:16	67-64-1	
Benzene	**0.14J**	ug/L	1.0	0.060	1		04/26/18 13:16	71-43-2	
Bromodichloromethane	**0.22J**	ug/L	1.0	0.19	1		04/26/18 13:16	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/26/18 13:16	75-25-2	
Bromomethane	**0.60J**	ug/L	5.0	0.16	1		04/26/18 13:16	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/26/18 13:16	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/26/18 13:16	75-15-0	L2
Carbon tetrachloride	**0.24J**	ug/L	1.0	0.18	1		04/26/18 13:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/26/18 13:16	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/26/18 13:16	75-00-3	
Chloroform	**3.8**	ug/L	1.0	0.14	1		04/26/18 13:16	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/26/18 13:16	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/26/18 13:16	124-48-1	
1,1-Dichloroethane	**0.28J**	ug/L	1.0	0.050	1		04/26/18 13:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/26/18 13:16	107-06-2	
1,1-Dichloroethene	**19.6**	ug/L	1.0	0.20	1		04/26/18 13:16	75-35-4	
cis-1,2-Dichloroethene	**97.9**	ug/L	1.0	0.080	1		04/26/18 13:16	156-59-2	
trans-1,2-Dichloroethene	**6.9**	ug/L	1.0	0.20	1		04/26/18 13:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/26/18 13:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/26/18 13:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/26/18 13:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/26/18 13:16	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/26/18 13:16	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/26/18 13:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/26/18 13:16	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/26/18 13:16	100-42-5	
1,1,2,2-Tetrachloroethane	**0.40J**	ug/L	1.0	0.15	1		04/26/18 13:16	79-34-5	
Tetrachloroethene	**5.0**	ug/L	1.0	0.10	1		04/26/18 13:16	127-18-4	
Toluene	**0.18J**	ug/L	1.0	0.17	1		04/26/18 13:16	108-88-3	
1,1,1-Trichloroethane	**0.30J**	ug/L	1.0	0.11	1		04/26/18 13:16	71-55-6	
1,1,2-Trichloroethane	**1.1**	ug/L	1.0	0.20	1		04/26/18 13:16	79-00-5	
Trichloroethene	**17000**	ug/L	200	34.0	200		04/23/18 17:40	79-01-6	
Vinyl chloride	**4.5**	ug/L	1.0	0.13	1		04/26/18 13:16	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/26/18 13:16	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	91	%	80-119		1		04/26/18 13:16	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/26/18 13:16	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/26/18 13:16	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/26/18 13:16		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: TB-04-201804 **Lab ID: 60268614028** Collected: 04/19/18 09:05 Received: 04/20/18 06:25 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		04/23/18 11:36	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 11:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 11:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 11:36	75-25-2	
Bromomethane	**0.90J**	ug/L	5.0	0.16	1		04/23/18 11:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 11:36	78-93-3	
Carbon disulfide	**0.21J**	ug/L	5.0	0.12	1		04/23/18 11:36	75-15-0	B
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 11:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 11:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 11:36	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 11:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 11:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 11:36	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 11:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 11:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 11:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 11:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 11:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 11:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 11:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 11:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 11:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 11:36	591-78-6	
Methylene chloride	**0.60J**	ug/L	1.0	0.15	1		04/23/18 11:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 11:36	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 11:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 11:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 11:36	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 11:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 11:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 11:36	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/23/18 11:36	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 11:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 11:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-119		1		04/23/18 11:36	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	80-117		1		04/23/18 11:36	17060-07-0	
Toluene-d8 (S)	97	%	80-115		1		04/23/18 11:36	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 11:36		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: TB-05-201804 **Lab ID: 60268614029** Collected: 04/19/18 09:05 Received: 04/20/18 06:25 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		04/23/18 11:50	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 11:50	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 11:50	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 11:50	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 11:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 11:50	78-93-3	
Carbon disulfide	**0.13J**	ug/L	5.0	0.12	1		04/23/18 11:50	75-15-0	B
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 11:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 11:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 11:50	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 11:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 11:50	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 11:50	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 11:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 11:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 11:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 11:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 11:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 11:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 11:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 11:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 11:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 11:50	591-78-6	
Methylene chloride	**0.52J**	ug/L	1.0	0.15	1		04/23/18 11:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 11:50	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 11:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 11:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 11:50	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 11:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 11:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 11:50	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/23/18 11:50	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 11:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 11:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/23/18 11:50	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/23/18 11:50	17060-07-0	
Toluene-d8 (S)	98	%	80-115		1		04/23/18 11:50	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 11:50		

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268614

QC Batch: 522725 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268614001, 60268614002, 60268614003, 60268614004, 60268614005, 60268614006, 60268614007, 60268614008, 60268614009, 60268614010

METHOD BLANK: 2140287 Matrix: Water
Associated Lab Samples: 60268614001, 60268614002, 60268614003, 60268614004, 60268614005, 60268614006, 60268614007, 60268614008, 60268614009, 60268614010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/23/18 19:18	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/23/18 19:18	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/23/18 19:18	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/23/18 19:18	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/23/18 19:18	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/23/18 19:18	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/23/18 19:18	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/23/18 19:18	
2-Hexanone	ug/L	ND	10.0	1.2	04/23/18 19:18	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/23/18 19:18	
Acetone	ug/L	2.1J	10.0	1.9	04/23/18 19:18	
Benzene	ug/L	ND	1.0	0.060	04/23/18 19:18	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/23/18 19:18	
Bromoform	ug/L	ND	1.0	0.070	04/23/18 19:18	
Bromomethane	ug/L	ND	5.0	0.16	04/23/18 19:18	
Carbon disulfide	ug/L	ND	5.0	0.12	04/23/18 19:18	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/23/18 19:18	
Chlorobenzene	ug/L	ND	1.0	0.21	04/23/18 19:18	
Chloroethane	ug/L	ND	1.0	0.15	04/23/18 19:18	
Chloroform	ug/L	ND	1.0	0.14	04/23/18 19:18	
Chloromethane	ug/L	ND	1.0	0.080	04/23/18 19:18	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/23/18 19:18	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/23/18 19:18	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/23/18 19:18	
Ethylbenzene	ug/L	ND	1.0	0.18	04/23/18 19:18	
Methylene chloride	ug/L	ND	1.0	0.15	04/23/18 19:18	
Styrene	ug/L	ND	1.0	0.12	04/23/18 19:18	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/23/18 19:18	
Toluene	ug/L	ND	1.0	0.17	04/23/18 19:18	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/23/18 19:18	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/23/18 19:18	
Trichloroethene	ug/L	ND	1.0	0.17	04/23/18 19:18	
Vinyl chloride	ug/L	ND	1.0	0.13	04/23/18 19:18	
Xylene (Total)	ug/L	ND	3.0	0.42	04/23/18 19:18	
1,2-Dichloroethane-d4 (S)	%	101	80-117		04/23/18 19:18	
4-Bromofluorobenzene (S)	%	99	80-119		04/23/18 19:18	
Toluene-d8 (S)	%	99	80-115		04/23/18 19:18	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268614

LABORATORY CONTROL SAMPLE: 2140288

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.6	108	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	19.3	96	74-121	
1,1,2-Trichloroethane	ug/L	20	19.9	99	83-119	
1,1-Dichloroethane	ug/L	20	20.8	104	85-128	
1,1-Dichloroethene	ug/L	20	19.2	96	85-123	
1,2-Dichloroethane	ug/L	20	19.9	99	77-120	
1,2-Dichloropropane	ug/L	20	21.4	107	81-126	
2-Butanone (MEK)	ug/L	100	99.0	99	65-134	
2-Hexanone	ug/L	100	99.5	99	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	103	103	66-139	
Acetone	ug/L	100	91.9	92	62-142	
Benzene	ug/L	20	21.2	106	81-118	
Bromodichloromethane	ug/L	20	19.2	96	85-123	
Bromoform	ug/L	20	20.2	101	83-123	
Bromomethane	ug/L	20	23.8	119	39-149	
Carbon disulfide	ug/L	20	21.9	110	85-124	
Carbon tetrachloride	ug/L	20	20.6	103	85-126	
Chlorobenzene	ug/L	20	20.9	105	87-118	
Chloroethane	ug/L	20	16.6	83	73-134	
Chloroform	ug/L	20	20.6	103	85-119	
Chloromethane	ug/L	20	22.3	111	20-174	
cis-1,2-Dichloroethene	ug/L	20	21.0	105	84-121	
cis-1,3-Dichloropropene	ug/L	20	20.2	101	80-124	
Dibromochloromethane	ug/L	20	19.1	96	83-122	
Ethylbenzene	ug/L	20	20.6	103	80-118	
Methylene chloride	ug/L	20	20.1	100	81-126	
Styrene	ug/L	20	20.5	103	85-120	
Tetrachloroethene	ug/L	20	20.9	104	87-120	
Toluene	ug/L	20	21.1	105	82-118	
trans-1,2-Dichloroethene	ug/L	20	21.5	107	83-121	
trans-1,3-Dichloropropene	ug/L	20	20.0	100	80-122	
Trichloroethene	ug/L	20	21.8	109	82-120	
Vinyl chloride	ug/L	20	23.2	116	74-147	
Xylene (Total)	ug/L	60	60.9	101	81-120	
1,2-Dichloroethane-d4 (S)	%			98	80-117	
4-Bromofluorobenzene (S)	%			99	80-119	
Toluene-d8 (S)	%			99	80-115	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268614

QC Batch: 522727 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268614011, 60268614012, 60268614014, 60268614015, 60268614016, 60268614017, 60268614018, 60268614019, 60268614020, 60268614021, 60268614022, 60268614023, 60268614024, 60268614025, 60268614026, 60268614027, 60268614028, 60268614029

METHOD BLANK: 2140289 Matrix: Water
Associated Lab Samples: 60268614011, 60268614012, 60268614014, 60268614015, 60268614016, 60268614017, 60268614018, 60268614019, 60268614020, 60268614021, 60268614022, 60268614023, 60268614024, 60268614025, 60268614026, 60268614027, 60268614028, 60268614029

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/23/18 11:22	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/23/18 11:22	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/23/18 11:22	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/23/18 11:22	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/23/18 11:22	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/23/18 11:22	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/23/18 11:22	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/23/18 11:22	
2-Hexanone	ug/L	ND	10.0	1.2	04/23/18 11:22	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/23/18 11:22	
Acetone	ug/L	ND	10.0	1.9	04/23/18 11:22	
Benzene	ug/L	ND	1.0	0.060	04/23/18 11:22	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/23/18 11:22	
Bromoform	ug/L	ND	1.0	0.070	04/23/18 11:22	
Bromomethane	ug/L	ND	5.0	0.16	04/23/18 11:22	
Carbon disulfide	ug/L	0.19J	5.0	0.12	04/23/18 11:22	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/23/18 11:22	
Chlorobenzene	ug/L	ND	1.0	0.21	04/23/18 11:22	
Chloroethane	ug/L	ND	1.0	0.15	04/23/18 11:22	
Chloroform	ug/L	ND	1.0	0.14	04/23/18 11:22	
Chloromethane	ug/L	ND	1.0	0.080	04/23/18 11:22	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/23/18 11:22	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/23/18 11:22	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/23/18 11:22	
Ethylbenzene	ug/L	ND	1.0	0.18	04/23/18 11:22	
Methylene chloride	ug/L	ND	1.0	0.15	04/23/18 11:22	
Styrene	ug/L	ND	1.0	0.12	04/23/18 11:22	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/23/18 11:22	
Toluene	ug/L	ND	1.0	0.17	04/23/18 11:22	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/23/18 11:22	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/23/18 11:22	
Trichloroethene	ug/L	ND	1.0	0.17	04/23/18 11:22	
Vinyl chloride	ug/L	ND	1.0	0.13	04/23/18 11:22	
Xylene (Total)	ug/L	ND	3.0	0.42	04/23/18 11:22	
1,2-Dichloroethane-d4 (S)	%	99	80-117		04/23/18 11:22	
4-Bromofluorobenzene (S)	%	100	80-119		04/23/18 11:22	
Toluene-d8 (S)	%	99	80-115		04/23/18 11:22	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268614

LABORATORY CONTROL SAMPLE: 2140290

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.1	101	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	19.0	95	74-121	
1,1,2-Trichloroethane	ug/L	20	19.5	97	83-119	
1,1-Dichloroethane	ug/L	20	19.8	99	85-128	
1,1-Dichloroethene	ug/L	20	18.3	91	85-123	
1,2-Dichloroethane	ug/L	20	19.6	98	77-120	
1,2-Dichloropropane	ug/L	20	20.4	102	81-126	
2-Butanone (MEK)	ug/L	100	102	102	65-134	
2-Hexanone	ug/L	100	99.5	99	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	103	103	66-139	
Acetone	ug/L	100	95.6	96	62-142	
Benzene	ug/L	20	20.7	103	81-118	
Bromodichloromethane	ug/L	20	19.2	96	85-123	
Bromoform	ug/L	20	20.6	103	83-123	
Bromomethane	ug/L	20	18.1	90	39-149	
Carbon disulfide	ug/L	20	21.1	106	85-124	
Carbon tetrachloride	ug/L	20	20.3	102	85-126	
Chlorobenzene	ug/L	20	19.8	99	87-118	
Chloroethane	ug/L	20	15.4	77	73-134	
Chloroform	ug/L	20	20.0	100	85-119	
Chloromethane	ug/L	20	21.8	109	20-174	
cis-1,2-Dichloroethene	ug/L	20	19.5	98	84-121	
cis-1,3-Dichloropropene	ug/L	20	19.5	97	80-124	
Dibromochloromethane	ug/L	20	18.7	94	83-122	
Ethylbenzene	ug/L	20	20.0	100	80-118	
Methylene chloride	ug/L	20	19.4	97	81-126	
Styrene	ug/L	20	20.1	100	85-120	
Tetrachloroethene	ug/L	20	18.5	92	87-120	
Toluene	ug/L	20	19.8	99	82-118	
trans-1,2-Dichloroethene	ug/L	20	20.2	101	83-121	
trans-1,3-Dichloropropene	ug/L	20	19.6	98	80-122	
Trichloroethene	ug/L	20	20.7	103	82-120	
Vinyl chloride	ug/L	20	21.9	110	74-147	
Xylene (Total)	ug/L	60	59.1	98	81-120	
1,2-Dichloroethane-d4 (S)	%			101	80-117	
4-Bromofluorobenzene (S)	%			101	80-119	
Toluene-d8 (S)	%			98	80-115	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268614

QC Batch: 522958
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268614006

METHOD BLANK: 2140814 Matrix: Water
Associated Lab Samples: 60268614006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichloroethene	ug/L	ND	1.0	0.17	04/24/18 20:55	
1,2-Dichloroethane-d4 (S)	%	96	80-117		04/24/18 20:55	
4-Bromofluorobenzene (S)	%	98	80-119		04/24/18 20:55	
Toluene-d8 (S)	%	97	80-115		04/24/18 20:55	

LABORATORY CONTROL SAMPLE: 2140815

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/L	20	22.4	112	82-120	
1,2-Dichloroethane-d4 (S)	%			89	80-117	
4-Bromofluorobenzene (S)	%			97	80-119	
Toluene-d8 (S)	%			100	80-115	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268614

QC Batch: 523345 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268614023, 60268614024, 60268614027

METHOD BLANK: 2142614 Matrix: Water
Associated Lab Samples: 60268614023, 60268614024, 60268614027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/26/18 12:24	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/26/18 12:24	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/26/18 12:24	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/26/18 12:24	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/26/18 12:24	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/26/18 12:24	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/26/18 12:24	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/26/18 12:24	
2-Hexanone	ug/L	ND	10.0	1.2	04/26/18 12:24	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/26/18 12:24	
Acetone	ug/L	ND	10.0	1.9	04/26/18 12:24	
Benzene	ug/L	ND	1.0	0.060	04/26/18 12:24	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/26/18 12:24	
Bromoform	ug/L	ND	1.0	0.070	04/26/18 12:24	
Bromomethane	ug/L	0.48J	5.0	0.16	04/26/18 12:24	
Carbon disulfide	ug/L	ND	5.0	0.12	04/26/18 12:24	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/26/18 12:24	
Chlorobenzene	ug/L	ND	1.0	0.21	04/26/18 12:24	
Chloroethane	ug/L	ND	1.0	0.15	04/26/18 12:24	
Chloroform	ug/L	ND	1.0	0.14	04/26/18 12:24	
Chloromethane	ug/L	ND	1.0	0.080	04/26/18 12:24	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/26/18 12:24	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/26/18 12:24	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/26/18 12:24	
Ethylbenzene	ug/L	ND	1.0	0.18	04/26/18 12:24	
Methylene chloride	ug/L	ND	1.0	0.15	04/26/18 12:24	
Styrene	ug/L	ND	1.0	0.12	04/26/18 12:24	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/26/18 12:24	
Toluene	ug/L	ND	1.0	0.17	04/26/18 12:24	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/26/18 12:24	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/26/18 12:24	
Vinyl chloride	ug/L	ND	1.0	0.13	04/26/18 12:24	
Xylene (Total)	ug/L	ND	3.0	0.42	04/26/18 12:24	
1,2-Dichloroethane-d4 (S)	%	101	80-117		04/26/18 12:24	
4-Bromofluorobenzene (S)	%	91	80-119		04/26/18 12:24	
Toluene-d8 (S)	%	101	80-115		04/26/18 12:24	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268614

LABORATORY CONTROL SAMPLE: 2142615

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.7	93	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	17.1	86	74-121	
1,1,2-Trichloroethane	ug/L	20	19.9	99	83-119	
1,1-Dichloroethane	ug/L	20	17.0	85	85-128	
1,1-Dichloroethene	ug/L	20	18.5	93	85-123	
1,2-Dichloroethane	ug/L	20	18.2	91	77-120	
1,2-Dichloropropane	ug/L	20	17.6	88	81-126	
2-Butanone (MEK)	ug/L	100	96.7	97	65-134	
2-Hexanone	ug/L	100	98.1	98	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	94.2	94	66-139	
Acetone	ug/L	100	86.7	87	62-142	
Benzene	ug/L	20	17.9	89	81-118	
Bromodichloromethane	ug/L	20	19.6	98	85-123	
Bromoform	ug/L	20	23.1	115	83-123	
Bromomethane	ug/L	20	20.4	102	39-149	
Carbon disulfide	ug/L	20	16.4	82	85-124	L2
Carbon tetrachloride	ug/L	20	19.6	98	85-126	
Chlorobenzene	ug/L	20	19.4	97	87-118	
Chloroethane	ug/L	20	16.3	82	73-134	
Chloroform	ug/L	20	18.1	91	85-119	
Chloromethane	ug/L	20	14.9	74	20-174	
cis-1,2-Dichloroethene	ug/L	20	18.8	94	84-121	
cis-1,3-Dichloropropene	ug/L	20	19.6	98	80-124	
Dibromochloromethane	ug/L	20	22.0	110	83-122	
Ethylbenzene	ug/L	20	19.6	98	80-118	
Methylene chloride	ug/L	20	17.7	88	81-126	
Styrene	ug/L	20	20.7	103	85-120	
Tetrachloroethene	ug/L	20	20.6	103	87-120	
Toluene	ug/L	20	19.2	96	82-118	
trans-1,2-Dichloroethene	ug/L	20	18.7	93	83-121	
trans-1,3-Dichloropropene	ug/L	20	20.5	103	80-122	
Vinyl chloride	ug/L	20	16.6	83	74-147	
Xylene (Total)	ug/L	60	59.7	100	81-120	
1,2-Dichloroethane-d4 (S)	%			98	80-117	
4-Bromofluorobenzene (S)	%			92	80-119	
Toluene-d8 (S)	%			103	80-115	

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REPORT OF LABORATORY ANALYSIS

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9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268614

QC Batch: 523154
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 7 day
Associated Lab Samples: 60268614013

METHOD BLANK: 2141660
Matrix: Water
Associated Lab Samples: 60268614013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/25/18 10:26	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/25/18 10:26	
Trichloroethene	ug/L	ND	1.0	0.17	04/25/18 10:26	
1,2-Dichloroethane-d4 (S)	%	93	80-117		04/25/18 10:26	
4-Bromofluorobenzene (S)	%	99	80-119		04/25/18 10:26	
Toluene-d8 (S)	%	96	80-115		04/25/18 10:26	

LABORATORY CONTROL SAMPLE: 2141661

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	20	20.6	103	84-121	
trans-1,2-Dichloroethene	ug/L	20	20.6	103	83-121	
Trichloroethene	ug/L	20	20.8	104	82-120	
1,2-Dichloroethane-d4 (S)	%			96	80-117	
4-Bromofluorobenzene (S)	%			98	80-119	
Toluene-d8 (S)	%			97	80-115	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268614

QC Batch: 523344
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 7 day
Associated Lab Samples: 60268614013

METHOD BLANK: 2142612
Matrix: Water
Associated Lab Samples: 60268614013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/26/18 12:24	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/26/18 12:24	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/26/18 12:24	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/26/18 12:24	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/26/18 12:24	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/26/18 12:24	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/26/18 12:24	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/26/18 12:24	
2-Hexanone	ug/L	ND	10.0	1.2	04/26/18 12:24	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/26/18 12:24	
Acetone	ug/L	ND	10.0	1.9	04/26/18 12:24	
Benzene	ug/L	ND	1.0	0.060	04/26/18 12:24	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/26/18 12:24	
Bromoform	ug/L	ND	1.0	0.070	04/26/18 12:24	
Bromomethane	ug/L	0.48J	5.0	0.16	04/26/18 12:24	
Carbon disulfide	ug/L	ND	5.0	0.12	04/26/18 12:24	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/26/18 12:24	
Chlorobenzene	ug/L	ND	1.0	0.21	04/26/18 12:24	
Chloroethane	ug/L	ND	1.0	0.15	04/26/18 12:24	
Chloroform	ug/L	ND	1.0	0.14	04/26/18 12:24	
Chloromethane	ug/L	ND	1.0	0.080	04/26/18 12:24	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/26/18 12:24	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/26/18 12:24	
Ethylbenzene	ug/L	ND	1.0	0.18	04/26/18 12:24	
Methylene chloride	ug/L	ND	1.0	0.15	04/26/18 12:24	
Styrene	ug/L	ND	1.0	0.12	04/26/18 12:24	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/26/18 12:24	
Toluene	ug/L	ND	1.0	0.17	04/26/18 12:24	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/26/18 12:24	
Vinyl chloride	ug/L	ND	1.0	0.13	04/26/18 12:24	
Xylene (Total)	ug/L	ND	3.0	0.42	04/26/18 12:24	
1,2-Dichloroethane-d4 (S)	%	101	80-117		04/26/18 12:24	
4-Bromofluorobenzene (S)	%	91	80-119		04/26/18 12:24	
Toluene-d8 (S)	%	101	80-115		04/26/18 12:24	

LABORATORY CONTROL SAMPLE: 2142613

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.7	93	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	17.1	86	74-121	

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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.: 60268614

LABORATORY CONTROL SAMPLE: 2142613

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2-Trichloroethane	ug/L	20	19.9	99	83-119	
1,1-Dichloroethane	ug/L	20	17.0	85	85-128	
1,1-Dichloroethene	ug/L	20	18.5	93	85-123	
1,2-Dichloroethane	ug/L	20	18.2	91	77-120	
1,2-Dichloropropane	ug/L	20	17.6	88	81-126	
2-Butanone (MEK)	ug/L	100	96.7	97	65-134	
2-Hexanone	ug/L	100	98.1	98	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	94.2	94	66-139	
Acetone	ug/L	100	86.7	87	62-142	
Benzene	ug/L	20	17.9	89	81-118	
Bromodichloromethane	ug/L	20	19.6	98	85-123	
Bromoform	ug/L	20	23.1	115	83-123	
Bromomethane	ug/L	20	20.4	102	39-149	
Carbon disulfide	ug/L	20	16.4	82	85-124	L2
Carbon tetrachloride	ug/L	20	19.6	98	85-126	
Chlorobenzene	ug/L	20	19.4	97	87-118	
Chloroethane	ug/L	20	16.3	82	73-134	
Chloroform	ug/L	20	18.1	91	85-119	
Chloromethane	ug/L	20	14.9	74	20-174	
cis-1,3-Dichloropropene	ug/L	20	19.6	98	80-124	
Dibromochloromethane	ug/L	20	22.0	110	83-122	
Ethylbenzene	ug/L	20	19.6	98	80-118	
Methylene chloride	ug/L	20	17.7	88	81-126	
Styrene	ug/L	20	20.7	103	85-120	
Tetrachloroethene	ug/L	20	20.6	103	87-120	
Toluene	ug/L	20	19.2	96	82-118	
trans-1,3-Dichloropropene	ug/L	20	20.5	103	80-122	
Vinyl chloride	ug/L	20	16.6	83	74-147	
Xylene (Total)	ug/L	60	59.7	100	81-120	
1,2-Dichloroethane-d4 (S)	%			98	80-117	
4-Bromofluorobenzene (S)	%			92	80-119	
Toluene-d8 (S)	%			103	80-115	

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Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60268614

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: 522725	
[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 522727	
[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 522958	
[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 523154	
[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 523344	
[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 523345	
[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.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60268614

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60268614001	MW-97-201804	EPA 5030B/8260	522725		
60268614002	MW-96-201804	EPA 5030B/8260	522725		
60268614003	MW-29-201804	EPA 5030B/8260	522725		
60268614004	MW-185-201804	EPA 5030B/8260	522725		
60268614005	DUP-07-201804	EPA 5030B/8260	522725		
60268614006	MW-189-201804	EPA 5030B/8260	522725		
60268614006	MW-189-201804	EPA 5030B/8260	522958		
60268614007	MW-188-201804	EPA 5030B/8260	522725		
60268614008	DUP-04-201804	EPA 5030B/8260	522725		
60268614009	MW-186-201804	EPA 5030B/8260	522725		
60268614010	ITMW-7-201804	EPA 5030B/8260	522725		
60268614011	TMW-19-201804	EPA 5030B/8260	522727		
60268614012	TMW-26-201804	EPA 5030B/8260	522727		
60268614014	TMW-25-201804	EPA 5030B/8260	522727		
60268614015	ITMW-10-201804	EPA 5030B/8260	522727		
60268614016	ITMW-5-201804	EPA 5030B/8260	522727		
60268614017	ITMW-21-201804	EPA 5030B/8260	522727		
60268614018	TMW-16-201804	EPA 5030B/8260	522727		
60268614019	MW-182-201804	EPA 5030B/8260	522727		
60268614020	DUP-06-201804	EPA 5030B/8260	522727		
60268614021	TMW-21-201804	EPA 5030B/8260	522727		
60268614022	MW-91-201804	EPA 5030B/8260	522727		
60268614023	MW-38-201804	EPA 5030B/8260	522727		
60268614023	MW-38-201804	EPA 5030B/8260	523345		
60268614024	MW-95-201804	EPA 5030B/8260	522727		
60268614024	MW-95-201804	EPA 5030B/8260	523345		
60268614025	MW-179-201804	EPA 5030B/8260	522727		
60268614026	EB-05-201804	EPA 5030B/8260	522727		
60268614027	MW-93-201804	EPA 5030B/8260	522727		
60268614027	MW-93-201804	EPA 5030B/8260	523345		
60268614028	TB-04-201804	EPA 5030B/8260	522727		
60268614029	TB-05-201804	EPA 5030B/8260	522727		
60268614013	MW-86-201804	EPA 5030B/8260	523154		
60268614013	MW-86-201804	EPA 5030B/8260	523344		

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Sample Condition Upon Receipt

WO# : 60268614

60268614

Client Name: 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: 296 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 1.5 3.3 **Corr. Factor** +1.3 **Corrected** 2.8 5.0

Date and initials of person examining contents: [initials] 4/20/18

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	MW-179 labeled as TMW-20
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	-collection D/T match
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	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks:		
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	
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 3

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Ramboll	Report To: Tamara House-Knight	Attention: Tamara House-Knight
Address: 124 W. Capitol Ave. Little Rock, AR 72201	Copy To:	Company Name: Ramboll
		Address: 124 W. Capitol Ave
Email To:	Purchase Order No.: NA	Pace Quote Reference: Little Rock, AR 72201
Phone: Fax:	Project Name: Fort Smith, AR	Pace Project Manager: Richard Mannz
Requested Due Date/TAT: Standard	Project Number:	Pace Profile #: 7444, line1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	8260 VOCs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-97-201804	WT	G			4/19/18	0905		3				3						X		3(DG9H) 001
2	MW-96-201804						1015														002
3	MW-29-201804						1140														003
4	MW-185-201804						1255														004
5	DUP-07-201804						1255														005
6	MW-189-201804						1445														006
7	MW-188-201804						0915														007
8	DUP-04-201804						0915														008
9	MW-186-201804						1035														009
10	ITMW-7-201804						0930														010
11	TMW-19-201804						1240														011
12	TMW-26-201804						1300														012

60268614

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)
	Haley Ahlers / Ramboll	4/19/18	1800	[signature] / PACE	4/20/18	0625	2.8	Y	Y	Y
							5.0	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Haley Ahlers

SIGNATURE of SAMPLER: Haley Ahlers

DATE Signed (MM/DD/YY): 04/19/18

*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

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: 2 of 3

Section A Required Client Information:

Company:	Ramboll
Address:	124 W. Capitol Ave. Little Rock, AR 72201
Email To:	
Phone:	Fax:
Requested Due Date/TAT:	Standard

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:	Ramboll
Address:	124 W. Capitol Ave Little Rock, AR 72201
Pace Quote Reference:	
Pace Project Manager:	Richard Mannz
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

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	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 Ascorbic Acid	Analysis Test Y/N	8260 VOCs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60268614
1	MW-86-201804	WT	G			4/19/18	1535		3								3		X		013
2	TMW-25-201804	"	"			"	1410		"				3				"		"		014
3	ITMW-10-201804						1115														015
4	ITMW-5-201804						1525														016
5	ITMW-21-201804						1410														017
6	TMW-16-201804						1530														018
7	MW-182-201804						0925														019
8	DUP-06-201804						0930														020
9	TMW-21-201804						1048														021
10	MW-91-201804						1235														022
11	MW-38-201804						1335														023
12	MW-95-201804	↓	↓			↓	1512		↓				↓				↓		↓		024

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Haley Anders / Ramboll	4/19/18	1800	/PACE	4/20/18	0625	2.8	Y	Y	Y
							5.0	Y	Y	Y

SAMPLER NAME AND SIGNATURE			Temp In °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Haley Anders					
SIGNATURE of SAMPLER:	Haley Anders	DATE Signed (MM/DD/YY): 04/19/18				

*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
www.pacelabs.com

Section A Required Client Information:

Company:	Ramboll
Address:	124 W. Capitol Ave
	Little Rock, AR 72201
Email To:	
Phone:	Fax:
Requested Due Date/TAT:	Standard

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:	Ramboll
Address:	124 W. Capitol Ave
Pace Quote Reference:	Little Rock, AR 72201
Pace Project Manager:	Richard Mannz
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

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

ITEM #	SAMPLE ID	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	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-179-201804	WT	G			4/19/18	1555		3				X						X		60268014 3(DLAH) 025
2	EB-05-201804						1600		3										1		026
3	MW-93-201804						1645		3												027
4	TB-04-201804								2												2(DLAH) 028
5	TB-05-201804								2												029
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Haley Ahlers / Ramboll	4/19/18	1800	PACE	4/20/18	0625	2-8	Y	Y	Y
							5-0	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Haley Ahlers

SIGNATURE of SAMPLER: Haley Ahlers DATE Signed (MM/DD/YY): 04/19/18

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.

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

April 30, 2018

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

RE: Project: FORT SMITH, AR
Pace Project No.: 60268615

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on April 20, 2018. 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: Kristen Drucquer, Ramboll
Tamara House-Knight, Ramboll Environ
M. Wilson

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CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60268615

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.: 60268615

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60268615001	**VP-7-201804**	Water	04/19/18 10:00	04/20/18 06:25
60268615002	**VP-8-201804**	Water	04/19/18 10:20	04/20/18 06:25
60268615003	**VP-10-201804**	Water	04/19/18 09:20	04/20/18 06:25
60268615004	**VP-12-201804**	Water	04/19/18 11:00	04/20/18 06:25
60268615005	**VP-14-201804**	Water	04/19/18 11:45	04/20/18 06:25
60268615006	**TB-06-201804**	Water	04/19/18 09:20	04/20/18 06:25

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60268615

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60268615001	**VP-7-201804**	EPA 5030B/8260	PGH	38	PASI-K
60268615002	**VP-8-201804**	EPA 5030B/8260	PGH	38	PASI-K
60268615003	**VP-10-201804**	EPA 5030B/8260	PGH	38	PASI-K
60268615004	**VP-12-201804**	EPA 5030B/8260	PGH	38	PASI-K
60268615005	**VP-14-201804**	EPA 5030B/8260	PGH	38	PASI-K
60268615006	**TB-06-201804**	EPA 5030B/8260	PGH	38	PASI-K

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60268615

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 30, 2018

General Information:
6 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: 522727

B: Analyte was detected in the associated method blank.

- BLANK for HBN 522727 [MSV/8881 (Lab ID: 2140289)
  - Carbon disulfide

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: 522727

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

QC Batch: 522958

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

QC Batch: 523326

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.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268615

Sample: VP-7-201804 **Lab ID: 60268615001** Collected: 04/19/18 10:00 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**25.6**	ug/L	10.0	1.9	1		04/23/18 12:18	67-64-1	
Benzene	**0.90J**	ug/L	1.0	0.060	1		04/23/18 12:18	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 12:18	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 12:18	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 12:18	74-83-9	
2-Butanone (MEK)	**4.0J**	ug/L	10.0	0.59	1		04/23/18 12:18	78-93-3	
Carbon disulfide	**0.13J**	ug/L	5.0	0.12	1		04/23/18 12:18	75-15-0	B
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 12:18	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 12:18	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 12:18	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 12:18	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 12:18	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 12:18	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 12:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 12:18	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 12:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 12:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 12:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 12:18	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 12:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 12:18	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 12:18	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 12:18	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 12:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	**0.92J**	ug/L	10.0	0.42	1		04/23/18 12:18	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 12:18	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 12:18	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 12:18	127-18-4	
Toluene	**0.21J**	ug/L	1.0	0.17	1		04/23/18 12:18	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 12:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 12:18	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/23/18 12:18	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 12:18	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 12:18	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/23/18 12:18	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-117		1		04/23/18 12:18	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/23/18 12:18	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 12:18		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268615

Sample: VP-8-201804 **Lab ID: 60268615002** Collected: 04/19/18 10:20 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**61.0**	ug/L	10.0	1.9	1		04/23/18 12:32	67-64-1	
Benzene	**0.82J**	ug/L	1.0	0.060	1		04/23/18 12:32	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 12:32	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 12:32	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 12:32	74-83-9	
2-Butanone (MEK)	**12.1**	ug/L	10.0	0.59	1		04/23/18 12:32	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 12:32	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 12:32	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 12:32	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 12:32	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 12:32	67-66-3	
Chloromethane	**0.45J**	ug/L	1.0	0.080	1		04/23/18 12:32	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 12:32	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 12:32	75-34-3	
1,2-Dichloroethane	**0.14J**	ug/L	1.0	0.12	1		04/23/18 12:32	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 12:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 12:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 12:32	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 12:32	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 12:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 12:32	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 12:32	100-41-4	
2-Hexanone	**2.9J**	ug/L	10.0	1.2	1		04/23/18 12:32	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 12:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	**0.89J**	ug/L	10.0	0.42	1		04/23/18 12:32	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 12:32	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 12:32	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 12:32	127-18-4	
Toluene	**0.25J**	ug/L	1.0	0.17	1		04/23/18 12:32	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 12:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 12:32	79-00-5	
Trichloroethene	**3.4**	ug/L	1.0	0.17	1		04/23/18 12:32	79-01-6	
Vinyl chloride	**0.17J**	ug/L	1.0	0.13	1		04/23/18 12:32	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 12:32	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/23/18 12:32	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/23/18 12:32	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/23/18 12:32	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 12:32		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268615

Sample: VP-10-201804 **Lab ID: 60268615003** Collected: 04/19/18 09:20 Received: 04/20/18 06:25 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		04/24/18 21:51	67-64-1	
Benzene	**0.25J**	ug/L	1.0	0.060	1		04/24/18 21:51	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/24/18 21:51	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/24/18 21:51	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/24/18 21:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/24/18 21:51	78-93-3	
Carbon disulfide	**0.52J**	ug/L	5.0	0.12	1		04/24/18 21:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/24/18 21:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/24/18 21:51	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/24/18 21:51	75-00-3	
Chloroform	**1.3**	ug/L	1.0	0.14	1		04/24/18 21:51	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/24/18 21:51	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/24/18 21:51	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/24/18 21:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/24/18 21:51	107-06-2	
1,1-Dichloroethene	**1.8**	ug/L	1.0	0.20	1		04/24/18 21:51	75-35-4	
cis-1,2-Dichloroethene	**14.9**	ug/L	1.0	0.080	1		04/24/18 21:51	156-59-2	
trans-1,2-Dichloroethene	**0.31J**	ug/L	1.0	0.20	1		04/24/18 21:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/24/18 21:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/24/18 21:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/24/18 21:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/24/18 21:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/24/18 21:51	591-78-6	
Methylene chloride	**0.38J**	ug/L	1.0	0.15	1		04/24/18 21:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/24/18 21:51	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/24/18 21:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/24/18 21:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/24/18 21:51	127-18-4	
Toluene	**0.36J**	ug/L	1.0	0.17	1		04/24/18 21:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/24/18 21:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/24/18 21:51	79-00-5	
Trichloroethene	**357**	ug/L	5.0	0.85	5		04/27/18 02:45	79-01-6	
Vinyl chloride	**0.40J**	ug/L	1.0	0.13	1		04/24/18 21:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/24/18 21:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/24/18 21:51	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	80-117		1		04/24/18 21:51	17060-07-0	
Toluene-d8 (S)	95	%	80-115		1		04/24/18 21:51	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/24/18 21:51		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268615

Sample: VP-12-201804 **Lab ID: 60268615004** Collected: 04/19/18 11:00 Received: 04/20/18 06:25 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		04/24/18 21:23	67-64-1	
Benzene	**0.13J**	ug/L	1.0	0.060	1		04/24/18 21:23	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/24/18 21:23	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/24/18 21:23	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/24/18 21:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/24/18 21:23	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/24/18 21:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/24/18 21:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/24/18 21:23	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/24/18 21:23	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/24/18 21:23	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/24/18 21:23	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/24/18 21:23	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/24/18 21:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/24/18 21:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/24/18 21:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/24/18 21:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/24/18 21:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/24/18 21:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/24/18 21:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/24/18 21:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/24/18 21:23	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/24/18 21:23	591-78-6	
Methylene chloride	**0.25J**	ug/L	1.0	0.15	1		04/24/18 21:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/24/18 21:23	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/24/18 21:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/24/18 21:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/24/18 21:23	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/24/18 21:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/24/18 21:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/24/18 21:23	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/24/18 21:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/24/18 21:23	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/24/18 21:23	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/24/18 21:23	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-117		1		04/24/18 21:23	17060-07-0	
Toluene-d8 (S)	97	%	80-115		1		04/24/18 21:23	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/24/18 21:23		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268615

Sample: VP-14-201804 **Lab ID: 60268615005** Collected: 04/19/18 11:45 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**4.0J**	ug/L	10.0	1.9	1		04/24/18 21:37	67-64-1	
Benzene	**0.16J**	ug/L	1.0	0.060	1		04/24/18 21:37	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/24/18 21:37	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/24/18 21:37	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/24/18 21:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/24/18 21:37	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/24/18 21:37	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/24/18 21:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/24/18 21:37	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/24/18 21:37	75-00-3	
Chloroform	**0.44J**	ug/L	1.0	0.14	1		04/24/18 21:37	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/24/18 21:37	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/24/18 21:37	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/24/18 21:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/24/18 21:37	107-06-2	
1,1-Dichloroethene	**0.87J**	ug/L	1.0	0.20	1		04/24/18 21:37	75-35-4	
cis-1,2-Dichloroethene	**2.6**	ug/L	1.0	0.080	1		04/24/18 21:37	156-59-2	
trans-1,2-Dichloroethene	**0.23J**	ug/L	1.0	0.20	1		04/24/18 21:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/24/18 21:37	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/24/18 21:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/24/18 21:37	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/24/18 21:37	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/24/18 21:37	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/24/18 21:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/24/18 21:37	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/24/18 21:37	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/24/18 21:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/24/18 21:37	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/24/18 21:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/24/18 21:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/24/18 21:37	79-00-5	
Trichloroethene	**55.8**	ug/L	1.0	0.17	1		04/24/18 21:37	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/24/18 21:37	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/24/18 21:37	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/24/18 21:37	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/24/18 21:37	17060-07-0	
Toluene-d8 (S)	98	%	80-115		1		04/24/18 21:37	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/24/18 21:37		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268615

Sample: TB-06-201804 **Lab ID: 60268615006** Collected: 04/19/18 09:20 Received: 04/20/18 06:25 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		04/24/18 21:09	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/24/18 21:09	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/24/18 21:09	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/24/18 21:09	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/24/18 21:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/24/18 21:09	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/24/18 21:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/24/18 21:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/24/18 21:09	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/24/18 21:09	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/24/18 21:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/24/18 21:09	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/24/18 21:09	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/24/18 21:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/24/18 21:09	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/24/18 21:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/24/18 21:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/24/18 21:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/24/18 21:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/24/18 21:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/24/18 21:09	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/24/18 21:09	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/24/18 21:09	591-78-6	
Methylene chloride	**0.57J**	ug/L	1.0	0.15	1		04/24/18 21:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/24/18 21:09	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/24/18 21:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/24/18 21:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/24/18 21:09	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/24/18 21:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/24/18 21:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/24/18 21:09	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/24/18 21:09	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/24/18 21:09	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/24/18 21:09	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/24/18 21:09	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/24/18 21:09	17060-07-0	
Toluene-d8 (S)	95	%	80-115		1		04/24/18 21:09	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/24/18 21:09		

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268615

QC Batch: 522727 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268615001, 60268615002

METHOD BLANK: 2140289 Matrix: Water
Associated Lab Samples: 60268615001, 60268615002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/23/18 11:22	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/23/18 11:22	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/23/18 11:22	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/23/18 11:22	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/23/18 11:22	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/23/18 11:22	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/23/18 11:22	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/23/18 11:22	
2-Hexanone	ug/L	ND	10.0	1.2	04/23/18 11:22	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/23/18 11:22	
Acetone	ug/L	ND	10.0	1.9	04/23/18 11:22	
Benzene	ug/L	ND	1.0	0.060	04/23/18 11:22	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/23/18 11:22	
Bromoform	ug/L	ND	1.0	0.070	04/23/18 11:22	
Bromomethane	ug/L	ND	5.0	0.16	04/23/18 11:22	
Carbon disulfide	ug/L	0.19J	5.0	0.12	04/23/18 11:22	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/23/18 11:22	
Chlorobenzene	ug/L	ND	1.0	0.21	04/23/18 11:22	
Chloroethane	ug/L	ND	1.0	0.15	04/23/18 11:22	
Chloroform	ug/L	ND	1.0	0.14	04/23/18 11:22	
Chloromethane	ug/L	ND	1.0	0.080	04/23/18 11:22	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/23/18 11:22	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/23/18 11:22	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/23/18 11:22	
Ethylbenzene	ug/L	ND	1.0	0.18	04/23/18 11:22	
Methylene chloride	ug/L	ND	1.0	0.15	04/23/18 11:22	
Styrene	ug/L	ND	1.0	0.12	04/23/18 11:22	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/23/18 11:22	
Toluene	ug/L	ND	1.0	0.17	04/23/18 11:22	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/23/18 11:22	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/23/18 11:22	
Trichloroethene	ug/L	ND	1.0	0.17	04/23/18 11:22	
Vinyl chloride	ug/L	ND	1.0	0.13	04/23/18 11:22	
Xylene (Total)	ug/L	ND	3.0	0.42	04/23/18 11:22	
1,2-Dichloroethane-d4 (S)	%	99	80-117		04/23/18 11:22	
4-Bromofluorobenzene (S)	%	100	80-119		04/23/18 11:22	
Toluene-d8 (S)	%	99	80-115		04/23/18 11:22	

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.

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268615

LABORATORY CONTROL SAMPLE: 2140290

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.1	101	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	19.0	95	74-121	
1,1,2-Trichloroethane	ug/L	20	19.5	97	83-119	
1,1-Dichloroethane	ug/L	20	19.8	99	85-128	
1,1-Dichloroethene	ug/L	20	18.3	91	85-123	
1,2-Dichloroethane	ug/L	20	19.6	98	77-120	
1,2-Dichloropropane	ug/L	20	20.4	102	81-126	
2-Butanone (MEK)	ug/L	100	102	102	65-134	
2-Hexanone	ug/L	100	99.5	99	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	103	103	66-139	
Acetone	ug/L	100	95.6	96	62-142	
Benzene	ug/L	20	20.7	103	81-118	
Bromodichloromethane	ug/L	20	19.2	96	85-123	
Bromoform	ug/L	20	20.6	103	83-123	
Bromomethane	ug/L	20	18.1	90	39-149	
Carbon disulfide	ug/L	20	21.1	106	85-124	
Carbon tetrachloride	ug/L	20	20.3	102	85-126	
Chlorobenzene	ug/L	20	19.8	99	87-118	
Chloroethane	ug/L	20	15.4	77	73-134	
Chloroform	ug/L	20	20.0	100	85-119	
Chloromethane	ug/L	20	21.8	109	20-174	
cis-1,2-Dichloroethene	ug/L	20	19.5	98	84-121	
cis-1,3-Dichloropropene	ug/L	20	19.5	97	80-124	
Dibromochloromethane	ug/L	20	18.7	94	83-122	
Ethylbenzene	ug/L	20	20.0	100	80-118	
Methylene chloride	ug/L	20	19.4	97	81-126	
Styrene	ug/L	20	20.1	100	85-120	
Tetrachloroethene	ug/L	20	18.5	92	87-120	
Toluene	ug/L	20	19.8	99	82-118	
trans-1,2-Dichloroethene	ug/L	20	20.2	101	83-121	
trans-1,3-Dichloropropene	ug/L	20	19.6	98	80-122	
Trichloroethene	ug/L	20	20.7	103	82-120	
Vinyl chloride	ug/L	20	21.9	110	74-147	
Xylene (Total)	ug/L	60	59.1	98	81-120	
1,2-Dichloroethane-d4 (S)	%			101	80-117	
4-Bromofluorobenzene (S)	%			101	80-119	
Toluene-d8 (S)	%			98	80-115	

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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9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268615

QC Batch: 522958 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268615003, 60268615004, 60268615005, 60268615006

METHOD BLANK: 2140814 Matrix: Water
Associated Lab Samples: 60268615003, 60268615004, 60268615005, 60268615006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/24/18 20:55	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/24/18 20:55	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/24/18 20:55	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/24/18 20:55	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/24/18 20:55	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/24/18 20:55	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/24/18 20:55	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/24/18 20:55	
2-Hexanone	ug/L	ND	10.0	1.2	04/24/18 20:55	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/24/18 20:55	
Acetone	ug/L	ND	10.0	1.9	04/24/18 20:55	
Benzene	ug/L	ND	1.0	0.060	04/24/18 20:55	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/24/18 20:55	
Bromoform	ug/L	ND	1.0	0.070	04/24/18 20:55	
Bromomethane	ug/L	1.1J	5.0	0.16	04/24/18 20:55	
Carbon disulfide	ug/L	ND	5.0	0.12	04/24/18 20:55	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/24/18 20:55	
Chlorobenzene	ug/L	ND	1.0	0.21	04/24/18 20:55	
Chloroethane	ug/L	ND	1.0	0.15	04/24/18 20:55	
Chloroform	ug/L	ND	1.0	0.14	04/24/18 20:55	
Chloromethane	ug/L	ND	1.0	0.080	04/24/18 20:55	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/24/18 20:55	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/24/18 20:55	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/24/18 20:55	
Ethylbenzene	ug/L	ND	1.0	0.18	04/24/18 20:55	
Methylene chloride	ug/L	ND	1.0	0.15	04/24/18 20:55	
Styrene	ug/L	ND	1.0	0.12	04/24/18 20:55	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/24/18 20:55	
Toluene	ug/L	ND	1.0	0.17	04/24/18 20:55	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/24/18 20:55	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/24/18 20:55	
Trichloroethene	ug/L	ND	1.0	0.17	04/24/18 20:55	
Vinyl chloride	ug/L	ND	1.0	0.13	04/24/18 20:55	
Xylene (Total)	ug/L	ND	3.0	0.42	04/24/18 20:55	
1,2-Dichloroethane-d4 (S)	%	96	80-117		04/24/18 20:55	
4-Bromofluorobenzene (S)	%	98	80-119		04/24/18 20:55	
Toluene-d8 (S)	%	97	80-115		04/24/18 20:55	

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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.: 60268615

LABORATORY CONTROL SAMPLE: 2140815

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.7	98	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	17.7	88	74-121	
1,1,2-Trichloroethane	ug/L	20	19.9	100	83-119	
1,1-Dichloroethane	ug/L	20	18.8	94	85-128	
1,1-Dichloroethene	ug/L	20	20.6	103	85-123	
1,2-Dichloroethane	ug/L	20	18.3	91	77-120	
1,2-Dichloropropane	ug/L	20	19.9	99	81-126	
2-Butanone (MEK)	ug/L	100	90.7	91	65-134	
2-Hexanone	ug/L	100	93.1	93	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	98.4	98	66-139	
Acetone	ug/L	100	95.9	96	62-142	
Benzene	ug/L	20	20.7	103	81-118	
Bromodichloromethane	ug/L	20	18.3	91	85-123	
Bromoform	ug/L	20	19.1	96	83-123	
Bromomethane	ug/L	20	20.7	103	39-149	
Carbon disulfide	ug/L	20	20.4	102	85-124	
Carbon tetrachloride	ug/L	20	19.3	96	85-126	
Chlorobenzene	ug/L	20	19.7	98	87-118	
Chloroethane	ug/L	20	15.0	75	73-134	
Chloroform	ug/L	20	19.2	96	85-119	
Chloromethane	ug/L	20	15.4	77	20-174	
cis-1,2-Dichloroethene	ug/L	20	19.6	98	84-121	
cis-1,3-Dichloropropene	ug/L	20	19.8	99	80-124	
Dibromochloromethane	ug/L	20	18.7	94	83-122	
Ethylbenzene	ug/L	20	19.2	96	80-118	
Methylene chloride	ug/L	20	19.6	98	81-126	
Styrene	ug/L	20	19.5	97	85-120	
Tetrachloroethene	ug/L	20	19.8	99	87-120	
Toluene	ug/L	20	19.9	99	82-118	
trans-1,2-Dichloroethene	ug/L	20	20.1	101	83-121	
trans-1,3-Dichloropropene	ug/L	20	19.1	96	80-122	
Trichloroethene	ug/L	20	22.4	112	82-120	
Vinyl chloride	ug/L	20	20.4	102	74-147	
Xylene (Total)	ug/L	60	57.4	96	81-120	
1,2-Dichloroethane-d4 (S)	%			89	80-117	
4-Bromofluorobenzene (S)	%			97	80-119	
Toluene-d8 (S)	%			100	80-115	

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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268615

QC Batch: 523326 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268615003

METHOD BLANK: 2142493 Matrix: Water
Associated Lab Samples: 60268615003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichloroethene	ug/L	ND	1.0	0.17	04/26/18 22:21	
1,2-Dichloroethane-d4 (S)	%	90	80-117		04/26/18 22:21	
4-Bromofluorobenzene (S)	%	98	80-119		04/26/18 22:21	
Toluene-d8 (S)	%	94	80-115		04/26/18 22:21	

LABORATORY CONTROL SAMPLE: 2142494

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/L	20	20.5	102	82-120	
1,2-Dichloroethane-d4 (S)	%			90	80-117	
4-Bromofluorobenzene (S)	%			97	80-119	
Toluene-d8 (S)	%			96	80-115	

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(913)599-5665

QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60268615

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: 522727

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 522958

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 523326

[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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60268615

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60268615001	**VP-7-201804**	EPA 5030B/8260	522727		
60268615002	**VP-8-201804**	EPA 5030B/8260	522727		
60268615003	**VP-10-201804**	EPA 5030B/8260	522958		
60268615003	**VP-10-201804**	EPA 5030B/8260	523326		
60268615004	**VP-12-201804**	EPA 5030B/8260	522958		
60268615005	**VP-14-201804**	EPA 5030B/8260	522958		
60268615006	**TB-06-201804**	EPA 5030B/8260	522958		

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Sample Condition Upon Receipt

WO# : 60268615

60268615

Client Name: Rumbell

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: 296 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 1.5 **Corr. Factor** +1.3 **Corrected** 2.8

Date and initials of person examining contents: JW 4/20/18

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	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: 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	
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.

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Page: 1 of 1

Section A Required Client Information:

Company: ~~Environ~~ Ramboll
Address: ~~7500 College Blvd., Ste. 925 Overland Park, KS 66210~~ 124 W. Capitol Ave. Little Rock, AR 72201
Email To: ~~wstonestreet@environcorp.com~~
Phone: ~~913 563 5026~~ Fax:
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: ~~Wendy Stonestreet~~ 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: Ramboll
Address: 124 W. Capitol Ave
Pace Quote Reference: Little Rock, AR 72201
Pace Project Manager: ~~Colleen Glynn~~ Richard Mann
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	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	8260 VOCs	AM20 GAX Hydrogen	AM 21 GAX Volatile Fatty Acids	AM 20 GAX Methane,Ethane,Ethene	AM 20 GAX Acetylene	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	VP-7-201804					4/19/18	1000		3				3					X							3(DEAH) 01
2	VP-8-201804						1020		2				2												2(DEAH) 02
3	VP-10-201804						0920		3				3												3(DEAH) 03
4	VP-12-201804						1105		3				3												↓ 04
5	VP-14-201804						1145		2				2												2(DEAH) 05
6	TB-06-201804																								
7																									
8																									
9																									
10																									
11																									
12																									

Requested Analysis Filtered (Y/N)

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)
Level IV data package required	Nick Zurweller / Ramboll	4/19/18	1800	[signature] RBCE	4/20/18	0625	2.8	Y	Y	Y
							5.0	Y	Y (for 4/20)	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nick Zurweller
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM/DD/YY): 4/19/18

*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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LABORATORY REPORT

May 9, 2018

Tamara House-Knight
Ramboll Environ US Corporation
124 W. Capitol Avenue, Suite 1605
Little Rock, AR 72201

RE: Whirlpool Fort Smith / 1690007739

Dear Tamara:

Enclosed are the results of the sample submitted to our laboratory on April 25, 2018. For your reference, this analysis has been assigned our service request number P1802082.

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 7:45 am, May 09, 2018

Sue Anderson
Project Manager

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: Whirlpool Fort Smith / 1690007739

Service Request No: P1802082

CASE NARRATIVE

The sample was received intact under chain of custody on April 25, 2018 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 samples at the time of sample receipt.

Volatile Organic Compound Analysis

The sample was analyzed in SIM mode for selected 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 container was cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.1 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

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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	1347317
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	4068-005
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: P1802082

Project ID: Whirlpool Fort Smith / 1690007739

Date Received: 4/25/2018

Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC SIM
VP-9-201804	P1802082-001	Air	4/19/2018	17:10	SC01853	-2.84	3.82	X

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 1

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: P1802092

Company Name & Address (Reporting Information)
Ramboll
124 W. Capitol Ave
Little Rock, AR 72201

Project Name: Whirlpool Fort Smith

Project Number: 1690007739

ALS Contact: Kelly Horiuchi

Project Manager: Tamara House-Knight

P.O. # / Billing Information: See Reporting Info

Phone:

Fax:

Email Address for Result Reporting: THouseknight@ramboll.com

Sampler (Print & Sign): Nick Turweller

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 (Modified List of analytes)		Comments e.g. Actual Preservative or specific instructions
VP-9-201804	SC01853	4/19/18	1710	SC01853	FC00610	-30	-8	6L	X		

5 of 10

Report Tier Levels - please select

Tier I - Results (Default in not specified) ✓ Tier III (Results + QC & Calibration Summaries) _____

Tier II (Results + QC 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:
	4/19/18	1830			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
			Henry Rayes	4/25/18	0830

Cooler / Blank Temperature _____ °C

ALS Environmental
Sample Acceptance Check Form

Client: Ramboll Environ US Corporation Work order: P1802082

Project: Whirlpool Fort Smith / 1690007739

Sample(s) received on: 4/25/18 Date opened: 4/25/18 by: E.PEREZ

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
P1802082-001.01	6.0 L Source 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-9-201804** ALS Project ID: P1802082
Client Project ID: **Whirlpool Fort Smith / 1690007739** ALS Sample ID: P1802082-001

Test Code: EPA TO-15 SIM Date Collected: 4/19/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 4/25/18
Analyst: Wida Ang Date Analyzed: 4/30/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.50 Liter(s)
Test Notes: 0.050 Liter(s)
Container ID: SC01853
Initial Pressure (psig): -2.84 Final Pressure (psig): 3.82

Container Dilution Factor: 1.56

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	**0.21**	0.078	**0.083**	0.031	
75-35-4	1,1-Dichloroethene	**0.39**	0.078	**0.099**	0.020	
156-60-5	trans-1,2-Dichloroethene	**0.52**	0.078	**0.13**	0.020	
75-34-3	1,1-Dichloroethane	**0.098**	0.078	**0.024**	0.019	
156-59-2	cis-1,2-Dichloroethene	**0.28**	0.078	**0.070**	0.020	
107-06-2	1,2-Dichloroethane	**0.17**	0.078	**0.041**	0.019	
71-55-6	1,1,1-Trichloroethane	ND	0.078	ND	0.014	
79-01-6	Trichloroethene	**540**	0.78	**100**	0.15	**D**
127-18-4	Tetrachloroethene	**0.20**	0.078	**0.029**	0.012	

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: P1802082
Client Project ID: **Whirlpool Fort Smith / 1690007739** ALS Sample ID: P180430-MB

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Wida Ang Date Analyzed: 4/30/18
Sample Type: 6.0 L Summa 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: **Whirlpool Fort Smith / 1690007739** ALS Project ID: P1802082

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date(s) Collected: 4/19/18
Analyst: Wida Ang Date(s) Received: 4/25/18
Sample Type: 6.0 L Summa Canister(s) Date(s) Analyzed: 4/30/18
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 % Recovered	Toluene-d8 % Recovered	Bromofluorobenzene % Recovered	Acceptance Limits	Data Qualifier
Method Blank	P180430-MB	**107**	**105**	**104**	70-130	
Lab Control Sample	P180430-LCS	**105**	**103**	**105**	70-130	
VP-9-201804	P1802082-001	**102**	**106**	**100**	70-130	

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.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Ramboll Environ US Corporation**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1802082
Client Project ID: **Whirlpool Fort Smith / 1690007739** ALS Sample ID: P180430-LCS

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Wida Ang Date Analyzed: 4/30/18
Sample Type: 6.0 L Summa 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	8.43	**8.53**	**101**	65-136	
75-35-4	1,1-Dichloroethene	8.54	**8.15**	**95**	76-120	
156-60-5	trans-1,2-Dichloroethene	8.54	**7.64**	**89**	73-124	
75-34-3	1,1-Dichloroethane	8.49	**7.52**	**89**	73-126	
156-59-2	cis-1,2-Dichloroethene	8.47	**7.53**	**89**	76-121	
107-06-2	1,2-Dichloroethane	8.48	**7.92**	**93**	68-126	
71-55-6	1,1,1-Trichloroethane	8.49	**7.74**	**91**	75-121	
79-01-6	Trichloroethene	8.50	**7.77**	**91**	73-121	
127-18-4	Tetrachloroethene	8.48	**7.80**	**92**	72-118	

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 April 2018

Fort Smith, AR

Fort Smith Regional

1:47 PM CDT on May 25, 2018 (GMT -0500)

Today Forecast

Weather History for KFSM - April, 2018

View: Daily Planner | Monthly | Daily Report | Actuals Only | Total Rain

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 Actual: **63°** | **42°** **0.16** in Average: **70°** | **45°** **0.13** in	**2** Actual: **52°** | **42°** **0.02** in Average: **70°** | **45°** **0.13** in	**3** Actual: **80°** | **43°** **0.00** in Average: **70°** | **46°** **0.12** in	**4** Actual: **59°** | **35°** **0.00** in Average: **71°** | **46°** **0.12** in	**5** Actual: **66°** | **38°** **0.00** in Average: **71°** | **46°** **0.13** in	**6** Actual: **56°** | **45°** **1.04** in Average: **71°** | **47°** **0.13** in	**7** Actual: **48°** | **33°** **0.03** in Average: **72°** | **47°** **0.13** in
8 Actual: **50°** | **31°** **0.00** in Average: **72°** | **47°** **0.14** in	**9** Actual: **70°** | **36°** **0.00** in Average: **72°** | **47°** **0.14** in	**10** Actual: **69°** | **40°** **0.00** in Average: **72°** | **48°** **0.14** in	**11** Actual: **80°** | **44°** **0.00** in Average: **73°** | **48°** **0.14** in	**12** Actual: **84°** | **52°** **0.00** in Average: **73°** | **48°** **0.14** in	**13** Actual: **76°** | **60°** **1.17** in Average: **73°** | **49°** **0.13** in	**14** Actual: **62°** | **41°** **0.00** in Average: **74°** | **49°** **0.14** in
15 Actual: **54°** | **36°** **0.00** in Average: **74°** | **49°** **0.14** in	**16** Actual: **67°** | **32°** **0.00** in Average: **74°** | **50°** **0.14** in	**17** Actual: **84°** | **47°** **0.00** in Average: **74°** | **50°** **0.14** in	**18** Actual: **75°** | **52°** **0.00** in Average: **75°** | **50°** **0.15** in	**19** Actual: **65°** | **43°** **0.00** in Average: **75°** | **51°** **0.14** in	**20** Actual: **69°** | **41°** **0.00** in Average: **75°** | **51°** **0.15** in	**21** Actual: **69°** | **49°** **0.32** in Average: **75°** | **51°** **0.15** in
22 Actual: **57°** | **51°** **0.62** in Average: **75°** | **52°** **0.15** in	**23** Actual: **74°** | **53°** **T** in Average: **76°** | **52°** **0.16** in	**24** Actual: **82°** | **49°** **0.00** in Average: **76°** | **52°** **0.15** in	**25** Actual: **59°** | **51°** **0.27** in Average: **76°** | **53°** **0.16** in	**26** Actual: **68°** | **51°** **0.00** in Average: **76°** | **53°** **0.16** in	**27** Actual: **77°** | **47°** **0.00** in Average: **77°** | **53°** **0.16** in	**28** Actual: **82°** | **44°** **0.00** in Average: **77°** | **54°** **0.16** in
29 Actual: **77°** | **55°** **0.00** in Average: **77°** | **54°** **0.16** in	**30** Actual: **83°** | **51°** **0.00** in Average: **77°** | **54°** **0.17** in					

Calendar Legend

Sunny / Clear · Mostly Cloudy · Partly Cloudy · Cloudy · Rain · Snow

Hail Flurries · Thunderstorms · Hazy / Fog · Sleet · '?' denotes 'chance of' · Unknown

4/16/18 Whirlpool, Ft. Smith — Sunny, 65°F

1600 Haley Anlers (HA) on-site for Ramboll. Nick Zurweller (NZ), Joel Krech (JK), Nick Martin (NM), & Johanna Pavlowsky (JP) already on-site.

1615 Health and safety meeting, unpacked field equipment and divvied up amongst everyone.

1800 Split into three groups to open all wells to allow them to equilibrate overnight before gauging. HA & NM to open all wells on the Bost property & along Jacobs avenue.

2000 All gauging wells open, Ramboll off-site.

Haley Anlers

Sunny 55°F

4/17/18	Whirlpool, Ft. Smith
0700	HA, NZ, JK, JP, & NM onsite for Ramboll. Prepared to gauge wells.
0730	Began gauging wells on Bost property, off-site whirlpool property, along Jacobs, and on-site.
0930	Finished gauging & returned to site to begin calibration.
1053	Finished calibrating and packing car. Arrived at MW-~~HA~~ 196 to prepare to purge
1100	Began purging mw-196. See log for parameters
1205	After purging for 1 hour, well did not stabilize. Will sample
	Sampled MW-196-201804 @ 1210
	Sampled MW-196-201804-MS/MSD @ 1210
1243	Started setting up & preparing to purge MW-195.
1253	Began purging mw-195 See log for parameters.
1345	MW-195 stabilized, will prepare to sample.

Sunny 81°F

4/17/18	Whirlpool, Ft. Smith
	~~Sampled MW-196 HA~~
	Sampled MW-195-201804 @ 1350
	Sampled ~~MW~~ DUP-02-201804 @ 1350
1410	Arrived at MW-68 and prepared to purge.
1418	Began purging mw-68. See log for parameters.
1510	mw-68 stabilized, will prepare to sample
	Sampled MW-68-201804 @ 1515
1539	Arrived back at the boiler room to start CoC & packing samples.
	Sampled EB-01-201804 @ 1610
1755	Courier arrived to take samples to lab.
1800	Ramboll off site.

Hailey Andrews

4/18/18	Whirlpool, Ft. Smith	Sunny 67°F
0700	HA, NZ, JK, NM, & JP on-site for Ramboll. Begin calibrating YSI and preparing to sample
0810	Arrived at MW-99, Prepared to purge.
0818	Began purging MW-99. See Sample log for parameters
0925	After an hour of purging, DO did not stabilize. Will sample.
	Sampled MW-99-201804 @ 0930
0940	went to gas station to get ice for cooler
0945	Arrived at MW-184. Prepared to purge.
0950	Began purging MW-184. See log for parameters.
1100	After an hour of purging, DO did not stabilize. will sample.
	Sampled MW-184-201804 @ 1105
1123	Arrived at MW-98. Prepared to purge
1127	Began purging MW-98. See log for parameters.

4/18/18	Whirlpool, Ft. Smith	Sunny 71°F
1235	After an hour of purging, DO did not stabilize. Will sample
	Sampled MW-98-201804 @ 1240
1250	Arrived at TMW-24, prepared to purge
1300	Began purging TMW-24, See log for parameters.
1355	well stabilized after 45 minutes of purging. Will sample
	Sampled TMW-24-201804 @ 1400
1420	Arrived at MW-183 & prepared to purge.
1430	Began purging MW-183. See log for parameters.
1520	Well stabilized after 40 minutes of purging, will sample.
	Sampled MW-183-201804 @ 1525
1540	Arrived at MW-84, prepared to purge
1545	Began purging MW-84. See log for parameters.

16

4/18/18	Whirlpool, Ft. Smith	Sunny 73°F
1650	well stabilized after 1 hour of purging. Will sample. Sampled MW-84-201804 @ 1655	
1700	Returned to boiler room to do CoCs & pack samples.	
1745	Courier arrived to collect Samples.	
1800	Ramboll off-site.	

Holly Gallus

4/19/18	Whirlpool, Ft. Smith	Sunny 45°F
0705	HA, NZ, JK, NM, JP on-site for Ramboll.	
0710	Began calibrating YSI & packing car to prepare to sample.	
0800	Arrived at MW-97. Prepared to purge.	
0805	Began purging MW-97. See log for parameters.	
0900	After purging for 50 minutes, well stabilized. Will sample. Sampled MW-97-201804 @ 0905	
0913	Arrived at MW-96. Prepared to purge.	
0917	Began purging MW-96. See log for parameters.	
1010	After purging for 45 minutes, MW-96 stabilized. Will sample. Sampled MW-96-201804 @ 1015	
1035	Arrived at MW-29. Prepared to purge.	
1045	Began purging MW-29. See log for parameters.	

HA

4/19/18	Whirlpool, Fort Smith	Sunny 50°F
1135	After 45 minutes of purging, MW-29 stabilized. Will sample. Sampled MW-29-201804 @ 1140	
1155	Arrived at MW-185. Prepared to purge.	
1200	Began purging MW-185. See log for parameters.	
1250	After 45 minutes of purging, MW-185 stabilized. Will sample. Sampled MW-185-201804 @ 1255 Sampled DUP-07-201804 @ 1255	
1340	Arrived at MW-189. Prepared to purge.	
1343	Began purging MW-189. See log for parameters.	
1440	After 45 minutes of purging, well stabilized. Will sample. Sampled MW-189-201804 @ 1445	
1500	went to Bost property & Jacobs Ave to close any	

4/19/18	Whirlpool, Ft-Smith	Sunny 55°F
	wells that were left open from gauging.	
1620	Finished closing wells, returned to boiler room to start chain of custody, pack samples, & demobilize all equipment used throughout the week.	
1745	Courier arrived to collect samples.	
1830	NM off-site to take pumps and summa canisters to FedEx.	
1900	After packing up remaining field equipment, Ramboll off-site.	

Holly Jones

4/20/18	Whirlpool, Ft. Smith	Sunny 60°F
0845	HA, NZ, & JP on-site for Ramboll. Waste hauler on-site to pick up IDW drums.	
0915	Waste hauler off-site. Checked well list one last time & ensured all wells opened during gauging had been closed.	
1000	Ramboll off-site.	

Location Fort Smith, AR Date 4/16/18

Project / Client Whirlpool

1530 J Krech on site
1550 H+S meeting - NZ, HA, JK, NM, JP
1600 Supply seperation
1730 Pop open wells and note damage:
ITMW-6 Photo @ 17:26
Needs outside casing replaced, no cap
ITMW-05 Lid broken on cover, half pad missing
ITMW-10 No lock, new hinges, needs new cover
MW-25 Bumper post needs straightening
MW-93 No lid
MW-94 Broken lid
MW-95 Missing 1 bolt, filled w/ water
TMW-29 Redo pad - well set into cement
photo @ 1805, filled w/ water
TMW-24 Redo pad - cement expanded
TMW-22 " " " "
TMW-23 " " " "
~~TMW~~ JK
TMW-19 No bolts, lid does not fit
1930 Complete well openings - will gauge in the morning
2000 Ramboll offsite

4/16/18

Location Fort Smith, AR Date 4/17/18

Project / Client Whirlpool

0700 Ramboll on site - NZ, HA, JK, NM, JP
0730 Ramboll begins to gauge wells
JK + NZ on red wells from distribution list
0715 H+S meeting - sun, traffic
930 Complete gauging wells
Calibration
YSI Serial No: 15K101827
YSI FRI ID: 33285

~~SC mS/cm~~	~~1045~~	~~1152~~ JK	Lot#	Exp
SC mS/cm		1412	76L100	12/2018
ORP	243.2	240.0	2062	2022
pH 7	7.01	7.00	76L254	2019
pH 4	3.99	4.00	86A190	2020
pH 10	10.02	10.00	76L670	2019
DO	104.1	98.0		

YSI meter probe Serial: 600336-4M
La Motte 2020 WE: 1835-0412
1045 Set up @ MW-175
shallow well - will purge dry
Begin purge @ 11 14
Dry @ 1220 DTW - 13.25
Will allow to recharge and sample tomorrow
ORP positive, played by NZ

4/17/18

Location Fort Smith, AR Date 4/17/18

Project / Client Whirlpool

1230 Set up @ MW-176
Shallow well - will purge dry
Begin purge @ 1239
Did not purge dry - DTW held @ ~5.85, Spec Cond and turbidity significantly higher than historic levels. Conversation w/ NE regarding this resulted in a determination that a sample will be taken @ an hour of purge time
Sample ID MW-176 20180424
Sample time 1350
cloudy sample
1 Bolt missing from lid
1410 Offsite to grab ice for samples
1420 Lunch
1440 Set up @ MW-179
Shallow well - will purge dry
Begin purge @ 1503
Dry @ 155 DTW - 12.07
Unable to get last turbidity reading due to dry well
Will allow to recharge over night, Ok'ed
4/17/18

Location Fort Smith, AR Date 4/17/18

Project / Client Whirlpool

1520 Set up @ MW-178
shallow well
Begin purge @ 1526
Dry at 1559 - DTW - 7.58
will allow to recharge overnight
1625 Empty purge water
Open 3 55 gal drums to distribute water into drip
1645 Pack up samples
Tomorrow will return to sample MW-175, MW-179, and MW-178
1800 Remobil offsite

4/17/18

Location Fort Smith, AR Date 4/18/18

Project / Client Whirlpool

0700 Ramboll Onsite: JK, NM, NZ, JP, HA

0705 Calibration

YSI Serial: 151L101827

YSI FEI ID 33285

YSI Probe ID 600336-4M

mS/cm	1356	1413	76L100
ORP	227.8	240.0	2062
pH 7	7.04	7.00	76L234
pH 4	4.01	4.00	86A190
pH 10	9.98	10.00	70L670
DO	101.3	97.7	

La Matte 2020 WE: 1835-0412

0715 H+S meeting - stinging insects, construction equip, seat belts

Complete calibration

Tasks: MW-175, MW-179, MW-178

MW-55R, MW-46R, ITMW-20

DUP, MS/MSD

0815 Set up @ ITMW-20

Begin purge @ 0816 - 1 gal removed

Sample @ 0850

MS/MSD taken

Sample ID: ITMW-20 201804

ITMW-20 201804 MS/MSD

[signature] 4/18/18

Location Fort Smith, AR Date 4/18/18

Project / Client Whirl Pool

ITMW-20 cont.

no odor, clear

915 Set up @ MW-175

purged dry on 4/17, will purge till clear, then sample.

Begin purge @ 0933

Sample @ 0940

No YSI used, turbidity: 2.11 NTU

Initial DTW - 7.97 final: 9.44

Sample ID: MW-175 201804

1000 Set up @ MW-55R

Begin purge @ 1017

Sample @ 1122

DUP-05 201804 Taken

Sample ID: MW-55R 201804

gal purged: 2.5

1140 Offsite for lunch

1210 Return to site

1215 Set up @ MW-46R

Begin purge 1243

Sample @ 1325

Sample ID MW-46R 201804

Gal purged 2

Stabalized @ 3.71'

[signature] 4/18/18

Location Fort Smith, AR Date 4/18/18

Project / Client Whirlpool

1345 Set up @ MW-178
Already purged yesterday, will purge till clear, then sample.
No YSI used, just turbidometer
Begin purge 1402
Sample @ 1415
Sample ID MW-178 201804

1430 Measure DTW @ MW-179
DTW - 11.93
Depth to dry: 12.07.
Not enough water to sample (0.14')

1445 Set up @ TMW-27
Begin purge 1500
Sample @ 1610
Sample ID TMW-27 201804
bal purged - 2 gal
Stabilized @ 11:25

1620 Empty Purge water

1640 Offsite to get ice for samples

1700 Equipment blank on water level meter
Heron Instruments: 2412-T
EB-04 201804 @ 17:15

1720 Pack up samples for shipment
Ramboll offsite

4/18/18

Location Fort Smith, AR Date 4/19/18

Project / Client Whirlpool

0700 Ramboll on site: NZ, HA, SK, JP, NM
0705 H+S meeting
0715 Calibrate Equipment
YSI serial 15K101827
YSI FEI ID 33285
YSI Pride ID 600336-494

mS/cm	1413	1413
ORP	255.8	240.0
pH 7	6.97	7.00
pH 4	4.03	4.00
pH 10	10.04	10.01
DO	102.5	99.4

Turbidity Meter: La Motte 2020WE
Serial No: 1635-0412

800 Set up @ ITMW-7
Begin purge @ 0820
Sample @ 0930
Sample ID ITMW-7 201804
bal purged 2.1
D.d not stabilize - 1 hr purge
DTW stable @ 18.2

4/19/18

Location Fort Smith, AR Date 4/19/18

Project / Client Whirlpool

950 set up @ ITMW-10
Begin purge @ 1007
Sample @ 11 15
Sample ID: ITMW-10 20180419
Gal purged: 2.3
Did not stabilize - 2hr purge
DTW stable @ 21.94

1145 Set up @ TMW-26
Begin purge @ 1210
Sample @ 1300
Gal purged: 1.6
Stabilized
DTW stable @ 16.90

1310 Set up @ TMW-25
Begin Purge @ 1318
Sample @ 1410
Gal purged 1.6
Stabilized
DTW stable @ 16.93

1425 Set up @ ITMW-5
Begin Purge @ 1434
Sample @ 1515
Gal purged: 1.2
Stabilized. DTW stable @ 20.00
4/19/18

Location Fort Smith, AR Date 4/19/18

Project / Client Whirlpool

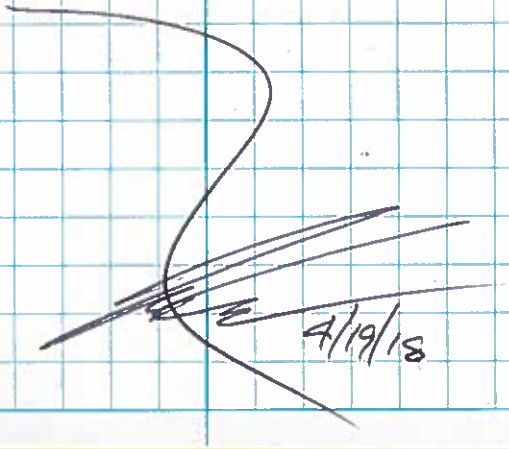
1535 Set up @ MW-179
DTW - 11.89
LP able to pull water till 12.07
No YSI used, previously purged dry
Allowed turbidity to clear
Sample @ 1555
Sample ID: MW-179 20180419

1615 Close J-plugs and lids on ~~some~~ purged wells

1700 Pack up equipment for shipment

1815 55-gal drum not closing properly
Adjust rim/lid to fix

1845 RamGeoll offsite



Sunny 58°F

1/15/18 Whirlpool

40 Demobilize & at TMW-33
00 Drillers leave site to obtain well construction materials.
30 Drillers back on site mobilize to final screen point location to South of MP-09.
45' south of MP-09
40 Begin advancing MP-09
50 Refusal at 26' bgs
Dropped metal rod (weight) into well/screen point when measuring TD.
Waiting for screen point to change.
00 packed up equipment.
~~50 Sampled MP-09 @ 1550~~
50 Dumped trash.
00 Leave site.

Sunny 65°F

1/16/18 Whirlpool

1415 Arrive on-site. Take inventory.
1430 Leave to WAL-MART to obtain sampling equipment.
1515 Meet with Sampling Kam. Pass out field paperwork, monitoring equipment.
1630 Conduct H2S mtg
1715 Begin popping open wells.
1725 MW-24 missing bolts, lid upside down.
1735 ITMW-2 missing all bolts
1740 ITMW-17 lock painted-may have trouble working
1743 Could not open ITMW-3
1811 Could not find MW-192
1830 MW-87 & MW-90 missing x1 bolt each.
1900 MW-183 buried in dirt, couldn't find
1930 Mick and Hailey find MW-183 & 192.
1945 MW-27 well cap in bad shape
2000 Leave site for day

4/17/18 Whirlpool Sunny 52°F

0700	arrive onsite	
0705	conduct tailgate mtg	
0710	disperse sample labels, coolers, equipment.	
0730	Begin gaging MWs	
	well	DTW (ft)
0735	ITMW-17	15.31'
0737	ITMW-2	12.97'
0740	ITMW-1	16.67'
0743	MW-22	13.36'
0745	MW-87	13.25'
0747	MW-91	11.98'
0750	MW-89	10.44'
0755	MW-88	11.50'
0805	MW-90	07.95'
0810	MW-28	08.10'
0815	MW-27	12.67'
0815	MW-178	3.86'
0816	MW-179	10.90'
0817	MW-180	4.24'
0815	MW-23	12.97'
0815	MW-93	12.79'
0820	MW-94	12.88'
0824	MW-24	13.57'
0826	ITMW-16	16.06'

0828	ITMW-20	14.47'
0830	MW-26	14.98'
0832	ITMW-21	13.35'
0834	MW-29	11.57'
0835	MW-30	16.58'
0838	ITMW-7	20.31'
0840	MW-185	14.90'
0841	MW-182	16.10'
0842	MW-97	8.70'
0843	MW-96	6.71'
0845	MW-183	11.06'
0850	MW-98	10.85'
0900	MW-184	9.76'
0905	MW-99	10.09'
	(well)	(DTW)

0910 Arrive back to site.

0915 Begin compiling all DTW readings from 3 teams.

1030 Complete Water Level sheet of all wells, DTW, time, notes on well conditions. Give to Haley A. for QAQC.

1045 Prepare for sampling.

1050 Begin calibrating YSI.

nny

Whirlpool 4/17/18

50 (cont.)
YSI Serial #-11E101549
Sp cond - 1.415 mS/cm
ORP - 240.0
pH7 - 7.00
pH4 - 3.99
pH10 - 10.02
DO - 98.4%
barometric pressure - 30.02 in Hg
x25.4 = 762 mm Hg - 15 = 747 mm Hg
Lamotte Turbidimeter #2667-9112
20 Finish calibrating mobilize to MW-60R
25 Eat a little lunch
40 Begin setting up sampling equipment at 60-R
2" PVC
TD - 10.86'
DTW - 5.89'
screen set @ ~8.36'
purge V - 2.7 gal
* purged quickly first ~5 min, slowed to 200 mL/min, then to 125 mL/min to purge greater in time efficient manner

4/17/18 Whirlpool 73°F Sunny

1255 sampled ~~60-R~~ MW-60R-201804 for VOCs @ 1255
Ferrous Iron - 0.35 mg/L
1300 Begin packing up.
1315 Begin setting up at MW-61R
1320 DTW - ~~10.19~~ 7.05'
TD - 15.28
tubing set @ 12.78
purge V = ~1.6 gal
2" PVC
tubing stained black, smells of decomposition. Replaced upper
1400 tubing. sampled MW-61R @ 1400
one well V ~ 1.4 gal. Ferrous Iron - over
1405 begin demobilizing @ MW-61R.
1415 mobilization at MW-62R.
1430 Begin purging well 62R
TD - 20.01
DTW - 5.90'
tubing set @ - 17.51'
2" PVC, flush mount
total V purged - 1.7 gal
initially purge rate @ 200mL/min to fill flow cell, then slowed to ~200

°F
Sunny
505 Whirlpool 4-17-18
Parameters stable
sample MW-62R @ 1510
for VOCs & Fe
ferrous iron 0.01 mg/L
710 Demobilization @ MW-62R
720 set up at MW-194
DTW ~ 5.00'
TD ~ 21.30'
1 well V = ~2.7
2" PVC, flush, 10' screen
total V purged ~ 2.7 gal
1555 Parameters stable @ 1555
1600 Sampled MW-194 @ 1600
for VOCs only
ferrous iron: 0.00 mg/L
MWS purge rate started high,
then gradually decreased after
½ hour of purging to increase
purge V ~ 2 gal
1705 Begin demobilizing @ MW-194
1715 Pump purge water on-site
2220 arrive on-site to deliver samples,
prep sample coolers
1700 Review COC + cooler.
1800 Relinquish samples to courier

Sunny
57°F Whirlpool 4/18/18
0710 Arrive on-site.
0715 Conduct H2S mtg
0725 Calibrate YSI
YSI # - 11E101549
sp Con - 1.378
ORP - 234.0
pH7 - 7.00
pH4 - 3.99
pH10 - 10.02
0746 DO - 97.6
*corrected to 742 mmHg
0750 gather sampling supplies/organize
0820 Mobilize at IW-73
DTW - 8.605'
TD - 26.82'
2" PVC, flush, __' screen
tubing set @ 21.80
0835 Begin monitoring IW-73 YSI
parameters stabilized. Prepare
to sample for VOCs & iron
0920 Sampled IW-73 @ 0920
+ IW-73-20180418-MS/MSD
ferrous iron: 0.25 mg/L
0925 total V purged: 2.5 gal
0930 Demobilize @ IW-73.

65°F Whirlpool 4/18/18
sunny

40 Mobilize at IN-77
49 Begin monitoring YSI params
Parameters stable @
TD - 28.70'
DTW - 10.20' @ 0945
tubing set @ 23.70'
2" PVC, flush, TOC below grade
0 conducted persulfate testing:
5 * diluted using 3 drops.
~0.6 on comparator x 300
= 180 ppm.
8 * diluted using 5 drops
~1.0 x 100 = 100 ppm.
9 using ascorbic acid VOAs
because first persulfate
reading was close to threshold.
0 sampled IN-77 201804
@ 1050 for VOCs only
5 Ferrous Iron: 0.0 mg/L
TOTAL ∀ purged: ~~2.75~~ 2.6 gal
0 Begin packing up/decon.
00 mobilize at RW-69
DTW - 8.48'
TD - 28.11'
4" PVC, flush, screen 16'

Sunny Whirlpool 4/18/18

1200 (RW-69 cont.)
tubing set @ 23.7'
1205 Begin monitoring YSI parameters
1245 Parameters stable. Prep samples.
Sample RW-69 and DUP-04
@ 1250 for VOCs only
Ferrous Iron - 0.02 mg/L
1255 Begin demob. Purged ~2.7 gal
1310 Mobilize at MW-26
1315 DTW - 14.54'
TD - 35.14' screen - 15'
tubing set at ~30'
4" PVC, stick up well in field.
1320 Begin monitoring YSI parameters
1350 Parameters stable. Prepare to
sample.
Sampled MW-26 201804
@ 1350 for VOCs only
1350 Ferrous Iron: 0.0 mg/L
total ∀ purged: ~2 gal
1400 Pump purge water & Demob.
1420 Mobilize at MW-187.
TD - 30.25' screen - 10'
screen set @ - 25.25'
1425 DTW - 19.68'
2" PVC, flush, in woods ~~SW~~ SE grup.

4-18-18 Whirlpool 74°F Sunny

(MW-187 Cont)

) Begin purging MW-187 on high pump rate to remove ∀ before taking first reading.

5 Begin monitoring YSI parameters Parameters stable. Prepare to sample.

Sampled MW-187 20180404 @ 1515 for VOCs only

Ferrous Iron: 0.03 mg/L

total ∀ purged ~ 2.3 gal

.0 Demobilize @ MW-187.

35 Arrive at TMW-32

TD - 26.1'

10' screen, 2" PVC, flush tubing set at 21.1'

45 DTW - 10.81

50 Begin purging TMW-32 @ 300 mL/min

55 Begin monitoring YSI parameters.

Parameters stable. Prepare to sample.

Sampled TMW-32 20180404 @ 1630 for VOCs only

Ferrous Iron: 0.0 mg/L

4-18-18 Whirlpool 78°F Sunny

Total ∀ purged: 1.75 gal

1635 Begin demob @ TMW-32.

1645 Dump purge buckets.

1650 Meet at home base to

1700 complete chain/pack samples.

1800 Relinquish samples to courier. Dropped by Brake DUP-04

~~Leave~~ site or sample.

1800 Leave site for day.

SF

19-18 Whirlpool 50°F Sunny

15 Arrive on-site

20 Conduct H&S mtg
Attendees - Jo Pawlowsky, Haley Ahlers, Nick Zurweller, Joel Kreich, Nick Martin of Ramboll Environ.

130 Collect team's 4-18-18 monitoring field logsheets. Scan for errors

740 Begin calibrating YSI
#-11E10191
Sp. Cond - 1.417 mS/cm
ORP - 239.8 mV
pH7 - 7.01
pH4 - 3.98
pH10 - 10.02
800 DO - 99.4%
*corrected to 755.2 mmHg

820 mobilize at 188 in woods (SW)
MW-188: 2" PVC flush
TD - 34.58'
Screen - 10'
tubing set @ - 29.6'

25 DTW - 22.33'
total ∀ purged - 2 gal

4-19-18 Whirlpool 53°F Sunny

0825 Begin purging MW-188 at ~300 mL/rate to remove ∀ before taking readings. ~5 min

0830 Begin monitoring YSI parameters Parameters stable. Prepare to sample.

0915 Sampled MW-188 201804 @ 0915 for VOCs only & DUP-04
Ferrous Iron - 0.0 mg/L

0920 Demob @ MW-188.

0940 Mob @ MW-186.

0950 DTW - 0950
TD - 27.8'
2" PVC, 10' screen, flush
tubing set at ~22.8'

0952 Begin purging at rapid rate (~300 mL/min) to remove ∀.

0955 Begin monitoring YSI parameters

1030 Parameters stable. Prepare to sample. TOTAL ∀ Purged ~2.5 gal

Sample MW-186 201804 @ 1035 for VOCs only
Ferrous Iron: 0.0 mg/L

1040 Demob at MW-186.

1050 Dump purge buckets.

4-19-18 Whirlpool 54°F Sunny

5 Drop samples off at Hadley Ahlers (MW-29). Discuss persulfate testing @ MW-190.
20 Mobilize @ TMW-19.
TD - 43'
screen - 10' 2" PVC, flush
30 DTW - 25.94'
135 Begin purging well. Purge water very turbid, opaque, tannish brown. Purged at increased rate (~300 mL/min) for approx 3-5 min to purge murky water.
45 Begin monitoring YSI parameters
35 Parameters stabilized.
40 Sampled TMW-19 201804 @ 1240 for VOCs only
Ferrous Iron: 1.78 mg/L
turbid sample.
total V purged: ~2.8 gal
45 Demob @ TMW-19. Dump purged.
55 Break for lunch.
30 Review field sampling logs from 4/17 & 4/18 to ensure readings, rates, measurements valid.
15 Arrive at MW-86

4-19-18 Whirlpool 65°F Sunny

TD - 27.78
2" PVC, flush, 5' screen
tubing set @ 25.28'
1430 DTW - 11.01'
Total V purged: ~3 gal
1435 Begin purging MW-86. Purge rate quick (250 mL/min) for ~5 min, then slowed rate during monitoring.
1440 Begin monitoring YSI parameters
1530 Parameters stable.
Persulfate measure:
4 drops = x200 multiplier
Comparator = 0.5 x 200 = 100 ppm
1535 Use ascorbic acid just in case measurement inaccurate.
Sampled MW-86 201804 for VOCs only @ 1530
Ferrous Iron: 0.07 mg/L
1545 Begin demob @ MW-86
1600 Sampled EB-05 201804 @ 1600 for VOCs only
1630 Arrive at MW-176 to assist Joel K to sample shallow well with little water.

4/19/18 Whirlpool Sunny 70°F

1500 arrive at home base to review chain, sampling logs, pack sample cooler

1600 ~~leave site for day~~ Begin packing field supplies, demobilizing site.

1830 Leave site for the day.

Sunny 55°F Whirlpool 4/20/18

0830 Arrive on-site.

0900 Dump trash from sampling event.

0915 Meet with waste collection service to dump/manage IDW.

0945 Close MWs in SW portion of site & W portion of site.

1015 Pack up field equipment

1020 Leave site.

Whirlpool
Fort Smith, AR



Rite in the Rain®

ALL-WEATHER

FIELD

№ 351FX

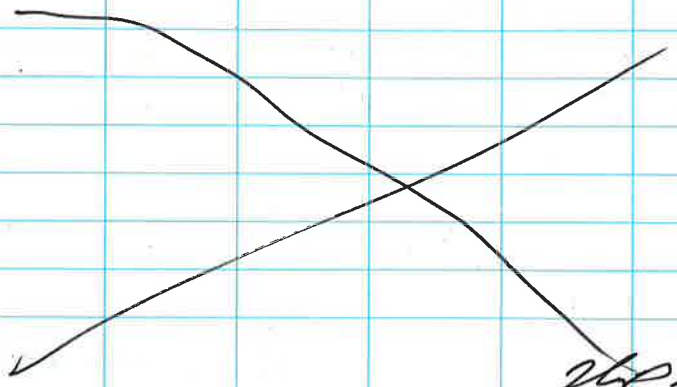
1350 Ramball onsite (Nick Martin) Inventory of supplies.
1405 J. Pavlovsky onsite. Offsite to purchase supplies.
1500 Back at site
1530 H. Ahlers, J. Krech, N. Zurmuehlen onsite. Unpack equipment; organize supplies
1730 Begin unlocking wells/popping J-plugs
1915 Complete unlocking wells. Assist others in unlocking wells
Weather: Mid 70s, sunny, calm
Purpose: Organize / purchase equipment, and unlock wells and unseat J-plugs.
2000 All REH personnel offsite
* Note, HSS meeting was completed by 1530. Topics discussed included PPE, work plan, heat stress, hydration, IDW etc.

4/16/18

0710 REH onsite: Personnel include Nick Martin (field books keeper), J Krech, H. Ahlers, N. Zurmuehlen, J. Pavlovsky
Purpose: Gage wells and begin sampling of wells.
Weather: High 40s in AM, to low 80s by PM. Sunny, slight breeze
0715 HSS meeting, topics discussed as noted in sign-in sheet
0725 Begin gaging wells
0920 Well gaging complete. Begin sample equipment prep/calibration
1045 Finish calibrating equipment see calibration log for Nick Martin 4/17/18 for equipment serial numbers/cal info
1100 Mob to TMW-20 for sampling
1133 Purge began - initial WL = 4.26' TOC
1143 DO sensor reading ~17 mg/L, will be recalibrated
1155 YSI recalibrated at 29.85 in press, and 97.8 % DO. Purging restart
1245 Sample collected - 3 VOAs for VOCs
→ TMW-20-20180417 @ 1245
1310 offsite for lunch/ice.

4/17/18

1350 Onsite / mob to TMW-29
1410 Begin Purge
1456 Well stablized
$ ↳ Sample collected at 1500 TMW-29-201804 @ 1500
1520 Mob to MW-40R
1530 Purge begin at MW-40R
1618 Purge end / parameter stabilized
$ Sample Collected MW40R-201804 @ 1618
Mob back to Boiler building
1630 Packup equipment, collect equipment / rinsate blank (VOCs)
$ EB-02-201804 @ 1630
1700 Dump purgewater in drums on SW corner of facility.
1755 Hand off samples to Pace Courier
Ramboll Personnel offsite.



4/17/18

0705 Ramboll onsite Personnel on sign in sheet
0715 H&S meeting; topics discussed listed on H&S reading sign-in sheet
Weather: High 50s to Low 70s; AM, sunny to partly cloudy, 5-15mph winds
Purpose: Continue GW sampling wells. Scheduled includes 5 wells for N. Martin today.
0720 Begin calibration of YSI / turbidity meter: see calibration log for more details
0830 Mob to TMW-14
0845 Begin purging @ TMW-14
0930 Well stabilized / sample collected
$ TMW-14-201804 @ 0930
Duplicate collected: DUP-03-201804 @0935
1000 Mob to TMW-12, begin purging
1040 Parameters stabilized, Sample collected shortly after.
$ TMW-12-201804 @ 1042
1100 Mob to MW-190
1135 Begin purge
1250 Stopped Purge to clean DO sensor b/c it was reading values significantly higher than last event

4/18/18

Purged for over ~2 hours when spoke to J. Kreeh whom informed me that we are not supposed to purge longer than 1 hour at this site. Although Sp. conductance had not stabilized after ~2.5 hours, a sample was collected at 1350

$ MW190-201804 @ 1350

1400 Mob to MW191, begin purge

1508 Stop purge / parameters stabilized

$ Sample collected: MW-191-201804 @1510

Mob to MW192.

1530 Begin purge at MW-192

1640 After 1 hr. well not completely stabilized (pH, sp. cond, turb, DO), but sample collected.

$ MW-192-201804 @ 1640

1700 Mob to boiler room to pack samples, clean equipment, and dump purge water (SW corner of site)

1750 Ramboll offsite

4/18/18

0705 Ramboll onsite - see personnel sign in sheet + H&S weekly log

0710 H&S tailgate meeting. Topics discussed included an H&S Sign in sheet.

Weather: Mid 40s in AM, high 60s in PM, Sunny

Purpose: Complete GW sampling at 5 wells today

0715 Begin calibration of YSI / Turb. meter

YSI C14F55 [probe], 11B102426 [monitor]

pH: 7/7, 4/4, 9.96/10.

Sp.Cond: 1413/1413 µS/cm

ORP: 240/240

DO: 99.4%/100%

Lamotte 2020 Turb. meter (21788/021783) calibrated to 0.0 + 10.0 NTU standards

0800 End calibration, mob to MW-182

0830 Begin purge at MW-182

0925 Parameters stabilized, sample and duplicate collected

$ MW-182-201804 @ 0925

$ DUP-06-201804 @ 0930

0945 Mob to TMW-21

0955 Begin purge at TMW-21

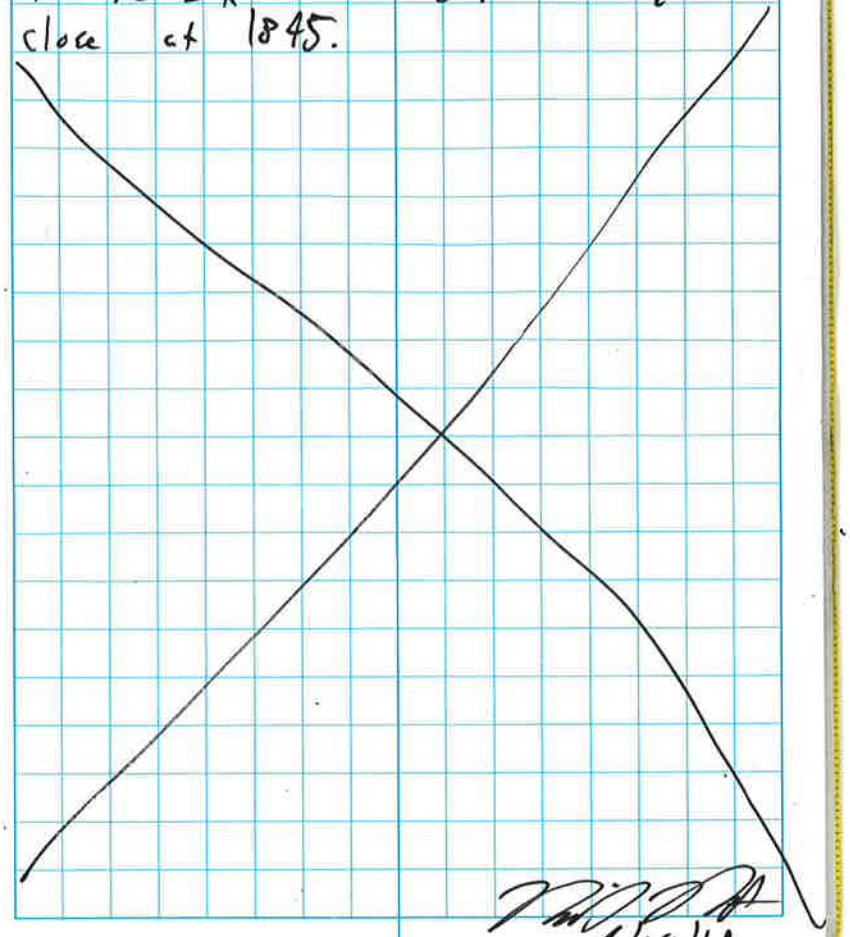
4/19/18

Rite in the Rain

1045 Parameters stabilized
$ Sample collected: TMW-21-201804 @ 1048
1100 offsite for lunch
1140 Mob to MW-91
1155 Begin purge at MW-91
1233 Parameters stabilized
$ Sample collected: MW-91-201804 @ 1235
Mob to MW-38 @ 1245
1305 Begin Purge at MW-38
1330 Parameters stabilized
$ Sample Collected: MW-38-201804 @ 1335
1350 Mob to MW-95 (indoor)
1405 Located / arrived at MW-95
1422 Purge begins at MW-95
1510 Parameters stabilized, sample collected at 1512
$ MW-95-201804 @ 1512
Mob to boiler room for sample packing, and equipment cleaning + packing.
1545 Emptied purge water in drums on SW side of site
1600 Closed / sealed wells on N. side of building.

4/19/18

1630 Continue equipment / cooler packing at Boiler room.
1815 Nick Martin offsite, will take peristaltic pumps and Summa cans to FedEx for shipment before close at 1845.



4/19/18

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4/16/18 Whirlpool 65°F Sunny

1550 NZ & HA on-site (Ramboll). SP, JK & NM (Ramboll) already on-site

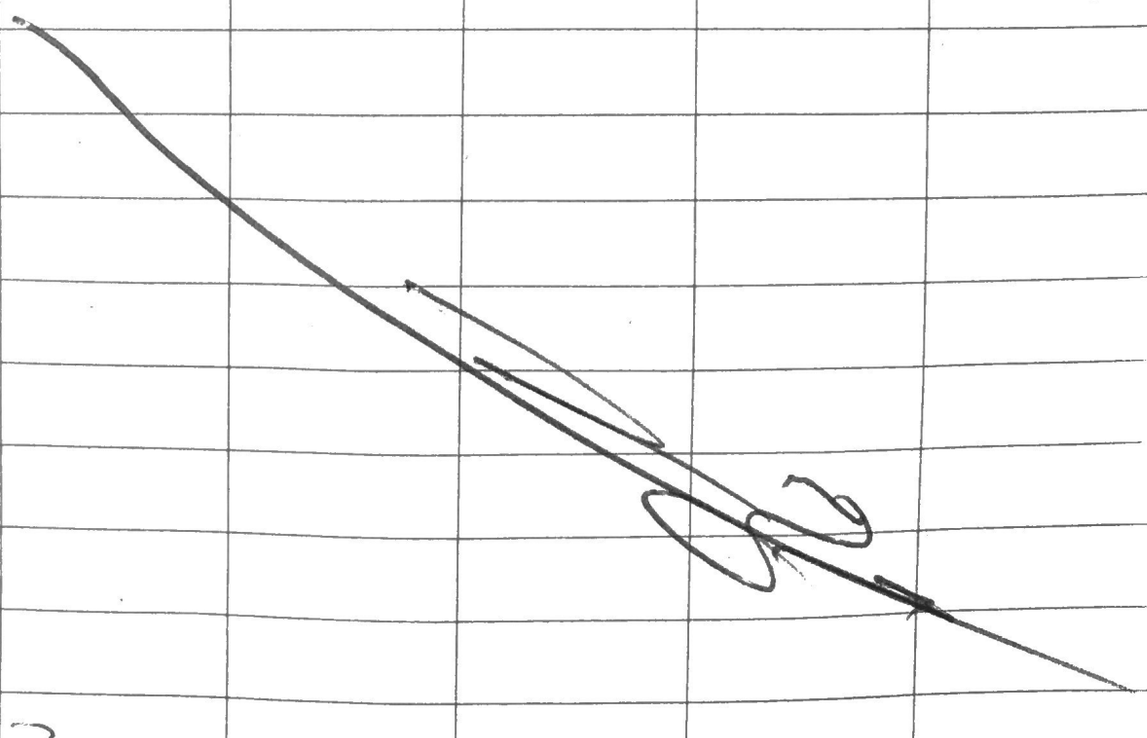
1600 Conduct H&S meeting.

1610 ~~1620~~ NZ Sort supplies & equipment for GW sampling. Prep

1730 for well equilibrations. Begin opening well covers & plugs to allow for equilibration for gauging tomorrow (4/17/18).

2000 ~~1900~~ NZ All wells to be gauged tomorrow covers & plugs removed for equilibration

2005 ~~1905~~ NZ All off-site



Rite in the Rain.

4/17/18 Whirlpool 50°F Sunny

0700 NE, HA, IF, JK, & NM on-site (Ramboll). Prep for gauging.

0710 Conduct H&S meeting

0720 Begin gauging. See water level form for water levels & notes.

0925 Gauging complete. Prep for GW sampling.

Begin calibrating YSI 556 SN 13D100788. See cal log.

1020 Cals complete

1123 Begin purging TMW-11 w/ peristaltic pump & associated dedicated tubing.

Sample TMW-11-201804 @ 1250 & MS/MSD

VOCs only, clear. See purge log for water & data

Begin purging MW-50R

Sample MW-50R-201804 @ 1445

VOCs only. Clear. See log

1513 Begin purging MW-63R

Sample MW-63R-201804 + DUP-01 @ 1620

VOCs only, slt light yellow tint

4/17/18 Whirlpool 80°F ~~85°F~~ Sunny

1640 Prep samples for relinquishment

1750 Samples relinquished to courier

1755 All off-site

Rite in the Rain

4/18/18 Whirlpool 65°F Sunny

0705 NZ, HA, JP, JK & NM on-site (Ranboll).

0720 Conduct H&S meeting & prep for GW sampling.

0725 Begin calibrating YSI 556 See cal log.

0755 Calibration complete

0843 Begin purging MW-39R See log for parameters

Sample MW-39R-201804 @ 0940

VOCs only, clear

1023 Begin TMW-23. See log

Sample TMW-23-201804 @ 1125

VOCs only, clear

1152 Begin purging TMW-10 See log

Sample TMW-10-201804 @ 1310

VOCs only, clear

1342 Begin purging TMW-22 See log

Sample TMW-22-201804 @ 1450

VOCs only, clear

4/18/18 Whirlpool 70°F Sunny

1516 Begin purging TMW-21 See. Log

Sample TMW-21-201804 @ 1605

VOCs only

Sample EB-03-201804 @ 1700

VOCs only, lab DI

Prep samples for relinquishment to courier

1750 Samples relinquished

1755 All off-site

Rite in the Rain

4/19/18 Whirlpool 45°F Sunny

0710 NZ, ItA, IJ, Ik, Nm (Rambo II) on-site. Prep for GW Sampling.

0715 Conduct ltgs meeting

0806 Begin purging VP-09 w/ peristaltic pump to check for water in vapor port.

0808 No water purged. Begin setup for Vapor sampling.

Summa Info

Summ ID: ~~SC01736~~ NZ SC01853

Regulator ID: ~~FCA01075~~ NZ FCA00610

Initial Pressure: ~~-30~~ -27 NZ "Hg

0828 Begin purging VP-09

0835 Purge ~ 1 L of air

0842 Begin shut-in test w/ hand pump for Summa connection

0845 Shut-in test complete Vacuum held @ -24" Hg for > 3 min

0848 Begin 3-way valve Shut-in test @ Vapor port

0851 Shut-in test complete. Vacuum held > 3 min -26" Hg

0855 Begin Helium leak test @ Vapor point connection

4/19/18 Whirlpool 50°F Sunny

Helium in shroud: 10.1%.

Helium in-line: 0 ppm

Helium test complete.

Note: Vacuum held @ -7" Hg w/ hand pump @ vapor port

0909 Begin 8-hour timed Summa

0915 Begin purging VP-10 w/ peristaltic pump @ ~100 ml/min.

0916 Water In-line

Sample VP-10-201804 @ 0920

100 ml/min

VOCs only, increasing black suspended solids during purge. Light brn sample, trace black sediments/susp. solids. Slt organic odor

0951 Begin purging VP-7 @ ~200 ml/min

0956 Stop purge water present Immediately @ start purge

Sample VP-7-201804 @ 1000

VOCs only, clear, air in-line during sampling, 100 ml/min

1009 Begin purging VP-8 @ ~200 ml/min

1010 Water present

1015 Stop purge

Rite in the Rain

4/19/18 Whirlpool 55°F Sunny

Sample VP-8-201804 @ 1020

VOCs only, 2 VOAs, clear, abundant air in line during sampling, 100 ml/min

1051 Begin purging VP-12 @ 200 ml/min. Water ~30 sec after start

1057 Stop purge. Clear line of water then intermittent flow (periods of recharge + dry).

Sample VP-12-201804 @ 1100

VOCs only; continuous flow @ 100 ml/min, clear

1126 Begin purging VP-14 @ ~200 ml/min

1131 Stop purge. Intermittent flow.

Sample VP-14-201804 @ 1145

VOCs only, clear line of water then intermittent recharge, light brn turbid, 2 VOAs

1210 Begin calibrating YSI 556 See cal log

1300 cal complete

1310 Begin purging ITMW-21

Sample ITMW-21-201804 @ 1410

VOCs only, clear

4/19/18 Whirlpool 65°F Sunny

1435 Begin purging TMW-16

Slight lgt brn cloudy initially

Sample TMW-16-201804 @ 1530

VOCs only, clear

1551 Begin purging MW-93

Sample MW-93-201804 @ 1645

VOCs only, clear

1710 Stop VP-9 summa

Final vacuum: -8" Hg

Prep for sample relinquishment + IDW relinquish

1800 Sample relinquished. Prep drums

1840 All off-site

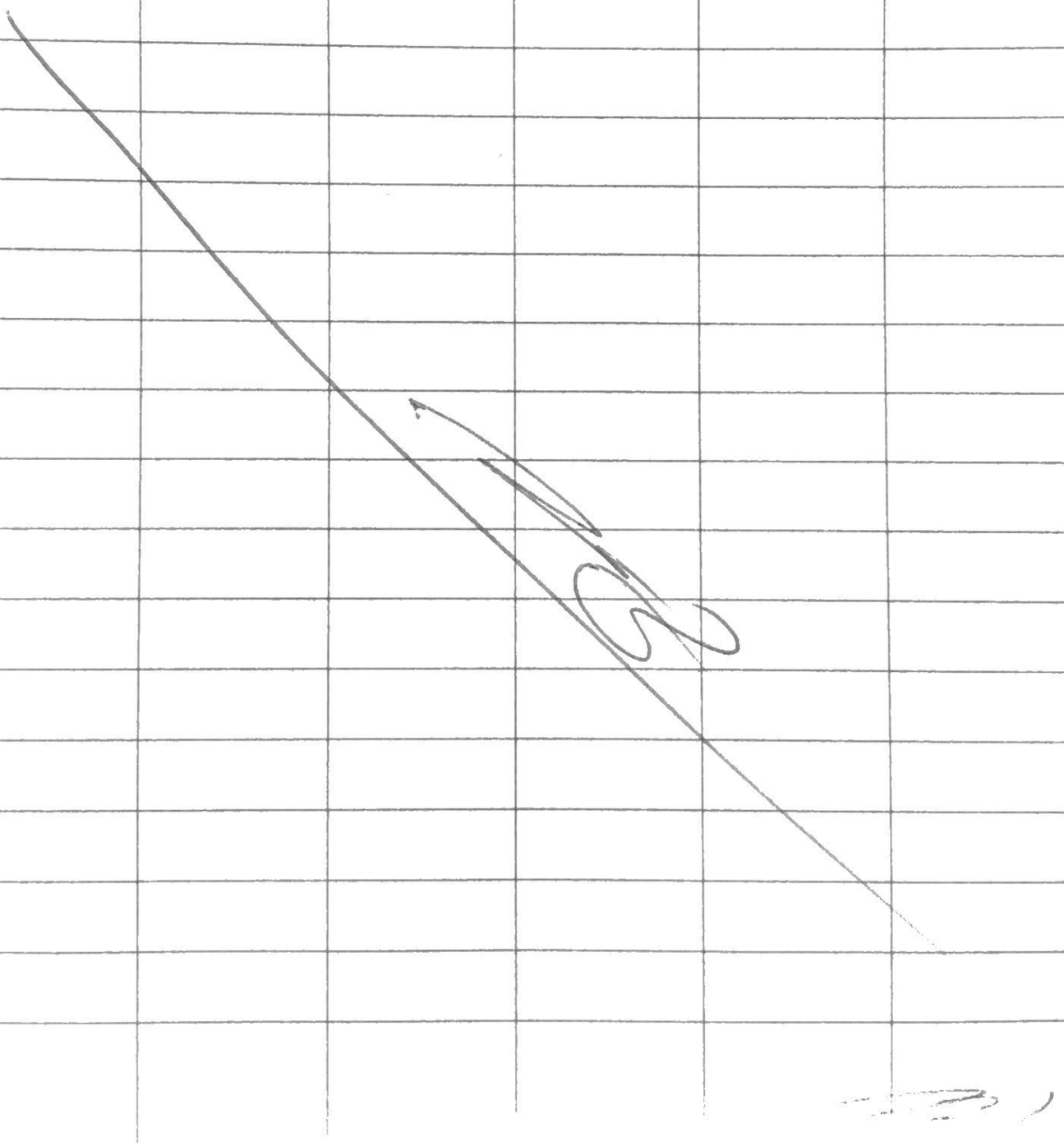
Rite in the Rain

4/20/18 Whirlpool

0835 NZ, HA, JI on-site.
Meet w/ ERS for drum pickup.
5 water drums
2 soil drums

0940 Complete demobilization activities (Note: ERS off-site @ 0915)

0950 All off-site



Appendix C
Risk Calculations and Input Parameters

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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	Bromodichloromethane	75-27-4	B2	1	N								126	90
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	1,1-Dichloroethane	75-34-3	SC	126	N				126	90	5.0E-01	1,000	2	3
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	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 September 4, 2015.

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	Bromodichloromethane	75-27-4	6.6E-02	4.5E-02	44		2.6E-01	44	9.2E-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	1,1-Dichloroethane	75-34-3	2.3E-01	1.7E-01	44		6.4E-01	44	9.1E-05	44	2.5E+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	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.

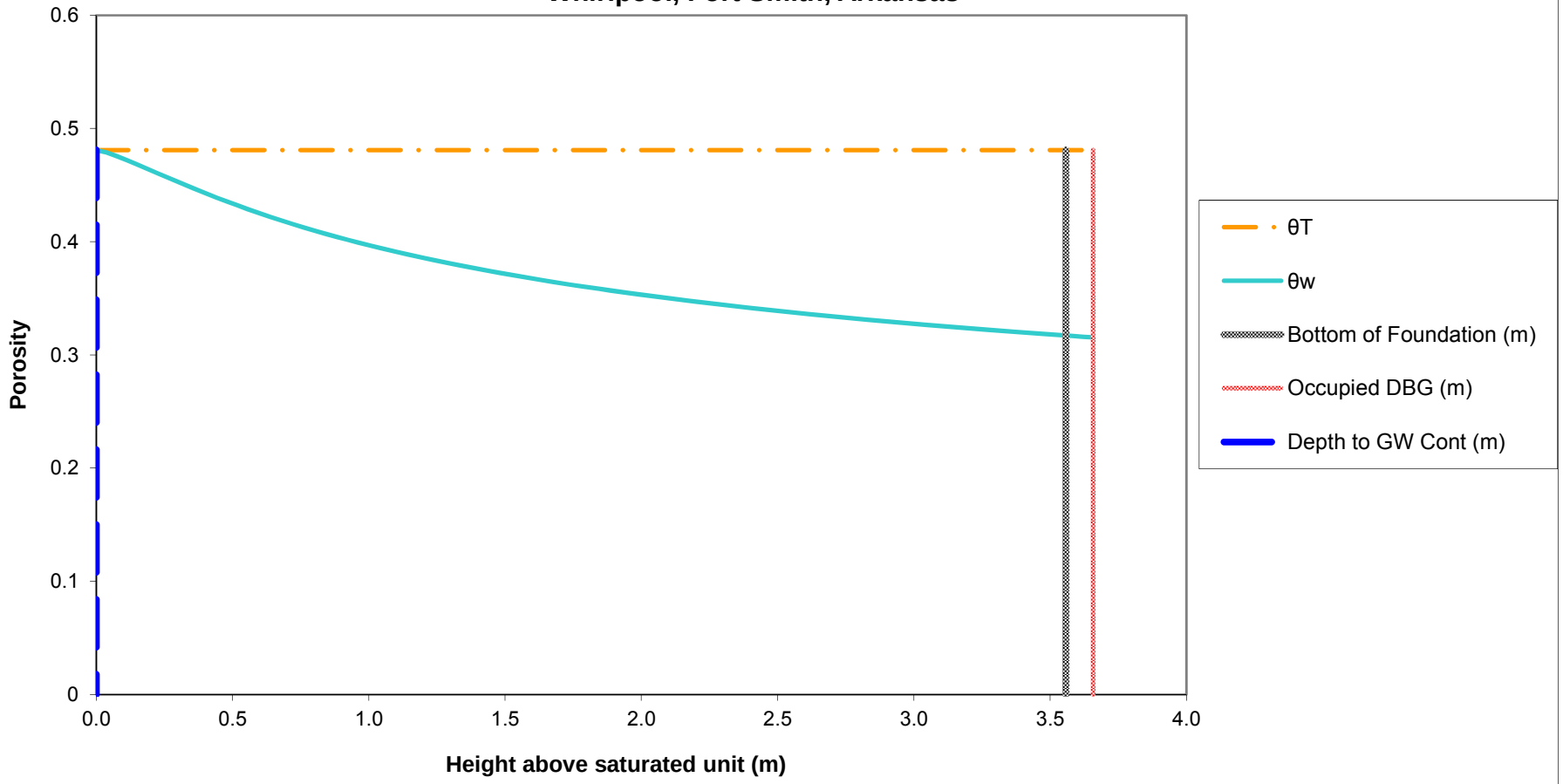
71 USEPA. 2002. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response. OSWER 9355.4-24. December.

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.

Ramboll

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	Bromodichloromethane	75-27-4	2.57E-01	9.16E-05	4.45E-02	4.13E-02	1.07E-03	4.17E-03	2.73E-03	1.14E-05	5.07E-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	Carbon Disulfide	75-15-0	8.99E-01	8.64E-05	9.26E-01	1.44E-01	2.93E-04	1.14E-03	2.73E-03	3.12E-06	2.89E-03
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	4-Methyl-2-pentanone	108-10-1	6.48E-01	6.74E-05	4.71E-03	1.04E-01	4.81E-03	1.84E-02	2.73E-03	5.03E-05	2.37E-04
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	$kg/m\text{-}s^2$	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

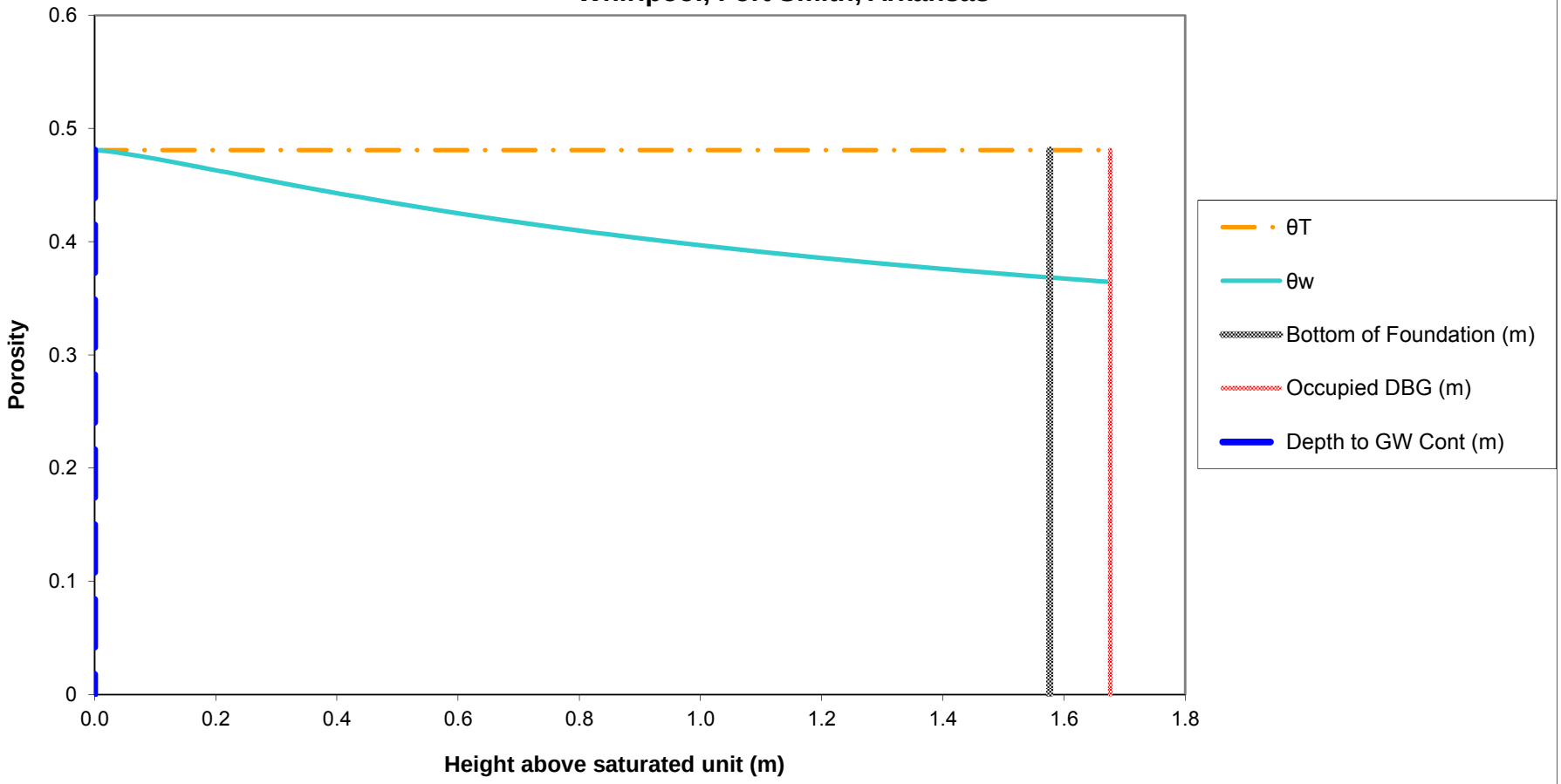
Indoor air concentrations resulting from groundwater vapor intrusion into a building are estimated using the relationships described by Johnson and Ettinger (Heuristic model for predicting the intrusion rate of contaminant vapors into buildings, 1991), which USEPA recommends for screening level calculations, 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.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	3.32E-02	7.03E-06					3.1E+01	2.2E-07
VOC	Benzene	71-43-2	A	N	2.70E-04	3.72E-07	7.8E-03		1.2E-09		3.0E-02	1.2E-05
VOC	Bromodichloromethane	75-27-4	B2	N	4.10E-04	2.08E-07						
VOC	Bromomethane	74-83-9	ID	N	1.50E-03	2.38E-06					5.0E-03	4.6E-04
VOC	2-Butanone	78-93-3	ID	N	1.70E-03	3.47E-07					5.0E+00	6.6E-08
VOC	Carbon Disulfide	75-15-0		N	4.60E-04	1.33E-06					7.0E-01	1.8E-06
VOC	Chloroethane	75-00-3	LC	N	3.10E-04	1.03E-06					1.0E+01	9.9E-08
VOC	Chloroform	67-66-3	B2	N	3.60E-04	4.57E-07	2.3E-02		4.3E-09		5.0E-02	8.8E-06
VOC	Chloromethane	74-87-3	D	N	1.60E-04	2.61E-07					9.0E-02	2.8E-06
VOC	1,1-Dichloroethene	75-35-4	C	N	2.80E-03	7.53E-06					2.0E-01	3.6E-05
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	1.05E-01	1.29E-04						
VOC	trans-1,2-Dichloroethene	156-60-5	ID	N	1.60E-03	2.86E-06						
VOC	4-Methyl-2-pentanone	108-10-1	ID	N	1.10E-03	2.61E-07					3.0E+00	8.3E-08
VOC	Tetrachloroethene	127-18-4	LC	N	1.70E-04	3.02E-07	2.6E-04		3.2E-11		4.0E-02	7.2E-06
VOC	Trichloroethene	79-01-6	HC	Y	5.20E-01	8.34E-04	4.1E-03	0.2439	1.9E-06		2.0E-03	4.0E-01
VOC	Vinyl Chloride	75-01-4	A	N	1.10E-03	3.63E-06	4.4E-03		2.3E-08		1.0E-01	3.5E-05
							Cumulative Risk:		2E-06		**HI:**	4E-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.

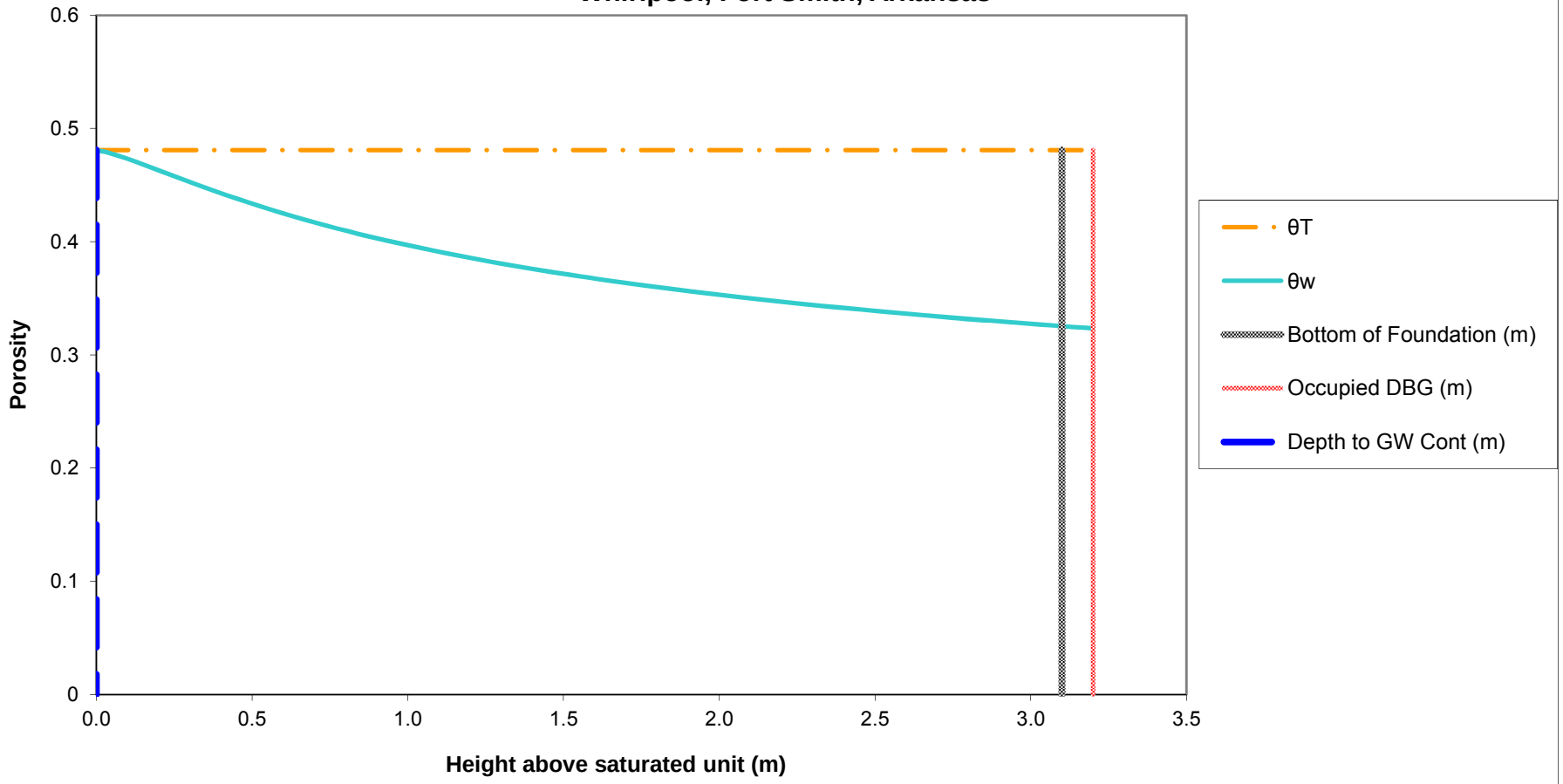
Attachment C.7: Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Perched Water at VP-7 (Parcel 2) Whirlpool, Fort Smith, Arkansas

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
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	$kg/m\text{-}s^2$	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.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)	**Risk**		**RfC** (mg/m^3)	**HQ**
VOC	Acetone	67-64-1	ID	N	2.56E-02	1.23E-05				3.1E+01	3.8E-07
VOC	Benzene	71-43-2	A	N	9.00E-04	1.38E-06	7.8E-03	4.4E-09		3.0E-02	4.4E-05
VOC	2-Butanone	78-93-3	ID	N	4.00E-03	1.83E-06				5.0E+00	3.5E-07
VOC	4-Methyl-2-pentanone	108-10-1	ID	N	9.20E-04	3.99E-07				3.0E+00	1.3E-07
VOC	Toluene	108-88-3	ID	N	2.10E-04	3.07E-07				5.0E+00	5.9E-08
								4E-09		**HI:**	4E-05
Note:											
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	1,2-Dichloroethane	107-06-2	8.99E-01	8.55E-05	2.74E-02	1.44E-01	2.13E-03	9.46E-03	2.73E-03	2.59E-05	7.09E-04
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-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	6.10E-02	1.47E-05					3.1E+01	4.6E-07
VOC	Benzene	71-43-2	A	N	8.20E-04	1.14E-06	7.8E-03		3.7E-09		3.0E-02	3.6E-05
VOC	2-Butanone	78-93-3	ID	N	1.21E-02	2.78E-06					5.0E+00	5.3E-07
VOC	Chloromethane	74-87-3	D	N	4.50E-04	7.34E-07					9.0E-02	7.8E-06
VOC	1,2-Dichloroethane	107-06-2	B2	N	1.40E-04	9.93E-08	2.6E-02		1.1E-09		7.0E-03	1.4E-05
VOC	2-Hexanone	591-78-6	ID	N	2.90E-03	7.34E-07					3.0E-02	2.3E-05
VOC	4-Methyl-2-pentanone	108-10-1	ID	N	8.90E-04	2.29E-07					3.0E+00	7.3E-08
VOC	Toluene	108-88-3	ID	N	2.50E-04	3.36E-07					5.0E+00	6.5E-08
VOC	Trichloroethene	79-01-6	HC	Y	3.40E-03	5.48E-06	4.1E-03	0.2439	1.3E-08		2.0E-03	2.6E-03
VOC	Vinyl Chloride	75-01-4	A	N	1.70E-04	5.60E-07	4.4E-03		3.5E-09		1.0E-01	5.4E-06
							Cumulative Risk:		2E-08		**HI:**	3E-03

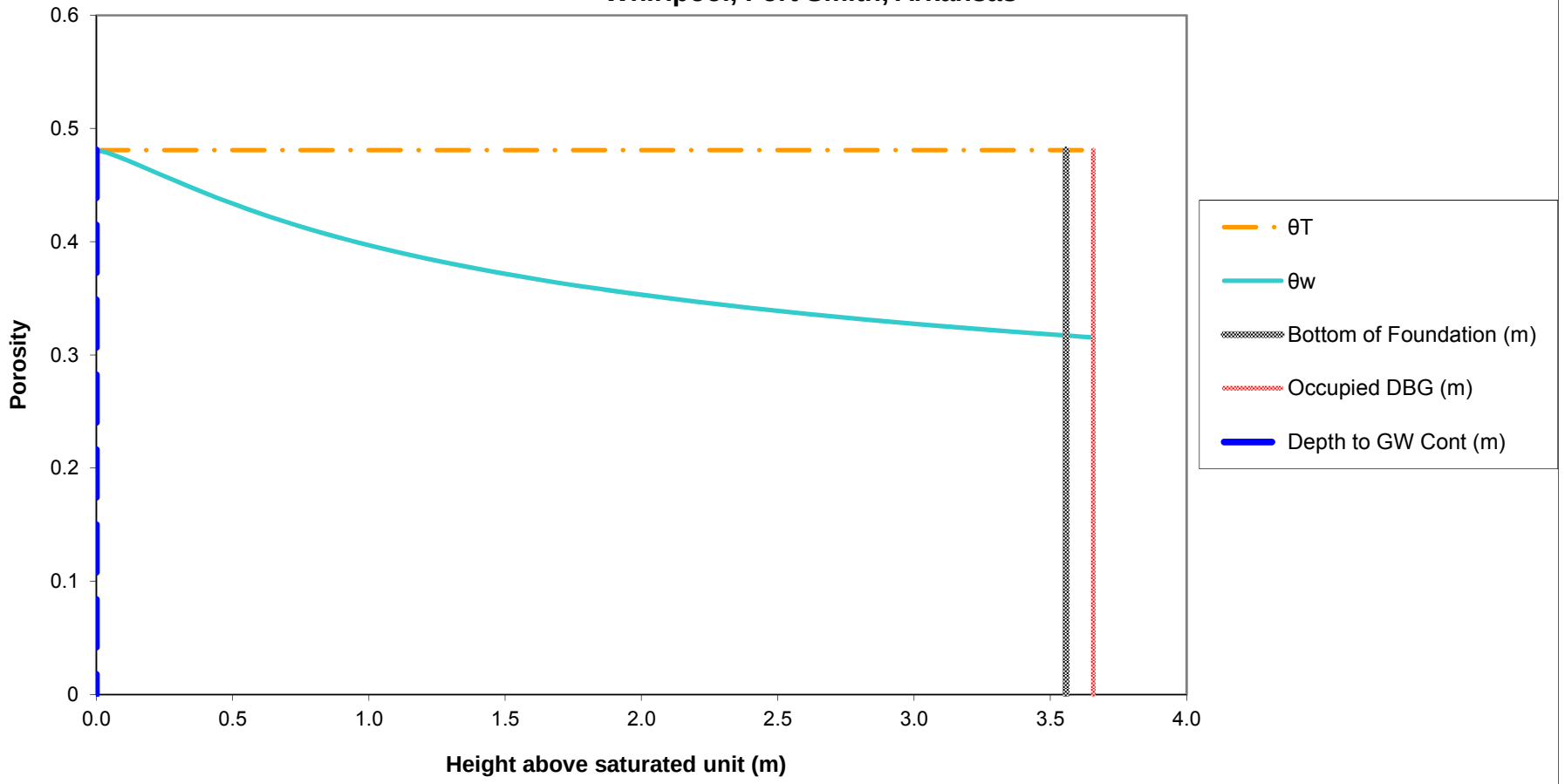
Note:

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 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	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	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	$kg/m\text{-}s^2$	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	Chloromethane	74-87-3	D	N	1.40E-04	2.29E-07					9.0E-02	2.4E-06
VOC	1,1-Dichloroethene	75-35-4	C	N	5.50E-04	1.48E-06					2.0E-01	7.1E-06
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	1.90E-03	2.33E-06						
VOC	Trichloroethene	79-01-6	HC	Y	1.17E-01	1.88E-04	4.1E-03	0.2439	4.3E-07		2.0E-03	9.0E-02
VOC	Vinyl Chloride	75-01-4	A	N	1.50E-04	4.95E-07	4.4E-03		3.1E-09		1.0E-01	4.7E-06
							Cumulative Risk:		4E-07		**HI:**	9E-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	9.80E-05	2.94E-06					5.0E-01	5.6E-06
VOC	1,2-Dichloroethane	107-06-2	B2	N	1.70E-04	5.10E-06	2.6E-02		5.4E-08		7.0E-03	7.0E-04
VOC	1,1-Dichloroethene	75-35-4	C	N	3.90E-04	1.17E-05					2.0E-01	5.6E-05
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	2.80E-04	8.40E-06						
VOC	trans-1,2-Dichloroethene	156-60-5	ID	N	5.20E-04	1.56E-05						
VOC	Tetrachloroethene	127-18-4	LC	N	2.00E-04	6.00E-06	2.6E-04		6.4E-10		4.0E-02	1.4E-04
VOC	Trichloroethene	79-01-6	HC	Y	5.40E-01	1.62E-02	4.1E-03	0.244	3.8E-05		2.0E-03	7.8E+00
VOC	Vinyl Chloride	75-01-4	A	N	2.10E-04	6.30E-06	4.4E-03		3.9E-08		1.0E-01	6.0E-05
							Cumulative Risk:		4E-05		**HI:**	**8E+00**
Note:												

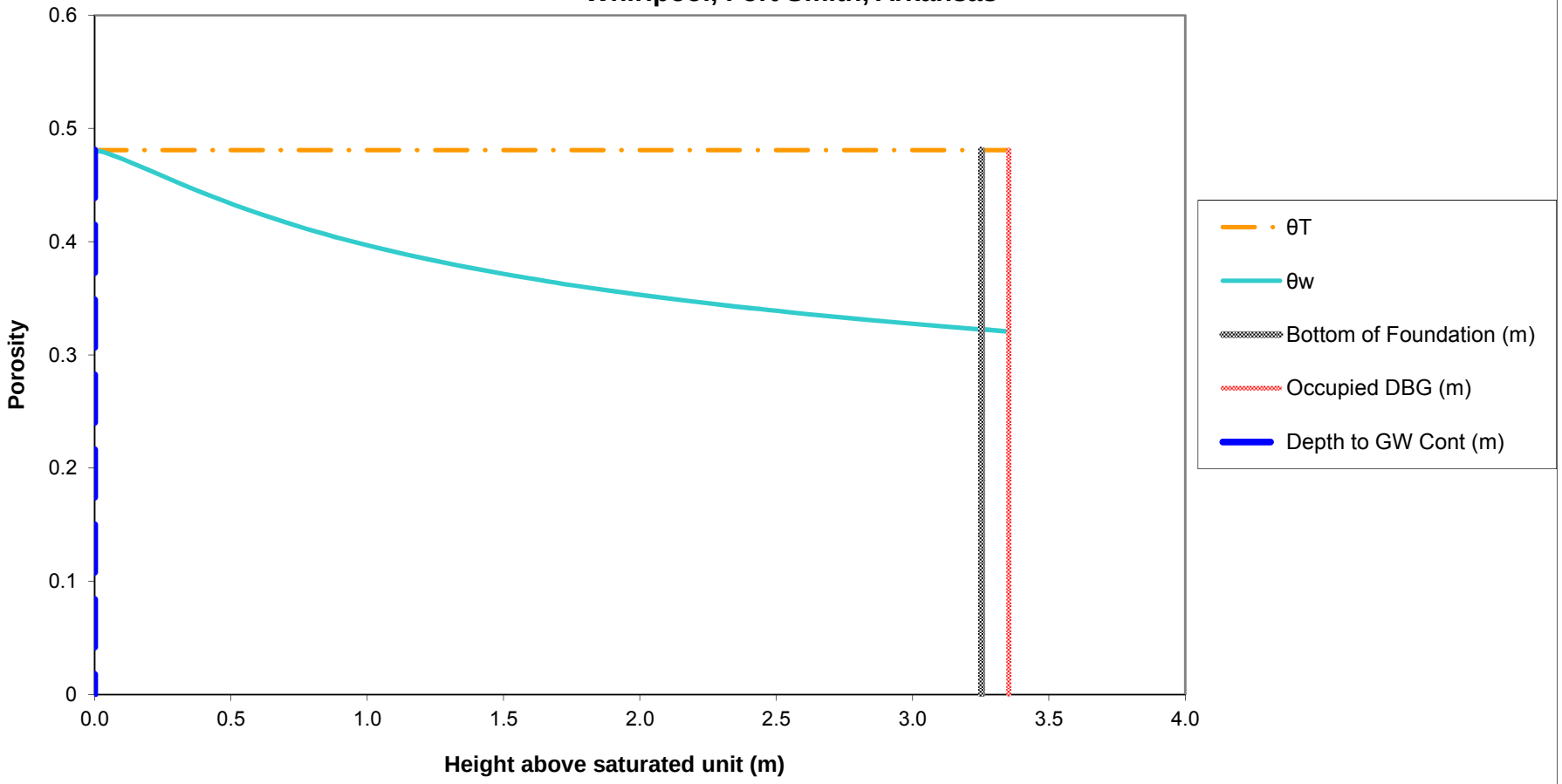
f_{inh} is the fraction of the inhalation toxicity value that USEPA identified as having a mutagenic mode of action.

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	Methylene Chloride	75-09-2	8.73E-01	1.01E-04	6.60E-02	1.40E-01	1.47E-03	6.25E-03	2.73E-03	1.71E-05	1.13E-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							

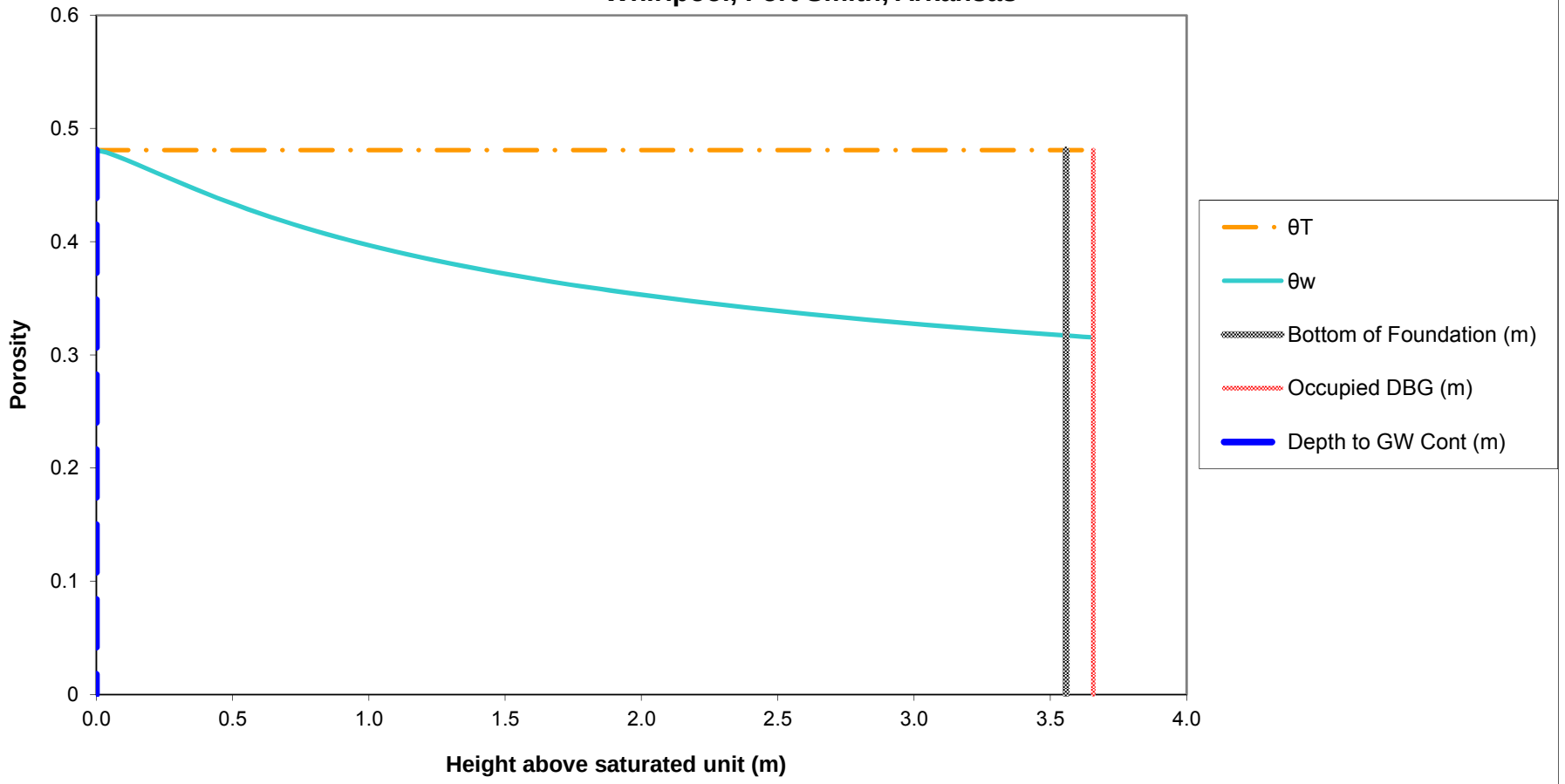
Indoor air concentrations resulting from groundwater vapor intrusion into a building are estimated using the relationships described by Johnson and Ettinger (Heuristic model for predicting the intrusion rate of contaminant vapors into buildings, 1991), which USEPA recommends for screening level calculations, 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	2.50E-04	3.48E-07	7.8E-03		1.1E-09		3.0E-02	1.1E-05
VOC	Carbon Disulfide	75-15-0		N	5.20E-04	1.51E-06					7.0E-01	2.1E-06
VOC	Chloroform	67-66-3	B2	N	1.30E-03	1.67E-06	2.3E-02		1.6E-08		5.0E-02	3.2E-05
VOC	1,1-Dichloroethene	75-35-4	C	N	1.80E-03	4.87E-06					2.0E-01	2.3E-05
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	1.49E-02	1.85E-05						
VOC	trans-1,2-Dichloroethene	156-60-5	ID	N	3.10E-04	5.60E-07						
VOC	Methylene Chloride	75-09-2	LC	Y	3.80E-04	4.28E-07	1.0E-05	1	4.5E-12		6.0E-01	6.8E-07
VOC	Toluene	108-88-3	ID	N	3.60E-04	4.86E-07					5.0E+00	9.3E-08
VOC	Trichloroethene	79-01-6	HC	Y	3.57E-01	5.78E-04	4.1E-03	0.2439	1.3E-06		2.0E-03	2.8E-01
VOC	Vinyl Chloride	75-01-4	A	N	4.00E-04	1.33E-06	4.4E-03		8.2E-09		1.0E-01	1.3E-05
							Cumulative Risk:		1E-06		**HI:**	3E-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	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	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	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.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	Acetone	67-64-1	ID	N	3.32E-02	7.03E-06					3.1E+01	2.2E-07
VOC	Benzene	71-43-2	A	N	2.70E-04	3.72E-07	7.8E-03		1.2E-09		3.0E-02	1.2E-05
VOC	Bromomethane	74-83-9	ID	N	1.50E-03	2.38E-06					5.0E-03	4.6E-04
VOC	2-Butanone	78-93-3	ID	N	1.70E-03	3.47E-07					5.0E+00	6.6E-08
VOC	Chloroethane	75-00-3	LC	N	3.10E-04	1.03E-06					1.0E+01	9.9E-08
VOC	Chloromethane	74-87-3	D	N	1.60E-04	2.61E-07					9.0E-02	2.8E-06
VOC	1,1-Dichloroethene	75-35-4	C	N	2.80E-03	7.53E-06					2.0E-01	3.6E-05
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	1.05E-01	1.29E-04						
VOC	trans-1,2-Dichloroethene	156-60-5	ID	N	1.60E-03	2.86E-06						
VOC	Tetrachloroethene	127-18-4	LC	N	1.70E-04	3.02E-07	2.6E-04		3.2E-11		4.0E-02	7.2E-06
VOC	Trichloroethene	79-01-6	HC	Y	4.26E-01	6.83E-04	4.1E-03	0.2439	1.6E-06		2.0E-03	3.3E-01
VOC	Vinyl Chloride	75-01-4	A	N	1.10E-03	3.63E-06	4.4E-03		2.3E-08		1.0E-01	3.5E-05
							Cumulative Risk:		2E-06		**HI:**	3E-01

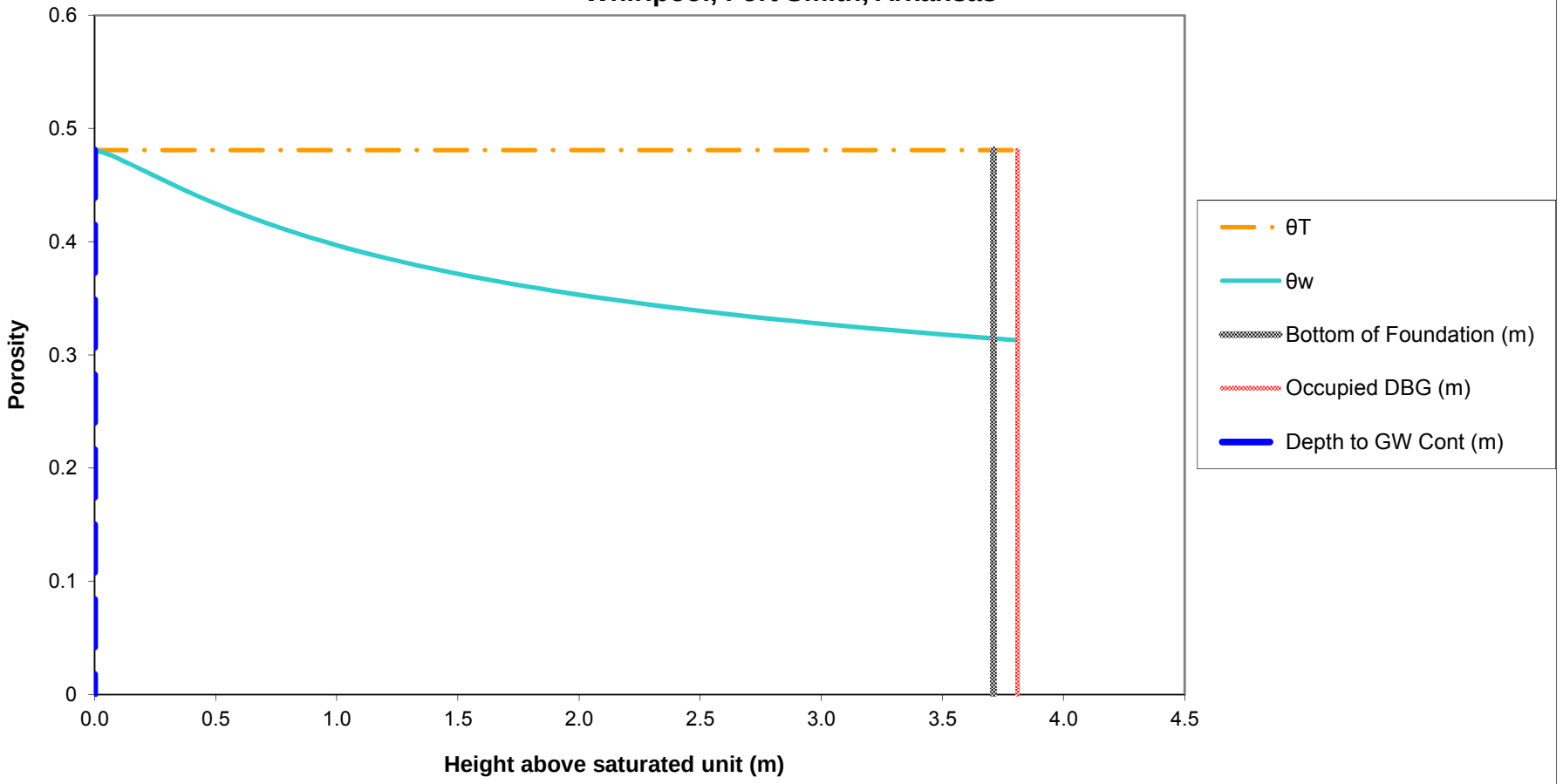
Note:

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

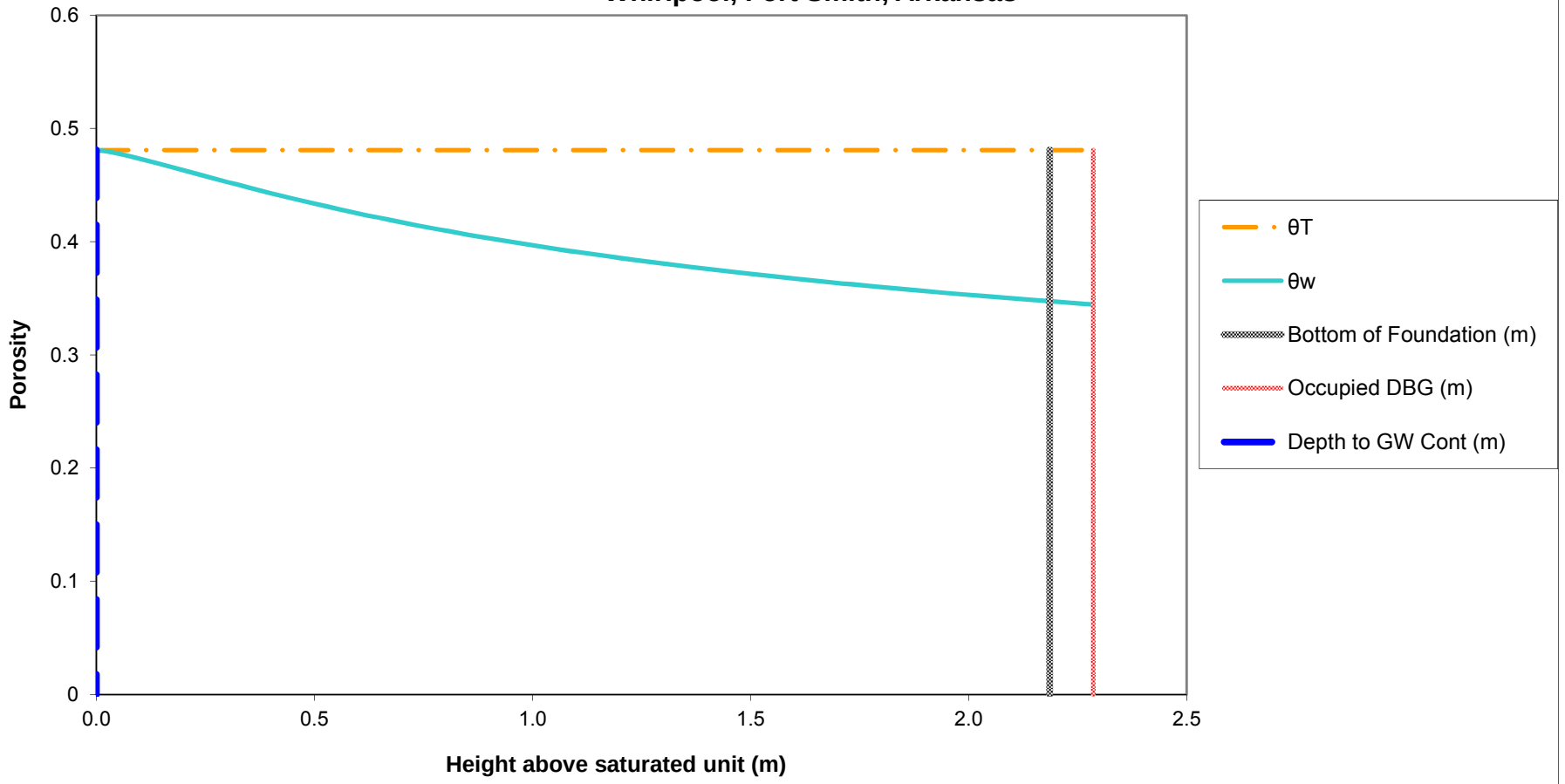
Chem Group	Chemical	CASRN	D_{air} (m^2/day)	D_{water} (m^2/day)	H (unitless)	D_{crack} (m^2/day)	D_{eff}^T (m^2/day)	α_{soil}	α_{slab}	α_{∞}	C_{bldg} (L-water/m^3)
VOC	Benzene	71-43-2	7.60E-01	8.47E-05	1.59E-01	1.22E-01	8.46E-04	3.16E-03	2.73E-03	8.62E-06	1.37E-03
VOC	Methylene Chloride	75-09-2	8.73E-01	1.01E-04	6.60E-02	1.40E-01	1.64E-03	6.10E-03	2.73E-03	1.67E-05	1.10E-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	Benzene	71-43-2	A	N	1.30E-04	1.78E-07	7.8E-03		5.7E-10		3.0E-02	5.7E-06
VOC	Methylene Chloride	75-09-2	LC	Y	2.50E-04	2.75E-07	1.0E-05	1	2.9E-12		6.0E-01	4.4E-07
							Cumulative Risk:		6E-10		**HI:**	6E-06
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.

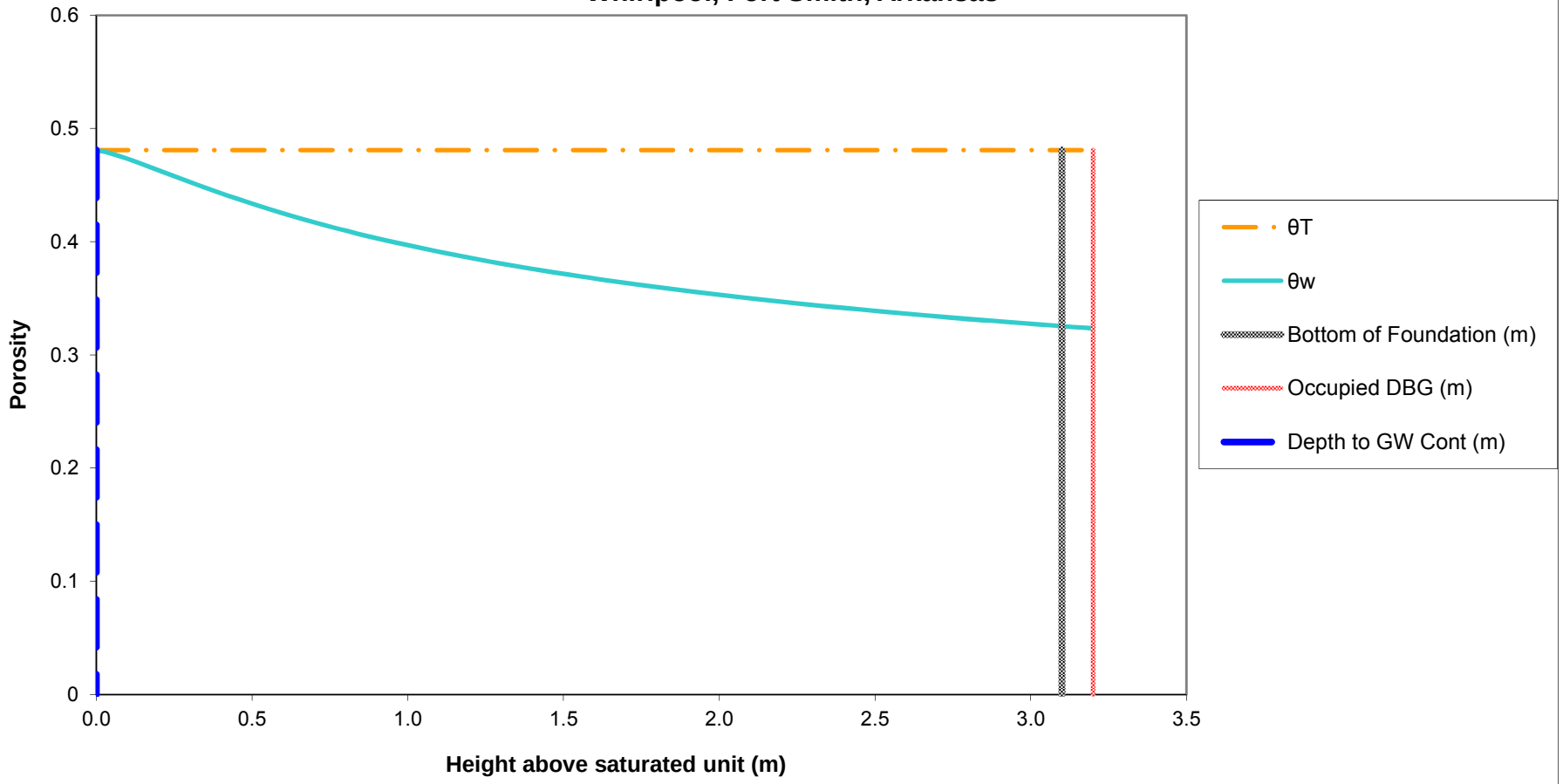
Attachment C.26: Normalized Indoor Air Concentration in a Residential Building (Slab-on-Grade) due to Vapor Intrusion from Perched Water at MW-178 (Parcel 5) Whirlpool, Fort Smith, Arkansas

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	Benzene	71-43-2	7.60E-01	8.47E-05	1.59E-01	1.19E-01	5.27E-04	3.34E-03	2.73E-03	9.13E-06	1.45E-03
VOC	Bromomethane	74-83-9	6.29E-01	1.05E-04	2.01E-01	9.84E-02	4.84E-04	3.06E-03	2.73E-03	8.37E-06	1.68E-03
VOC	Chloromethane	74-87-3	1.09E+00	5.62E-05	3.33E-01	1.70E-01	2.88E-04	1.82E-03	2.73E-03	4.98E-06	1.66E-03
VOC	1,1-Dichloroethene	75-35-4	7.78E-01	8.99E-05	8.10E-01	1.22E-01	1.95E-04	1.23E-03	2.73E-03	3.37E-06	2.73E-03
VOC	cis-1,2-Dichloroethene	156-59-2	6.36E-01	9.76E-05	1.19E-01	9.95E-02	6.44E-04	4.08E-03	2.73E-03	1.11E-05	1.32E-03
VOC	Trichloroethene	79-01-6	6.83E-01	7.86E-05	2.88E-01	1.07E-01	3.33E-04	2.11E-03	2.73E-03	5.76E-06	1.66E-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	0.057							
	Air-filled porosity	L/L-soil	θ_a	0.318							
	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	0.012							
	van Genuchten N	unitless	N	3.177							
	van Genuchten M	unitless	M	0.685							
	Relative air permeability	unitless	k_{rg}	0.992							
	Permeability to vapor	cm^2	k_v	9.84E-08							
	Distance from building foundation to source	m	L_{T-gw}	2.19							
	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.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	Benzene	71-43-2	A	N	2.10E-04	3.05E-07	7.8E-03		9.8E-10		3.0E-02	9.7E-06
VOC	Bromomethane	74-83-9	ID	N	1.40E-03	2.36E-06					5.0E-03	4.5E-04
VOC	Chloromethane	74-87-3	D	N	1.10E-04	1.82E-07					9.0E-02	1.9E-06
VOC	1,1-Dichloroethene	75-35-4	C	N	2.20E-04	6.01E-07					2.0E-01	2.9E-06
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	1.40E-03	1.85E-06						
VOC	Trichloroethene	79-01-6	HC	Y	5.30E-03	8.81E-06	4.1E-03	0.2439	2.0E-08		2.0E-03	4.2E-03
							Cumulative Risk:		2E-08		**HI:**	5E-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.

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	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	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

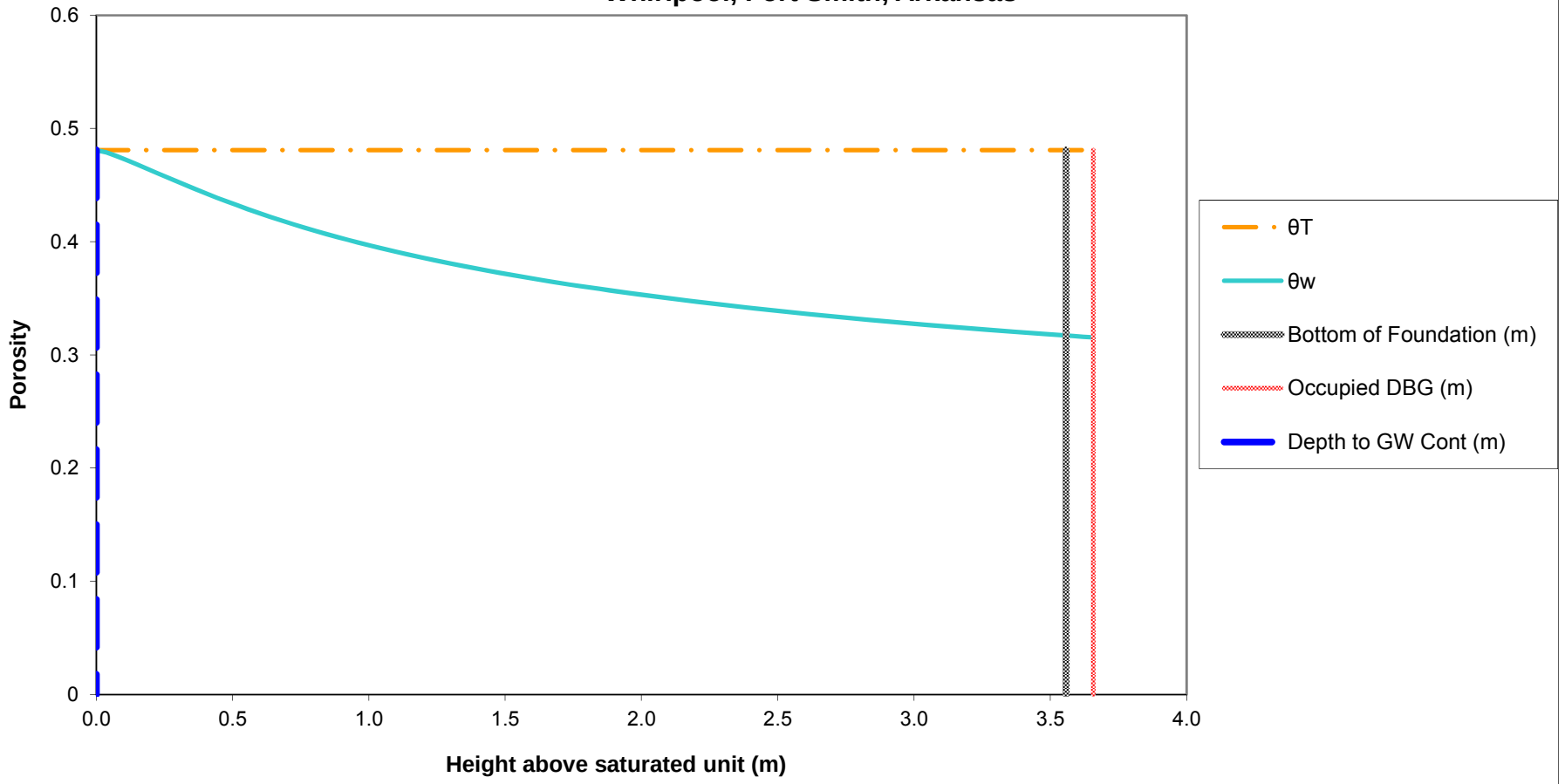
Indoor air concentrations resulting from groundwater vapor intrusion into a building are estimated using the relationships described by Johnson and Ettinger (Heuristic model for predicting the intrusion rate of contaminant vapors into buildings, 1991), which USEPA recommends for screening level calculations, 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	Acetone	67-64-1	ID	N	4.00E-03	9.63E-07					3.1E+01	3.0E-08
VOC	Benzene	71-43-2	A	N	1.60E-04	2.22E-07	7.8E-03		7.1E-10		3.0E-02	7.1E-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	8.70E-04	2.34E-06					2.0E-01	1.1E-05
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	2.60E-03	3.23E-06						
VOC	trans-1,2-Dichloroethene	156-60-5	ID	N	2.30E-04	4.14E-07						
VOC	Trichloroethene	79-01-6	HC	Y	5.58E-02	8.99E-05	4.1E-03	0.2439	2.1E-07		2.0E-03	4.3E-02
							Cumulative Risk:		2E-07		**HI:**	4E-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	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	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-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	2.90E-03	6.14E-07					3.1E+01	1.9E-08
VOC	1,1-Dichloroethene	75-35-4	C	N	2.70E-04	7.27E-07					2.0E-01	3.5E-06
VOC	cis-1,2-Dichloroethene	156-59-2	ID	N	8.50E-04	1.04E-06						
VOC	Trichloroethene	79-01-6	HC	Y	2.17E-02	3.48E-05	4.1E-03	0.2439	8.1E-08		2.0E-03	1.7E-02
							Cumulative Risk:		8E-08		**HI:**	2E-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-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.												

Appendix C

Laboratory Analytical Data

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

April 26, 2018

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

RE: Project: FORT SMITH, AR
Pace Project No.: 60268487

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on April 18, 2018. 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: Kristen Drucquer, Ramboll
Tamara House-Knight, Ramboll Environ
M. Wilson

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CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60268487

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.: 60268487

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60268487001	**MW-196-201804**	Water	04/17/18 12:10	04/18/18 06:45
60268487002	**MW-195-201804**	Water	04/17/18 13:50	04/18/18 06:45
60268487003	**DUP-02-201804**	Water	04/17/18 13:50	04/18/18 06:45
60268487004	**MW-68-201804**	Water	04/17/18 15:15	04/18/18 06:45
60268487005	**TMW-20-201804**	Water	04/17/18 12:45	04/18/18 06:45
60268487006	**TMW-29-201804**	Water	04/17/18 15:00	04/18/18 06:45
60268487007	**MW-60R-201804**	Water	04/17/18 12:55	04/18/18 06:45
60268487008	**MW-61R-201804**	Water	04/17/18 14:00	04/18/18 06:45
60268487009	**MW-62R-201804**	Water	04/17/18 15:10	04/18/18 06:45
60268487010	**MW-194-201804**	Water	04/17/18 16:00	04/18/18 06:45
60268487011	**TMW-11-201804**	Water	04/17/18 12:50	04/18/18 06:45
60268487012	**MW-50R-201804**	Water	04/17/18 14:45	04/18/18 06:45
60268487013	**MW-176-201804**	Water	04/17/18 13:50	04/18/18 06:45
60268487014	**EB-01-201804**	Water	04/17/18 16:10	04/18/18 06:45
60268487015	**MW-63R-201804**	Water	04/17/18 16:20	04/18/18 06:45
60268487016	**DUP-01-201804**	Water	04/17/18 16:20	04/18/18 06:45
60268487017	**MW-40R-201804**	Water	04/17/18 16:18	04/18/18 06:45
60268487018	**EB-02-201804**	Water	04/17/18 16:30	04/18/18 06:45
60268487019	**TB-01-201804**	Water	04/17/18 12:10	04/18/18 06:45

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60268487

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60268487001	MW-196-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487002	MW-195-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487003	DUP-02-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487004	MW-68-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487005	TMW-20-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487006	TMW-29-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487007	MW-60R-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487008	MW-61R-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487009	MW-62R-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487010	MW-194-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487011	TMW-11-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487012	MW-50R-201804	EPA 5030B/8260	EAG	38	PASI-K
60268487013	MW-176-201804	EPA 5030B/8260	JTK, PGH	38	PASI-K
60268487014	EB-01-201804	EPA 5030B/8260	JTK	38	PASI-K
60268487015	MW-63R-201804	EPA 5030B/8260	JTK	38	PASI-K
60268487016	DUP-01-201804	EPA 5030B/8260	JTK	38	PASI-K
60268487017	MW-40R-201804	EPA 5030B/8260	JTK	38	PASI-K
60268487018	EB-02-201804	EPA 5030B/8260	JTK	38	PASI-K
60268487019	TB-01-201804	EPA 5030B/8260	JTK	38	PASI-K

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60268487

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 26, 2018

General Information:
19 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: 522579

B: Analyte was detected in the associated method blank.
- BLANK for HBN 522579 [MSV/8880 (Lab ID: 2139391)
  - Bromomethane

QC Batch: 522630

B: Analyte was detected in the associated method blank.
- BLANK for HBN 522630 [MSV/8880 (Lab ID: 2139687)
  - 1,2-Dichloroethane

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

QC Batch: 522630

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
- LCS (Lab ID: 2139688)
  - Chloroethane

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

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60268487

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 26, 2018

QC Batch: 522579

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60268487001,60268487011

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

- MSD (Lab ID: 2139396)
  - Chloroethane

R1: RPD value was outside control limits.

- MSD (Lab ID: 2139396)
  - 1,1-Dichloroethene
  - Chlorobenzene
  - Chloroethane
  - Tetrachloroethene

QC Batch: 522630

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60268532011

R1: RPD value was outside control limits.

- MSD (Lab ID: 2139690)
  - 1,1,1-Trichloroethane
  - 1,1,2-Trichloroethane
  - 1,1-Dichloroethane
  - 1,1-Dichloroethene
  - 1,2-Dichloropropane
  - 2-Hexanone
  - 4-Methyl-2-pentanone (MIBK)
  - Bromodichloromethane
  - Bromoform
  - Carbon disulfide
  - Chlorobenzene
  - Chloroform
  - Dibromochloromethane
  - Tetrachloroethene
  - Trichloroethene
  - cis-1,2-Dichloroethene
  - cis-1,3-Dichloropropene
  - trans-1,2-Dichloroethene
  - trans-1,3-Dichloropropene

QC Batch: 523156

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, AR
Pace Project No.: 60268487

Sample: MW-196-201804 **Lab ID: 60268487001** Collected: 04/17/18 12:10 Received: 04/18/18 06:45 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		04/20/18 18:20	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 18:20	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 18:20	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 18:20	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 18:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 18:20	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 18:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 18:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 18:20	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 18:20	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 18:20	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 18:20	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 18:20	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 18:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 18:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 18:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 18:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 18:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 18:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 18:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 18:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 18:20	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 18:20	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 18:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 18:20	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 18:20	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 18:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 18:20	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 18:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 18:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 18:20	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 18:20	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 18:20	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 18:20	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-119		1		04/20/18 18:20	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/20/18 18:20	17060-07-0	
Toluene-d8 (S)	102	%	80-115		1		04/20/18 18:20	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 18:20		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-195-201804 **Lab ID: 60268487002** Collected: 04/17/18 13:50 Received: 04/18/18 06:45 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		04/20/18 19:02	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 19:02	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 19:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 19:02	75-25-2	
Bromomethane	**0.61J**	ug/L	5.0	0.16	1		04/20/18 19:02	74-83-9	B
2-Butanone (MEK)	**1.4J**	ug/L	10.0	0.59	1		04/20/18 19:02	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 19:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 19:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 19:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:02	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 19:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 19:02	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 19:02	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 19:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 19:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 19:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 19:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 19:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 19:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 19:02	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 19:02	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 19:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	**1.1J**	ug/L	10.0	0.42	1		04/20/18 19:02	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 19:02	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 19:02	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 19:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 19:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 19:02	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 19:02	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 19:02	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 19:02	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-119		1		04/20/18 19:02	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/20/18 19:02	17060-07-0	
Toluene-d8 (S)	103	%	80-115		1		04/20/18 19:02	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 19:02		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: DUP-02-201804 **Lab ID: 60268487003** Collected: 04/17/18 13:50 Received: 04/18/18 06:45 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		04/20/18 19:16	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 19:16	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 19:16	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 19:16	75-25-2	
Bromomethane	**0.52J**	ug/L	5.0	0.16	1		04/20/18 19:16	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 19:16	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 19:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 19:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 19:16	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:16	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 19:16	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 19:16	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 19:16	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 19:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 19:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 19:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 19:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 19:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 19:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 19:16	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 19:16	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 19:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 19:16	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 19:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 19:16	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 19:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 19:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 19:16	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 19:16	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 19:16	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 19:16	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-119		1		04/20/18 19:16	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/20/18 19:16	17060-07-0	
Toluene-d8 (S)	103	%	80-115		1		04/20/18 19:16	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 19:16		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-68-201804 **Lab ID: 60268487004** Collected: 04/17/18 15:15 Received: 04/18/18 06:45 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		04/20/18 19:30	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 19:30	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 19:30	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 19:30	75-25-2	
Bromomethane	**0.44J**	ug/L	5.0	0.16	1		04/20/18 19:30	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 19:30	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 19:30	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 19:30	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 19:30	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:30	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 19:30	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 19:30	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 19:30	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 19:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 19:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 19:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 19:30	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 19:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 19:30	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 19:30	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 19:30	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 19:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 19:30	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 19:30	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:30	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 19:30	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 19:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 19:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 19:30	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 19:30	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 19:30	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 19:30	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-119		1		04/20/18 19:30	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-117		1		04/20/18 19:30	17060-07-0	
Toluene-d8 (S)	103	%	80-115		1		04/20/18 19:30	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 19:30		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: TMW-20-201804 **Lab ID: 60268487005** Collected: 04/17/18 12:45 Received: 04/18/18 06:45 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		04/20/18 19:44	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 19:44	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 19:44	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 19:44	75-25-2	
Bromomethane	**0.41J**	ug/L	5.0	0.16	1		04/20/18 19:44	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 19:44	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 19:44	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 19:44	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 19:44	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:44	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 19:44	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 19:44	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 19:44	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 19:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 19:44	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 19:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 19:44	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 19:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 19:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 19:44	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 19:44	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 19:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 19:44	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 19:44	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:44	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 19:44	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 19:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 19:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 19:44	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 19:44	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 19:44	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 19:44	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-119		1		04/20/18 19:44	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/20/18 19:44	17060-07-0	
Toluene-d8 (S)	103	%	80-115		1		04/20/18 19:44	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 19:44		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: TMW-29-201804 **Lab ID: 60268487006** Collected: 04/17/18 15:00 Received: 04/18/18 06:45 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		04/20/18 19:59	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 19:59	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 19:59	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 19:59	75-25-2	
Bromomethane	**0.47J**	ug/L	5.0	0.16	1		04/20/18 19:59	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 19:59	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 19:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 19:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 19:59	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:59	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 19:59	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 19:59	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 19:59	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 19:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 19:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 19:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 19:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 19:59	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 19:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 19:59	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 19:59	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 19:59	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 19:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 19:59	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 19:59	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 19:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 19:59	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 19:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 19:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 19:59	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 19:59	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 19:59	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 19:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	92	%	80-119		1		04/20/18 19:59	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/20/18 19:59	17060-07-0	
Toluene-d8 (S)	102	%	80-115		1		04/20/18 19:59	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 19:59		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-60R-201804 **Lab ID: 60268487007** Collected: 04/17/18 12:55 Received: 04/18/18 06:45 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		04/20/18 20:13	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 20:13	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 20:13	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 20:13	75-25-2	
Bromomethane	**0.30J**	ug/L	5.0	0.16	1		04/20/18 20:13	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 20:13	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 20:13	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 20:13	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 20:13	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 20:13	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 20:13	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 20:13	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 20:13	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 20:13	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 20:13	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 20:13	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 20:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 20:13	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 20:13	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 20:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 20:13	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 20:13	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 20:13	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 20:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 20:13	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 20:13	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 20:13	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 20:13	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 20:13	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 20:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 20:13	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 20:13	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 20:13	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 20:13	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-119		1		04/20/18 20:13	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/20/18 20:13	17060-07-0	
Toluene-d8 (S)	103	%	80-115		1		04/20/18 20:13	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 20:13		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-61R-201804 **Lab ID: 60268487008** Collected: 04/17/18 14:00 Received: 04/18/18 06:45 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		04/20/18 21:51	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 21:51	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 21:51	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 21:51	75-25-2	
Bromomethane	**0.80J**	ug/L	5.0	0.16	1		04/20/18 21:51	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 21:51	78-93-3	
Carbon disulfide	**0.46J**	ug/L	5.0	0.12	1		04/20/18 21:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 21:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 21:51	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 21:51	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 21:51	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 21:51	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 21:51	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 21:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 21:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 21:51	75-35-4	
cis-1,2-Dichloroethene	**1.9**	ug/L	1.0	0.080	1		04/20/18 21:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 21:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 21:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 21:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 21:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 21:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 21:51	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 21:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	**0.93J**	ug/L	10.0	0.42	1		04/20/18 21:51	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 21:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 21:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 21:51	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 21:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 21:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 21:51	79-00-5	
Trichloroethene	**4.0**	ug/L	1.0	0.17	1		04/20/18 21:51	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 21:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 21:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-119		1		04/20/18 21:51	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/20/18 21:51	17060-07-0	
Toluene-d8 (S)	104	%	80-115		1		04/20/18 21:51	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 21:51		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-62R-201804 **Lab ID: 60268487009** Collected: 04/17/18 15:10 Received: 04/18/18 06:45 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		04/20/18 20:27	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 20:27	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 20:27	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 20:27	75-25-2	
Bromomethane	**0.46J**	ug/L	5.0	0.16	1		04/20/18 20:27	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 20:27	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 20:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 20:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 20:27	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 20:27	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 20:27	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 20:27	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 20:27	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 20:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 20:27	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 20:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 20:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 20:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 20:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 20:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 20:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 20:27	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 20:27	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 20:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 20:27	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 20:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 20:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 20:27	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 20:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 20:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 20:27	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 20:27	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 20:27	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 20:27	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-119		1		04/20/18 20:27	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/20/18 20:27	17060-07-0	
Toluene-d8 (S)	103	%	80-115		1		04/20/18 20:27	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 20:27		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-194-201804 **Lab ID: 60268487010** Collected: 04/17/18 16:00 Received: 04/18/18 06:45 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		04/20/18 20:41	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 20:41	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 20:41	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 20:41	75-25-2	
Bromomethane	**0.37J**	ug/L	5.0	0.16	1		04/20/18 20:41	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 20:41	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 20:41	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 20:41	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 20:41	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 20:41	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 20:41	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 20:41	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 20:41	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 20:41	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 20:41	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 20:41	75-35-4	
cis-1,2-Dichloroethene	**0.57J**	ug/L	1.0	0.080	1		04/20/18 20:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 20:41	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 20:41	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 20:41	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 20:41	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 20:41	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 20:41	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 20:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 20:41	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 20:41	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 20:41	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 20:41	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 20:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 20:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 20:41	79-00-5	
Trichloroethene	**9.4**	ug/L	1.0	0.17	1		04/20/18 20:41	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 20:41	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 20:41	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-119		1		04/20/18 20:41	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/20/18 20:41	17060-07-0	
Toluene-d8 (S)	103	%	80-115		1		04/20/18 20:41	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 20:41		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: TMW-11-201804 **Lab ID: 60268487011** Collected: 04/17/18 12:50 Received: 04/18/18 06:45 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		04/20/18 21:09	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 21:09	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 21:09	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 21:09	75-25-2	
Bromomethane	**0.42J**	ug/L	5.0	0.16	1		04/20/18 21:09	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 21:09	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 21:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 21:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 21:09	108-90-7	R1
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 21:09	75-00-3	M1,R1
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 21:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 21:09	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 21:09	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 21:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 21:09	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 21:09	75-35-4	R1
cis-1,2-Dichloroethene	**1.2**	ug/L	1.0	0.080	1		04/20/18 21:09	156-59-2	
trans-1,2-Dichloroethene	**0.22J**	ug/L	1.0	0.20	1		04/20/18 21:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 21:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 21:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 21:09	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 21:09	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 21:09	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 21:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 21:09	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 21:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 21:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 21:09	127-18-4	R1
Toluene	**0.43J**	ug/L	1.0	0.17	1		04/20/18 21:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 21:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 21:09	79-00-5	
Trichloroethene	**0.67J**	ug/L	1.0	0.17	1		04/20/18 21:09	79-01-6	
Vinyl chloride	**0.59J**	ug/L	1.0	0.13	1		04/20/18 21:09	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 21:09	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-119		1		04/20/18 21:09	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/20/18 21:09	17060-07-0	
Toluene-d8 (S)	104	%	80-115		1		04/20/18 21:09	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 21:09		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-50R-201804 **Lab ID: 60268487012** Collected: 04/17/18 14:45 Received: 04/18/18 06:45 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		04/20/18 20:55	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 20:55	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 20:55	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 20:55	75-25-2	
Bromomethane	**0.38J**	ug/L	5.0	0.16	1		04/20/18 20:55	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 20:55	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 20:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 20:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 20:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 20:55	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 20:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 20:55	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 20:55	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 20:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 20:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 20:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 20:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 20:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 20:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 20:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 20:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 20:55	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 20:55	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 20:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 20:55	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 20:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 20:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 20:55	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 20:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 20:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 20:55	79-00-5	
Trichloroethene	**0.61J**	ug/L	1.0	0.17	1		04/20/18 20:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 20:55	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 20:55	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-119		1		04/20/18 20:55	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/20/18 20:55	17060-07-0	
Toluene-d8 (S)	103	%	80-115		1		04/20/18 20:55	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 20:55		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-176-201804 **Lab ID: 60268487013** Collected: 04/17/18 13:50 Received: 04/18/18 06:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**33.2**	ug/L	10.0	1.9	1		04/21/18 01:26	67-64-1	
Benzene	**0.27J**	ug/L	1.0	0.060	1		04/21/18 01:26	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 01:26	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 01:26	75-25-2	
Bromomethane	**1.5J**	ug/L	5.0	0.16	1		04/21/18 01:26	74-83-9	
2-Butanone (MEK)	**1.7J**	ug/L	10.0	0.59	1		04/21/18 01:26	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 01:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 01:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 01:26	108-90-7	
Chloroethane	**0.31J**	ug/L	1.0	0.15	1		04/21/18 01:26	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 01:26	67-66-3	
Chloromethane	**0.16J**	ug/L	1.0	0.080	1		04/21/18 01:26	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 01:26	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 01:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/21/18 01:26	107-06-2	
1,1-Dichloroethene	**2.8**	ug/L	1.0	0.20	1		04/21/18 01:26	75-35-4	
cis-1,2-Dichloroethene	**105**	ug/L	1.0	0.080	1		04/21/18 01:26	156-59-2	
trans-1,2-Dichloroethene	**1.6**	ug/L	1.0	0.20	1		04/21/18 01:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 01:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 01:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 01:26	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 01:26	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 01:26	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 01:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 01:26	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 01:26	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 01:26	79-34-5	
Tetrachloroethene	**0.17J**	ug/L	1.0	0.10	1		04/21/18 01:26	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 01:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 01:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 01:26	79-00-5	
Trichloroethene	**426**	ug/L	10.0	1.7	10		04/25/18 14:51	79-01-6	
Vinyl chloride	**1.1**	ug/L	1.0	0.13	1		04/21/18 01:26	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 01:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 01:26	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/21/18 01:26	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/21/18 01:26	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 01:26		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: EB-01-201804 **Lab ID: 60268487014** Collected: 04/17/18 16:10 Received: 04/18/18 06:45 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		04/21/18 01:41	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 01:41	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 01:41	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 01:41	75-25-2	
Bromomethane	**1.5J**	ug/L	5.0	0.16	1		04/21/18 01:41	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 01:41	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 01:41	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 01:41	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 01:41	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 01:41	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 01:41	67-66-3	
Chloromethane	**0.10J**	ug/L	1.0	0.080	1		04/21/18 01:41	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 01:41	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 01:41	75-34-3	
1,2-Dichloroethane	**0.25J**	ug/L	1.0	0.12	1		04/21/18 01:41	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 01:41	75-35-4	
cis-1,2-Dichloroethene	**0.18J**	ug/L	1.0	0.080	1		04/21/18 01:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 01:41	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 01:41	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 01:41	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 01:41	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 01:41	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 01:41	591-78-6	
Methylene chloride	**0.46J**	ug/L	1.0	0.15	1		04/21/18 01:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 01:41	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 01:41	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 01:41	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 01:41	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 01:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 01:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 01:41	79-00-5	
Trichloroethene	**0.50J**	ug/L	1.0	0.17	1		04/21/18 01:41	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 01:41	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 01:41	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 01:41	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 01:41	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 01:41	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 01:41		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-63R-201804 **Lab ID: 60268487015** Collected: 04/17/18 16:20 Received: 04/18/18 06:45 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		04/21/18 01:56	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 01:56	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 01:56	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 01:56	75-25-2	
Bromomethane	**1.4J**	ug/L	5.0	0.16	1		04/21/18 01:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 01:56	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 01:56	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 01:56	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 01:56	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 01:56	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 01:56	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 01:56	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 01:56	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 01:56	75-34-3	
1,2-Dichloroethane	**0.22J**	ug/L	1.0	0.12	1		04/21/18 01:56	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 01:56	75-35-4	
cis-1,2-Dichloroethene	**0.44J**	ug/L	1.0	0.080	1		04/21/18 01:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 01:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 01:56	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 01:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 01:56	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 01:56	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 01:56	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 01:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 01:56	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 01:56	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 01:56	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 01:56	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 01:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 01:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 01:56	79-00-5	
Trichloroethene	**4.8**	ug/L	1.0	0.17	1		04/21/18 01:56	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 01:56	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 01:56	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 01:56	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 01:56	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 01:56	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 01:56		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: DUP-01-201804 **Lab ID: 60268487016** Collected: 04/17/18 16:20 Received: 04/18/18 06:45 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		04/21/18 02:11	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 02:11	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 02:11	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 02:11	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 02:11	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 02:11	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 02:11	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 02:11	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 02:11	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 02:11	75-00-3	L2
Chloroform	**0.15J**	ug/L	1.0	0.14	1		04/21/18 02:11	67-66-3	
Chloromethane	**0.13J**	ug/L	1.0	0.080	1		04/21/18 02:11	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 02:11	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 02:11	75-34-3	
1,2-Dichloroethane	**0.20J**	ug/L	1.0	0.12	1		04/21/18 02:11	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 02:11	75-35-4	
cis-1,2-Dichloroethene	**0.38J**	ug/L	1.0	0.080	1		04/21/18 02:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 02:11	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 02:11	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 02:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 02:11	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 02:11	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 02:11	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 02:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 02:11	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 02:11	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 02:11	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 02:11	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 02:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 02:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 02:11	79-00-5	
Trichloroethene	**4.9**	ug/L	1.0	0.17	1		04/21/18 02:11	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 02:11	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 02:11	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 02:11	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 02:11	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 02:11	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 02:11		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: MW-40R-201804 **Lab ID: 60268487017** Collected: 04/17/18 16:18 Received: 04/18/18 06:45 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		04/21/18 02:26	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 02:26	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 02:26	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 02:26	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 02:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 02:26	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 02:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 02:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 02:26	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 02:26	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 02:26	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 02:26	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 02:26	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 02:26	75-34-3	
1,2-Dichloroethane	**0.22J**	ug/L	1.0	0.12	1		04/21/18 02:26	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 02:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 02:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 02:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 02:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 02:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 02:26	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 02:26	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 02:26	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 02:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 02:26	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 02:26	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 02:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 02:26	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 02:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 02:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 02:26	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 02:26	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 02:26	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 02:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 02:26	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 02:26	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 02:26	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 02:26		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: EB-02-201804 **Lab ID: 60268487018** Collected: 04/17/18 16:30 Received: 04/18/18 06:45 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		04/21/18 02:41	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 02:41	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 02:41	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 02:41	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 02:41	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 02:41	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 02:41	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 02:41	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 02:41	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 02:41	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 02:41	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 02:41	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 02:41	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 02:41	75-34-3	
1,2-Dichloroethane	**0.23J**	ug/L	1.0	0.12	1		04/21/18 02:41	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 02:41	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 02:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 02:41	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 02:41	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 02:41	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 02:41	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 02:41	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 02:41	591-78-6	
Methylene chloride	**0.47J**	ug/L	1.0	0.15	1		04/21/18 02:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 02:41	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 02:41	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 02:41	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 02:41	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 02:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 02:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 02:41	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 02:41	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 02:41	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 02:41	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/21/18 02:41	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 02:41	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 02:41	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 02:41		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268487

Sample: TB-01-201804 **Lab ID: 60268487019** Collected: 04/17/18 12:10 Received: 04/18/18 06:45 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		04/21/18 02:57	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 02:57	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 02:57	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 02:57	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 02:57	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 02:57	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 02:57	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 02:57	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 02:57	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 02:57	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 02:57	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 02:57	74-87-3	
Dibromochloromethane	**0.22J**	ug/L	1.0	0.21	1		04/21/18 02:57	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 02:57	75-34-3	
1,2-Dichloroethane	**0.22J**	ug/L	1.0	0.12	1		04/21/18 02:57	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 02:57	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 02:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 02:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 02:57	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 02:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 02:57	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 02:57	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 02:57	591-78-6	
Methylene chloride	**0.48J**	ug/L	1.0	0.15	1		04/21/18 02:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 02:57	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 02:57	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 02:57	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 02:57	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 02:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 02:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 02:57	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 02:57	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 02:57	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 02:57	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/21/18 02:57	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 02:57	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 02:57	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 02:57		

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268487

QC Batch: 522579 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268487001, 60268487002, 60268487003, 60268487004, 60268487005, 60268487006, 60268487007, 60268487008, 60268487009, 60268487010, 60268487011, 60268487012

METHOD BLANK: 2139391 Matrix: Water
Associated Lab Samples: 60268487001, 60268487002, 60268487003, 60268487004, 60268487005, 60268487006, 60268487007, 60268487008, 60268487009, 60268487010, 60268487011, 60268487012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/20/18 17:23	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/20/18 17:23	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/20/18 17:23	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/20/18 17:23	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/20/18 17:23	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/20/18 17:23	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/20/18 17:23	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/20/18 17:23	
2-Hexanone	ug/L	ND	10.0	1.2	04/20/18 17:23	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/20/18 17:23	
Acetone	ug/L	ND	10.0	1.9	04/20/18 17:23	
Benzene	ug/L	ND	1.0	0.060	04/20/18 17:23	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/20/18 17:23	
Bromoform	ug/L	ND	1.0	0.070	04/20/18 17:23	
Bromomethane	ug/L	0.47J	5.0	0.16	04/20/18 17:23	
Carbon disulfide	ug/L	ND	5.0	0.12	04/20/18 17:23	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/20/18 17:23	
Chlorobenzene	ug/L	ND	1.0	0.21	04/20/18 17:23	
Chloroethane	ug/L	ND	1.0	0.15	04/20/18 17:23	
Chloroform	ug/L	ND	1.0	0.14	04/20/18 17:23	
Chloromethane	ug/L	ND	1.0	0.080	04/20/18 17:23	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/20/18 17:23	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/20/18 17:23	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/20/18 17:23	
Ethylbenzene	ug/L	ND	1.0	0.18	04/20/18 17:23	
Methylene chloride	ug/L	ND	1.0	0.15	04/20/18 17:23	
Styrene	ug/L	ND	1.0	0.12	04/20/18 17:23	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/20/18 17:23	
Toluene	ug/L	ND	1.0	0.17	04/20/18 17:23	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/20/18 17:23	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/20/18 17:23	
Trichloroethene	ug/L	ND	1.0	0.17	04/20/18 17:23	
Vinyl chloride	ug/L	ND	1.0	0.13	04/20/18 17:23	
Xylene (Total)	ug/L	ND	3.0	0.42	04/20/18 17:23	
1,2-Dichloroethane-d4 (S)	%	99	80-117		04/20/18 17:23	
4-Bromofluorobenzene (S)	%	92	80-119		04/20/18 17:23	
Toluene-d8 (S)	%	103	80-115		04/20/18 17:23	

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.

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268487

LABORATORY CONTROL SAMPLE: 2139392

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.5	97	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	17.5	87	74-121	
1,1,2-Trichloroethane	ug/L	20	20.7	103	83-119	
1,1-Dichloroethane	ug/L	20	18.5	92	85-128	
1,1-Dichloroethene	ug/L	20	22.9	114	85-123	
1,2-Dichloroethane	ug/L	20	19.9	100	77-120	
1,2-Dichloropropane	ug/L	20	18.9	94	81-126	
2-Butanone (MEK)	ug/L	100	94.0	94	65-134	
2-Hexanone	ug/L	100	94.7	95	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	91.7	92	66-139	
Acetone	ug/L	100	97.7	98	62-142	
Benzene	ug/L	20	19.1	95	81-118	
Bromodichloromethane	ug/L	20	20.5	102	85-123	
Bromoform	ug/L	20	22.9	114	83-123	
Bromomethane	ug/L	20	20.4	102	39-149	
Carbon disulfide	ug/L	20	20.6	103	85-124	
Carbon tetrachloride	ug/L	20	21.0	105	85-126	
Chlorobenzene	ug/L	20	20.3	101	87-118	
Chloroethane	ug/L	20	17.0	85	73-134	
Chloroform	ug/L	20	19.1	95	85-119	
Chloromethane	ug/L	20	21.0	105	20-174	
cis-1,2-Dichloroethene	ug/L	20	19.9	99	84-121	
cis-1,3-Dichloropropene	ug/L	20	20.0	100	80-124	
Dibromochloromethane	ug/L	20	23.1	116	83-122	
Ethylbenzene	ug/L	20	20.2	101	80-118	
Methylene chloride	ug/L	20	18.8	94	81-126	
Styrene	ug/L	20	20.6	103	85-120	
Tetrachloroethene	ug/L	20	21.4	107	87-120	
Toluene	ug/L	20	20.7	104	82-118	
trans-1,2-Dichloroethene	ug/L	20	20.1	101	83-121	
trans-1,3-Dichloropropene	ug/L	20	21.1	105	80-122	
Trichloroethene	ug/L	20	20.4	102	82-120	
Vinyl chloride	ug/L	20	22.5	112	74-147	
Xylene (Total)	ug/L	60	61.9	103	81-120	
1,2-Dichloroethane-d4 (S)	%			99	80-117	
4-Bromofluorobenzene (S)	%			95	80-119	
Toluene-d8 (S)	%			104	80-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2139393 2139394

Parameter	Units	60268487001 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	19.4	20.0	97	100	79-135	3	11	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	17.5	17.2	88	86	49-144	2	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	19.4	19.9	97	99	71-124	2	14	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268487

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		2139393			2139394							
Parameter	Units	60268487001 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	17.5	18.2	88	91	77-135	4	12	
1,1-Dichloroethene	ug/L	ND	20	20	20.5	22.0	103	110	77-138	7	14	
1,2-Dichloroethane	ug/L	ND	20	20	18.5	19.2	93	96	47-152	4	27	
1,2-Dichloropropane	ug/L	ND	20	20	18.2	18.4	91	92	74-128	1	13	
2-Butanone (MEK)	ug/L	ND	100	100	89.0	82.0	89	82	60-125	8	17	
2-Hexanone	ug/L	ND	100	100	94.6	85.6	95	86	53-133	10	15	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	93.7	86.9	94	87	62-134	8	15	
Acetone	ug/L	ND	100	100	85.2	79.7	85	80	50-127	7	28	
Benzene	ug/L	ND	20	20	18.3	19.1	91	96	62-138	5	34	
Bromodichloromethane	ug/L	ND	20	20	19.7	20.4	98	102	75-126	4	12	
Bromoform	ug/L	ND	20	20	21.7	21.2	109	106	70-122	3	14	
Bromomethane	ug/L	ND	20	20	18.1	18.8	90	94	41-155	4	42	
Carbon disulfide	ug/L	ND	20	20	17.9	19.5	89	97	70-148	8	14	
Carbon tetrachloride	ug/L	ND	20	20	21.0	21.9	105	110	78-139	4	23	
Chlorobenzene	ug/L	ND	20	20	19.9	20.7	99	103	74-130	4	10	
Chloroethane	ug/L	ND	20	20	15.7	19.4	78	97	67-153	21	27	
Chloroform	ug/L	ND	20	20	18.4	19.1	92	96	75-127	4	12	
Chloromethane	ug/L	ND	20	20	12.3	14.7	62	73	22-188	17	68	
cis-1,2-Dichloroethene	ug/L	ND	20	20	18.6	19.4	93	97	69-135	4	15	
cis-1,3-Dichloropropene	ug/L	ND	20	20	19.8	19.5	99	98	61-129	1	11	
Dibromochloromethane	ug/L	ND	20	20	21.4	21.9	107	109	60-133	2	14	
Ethylbenzene	ug/L	ND	20	20	20.5	21.0	103	105	60-140	2	32	
Methylene chloride	ug/L	ND	20	20	17.7	18.8	88	94	72-131	6	16	
Styrene	ug/L	ND	20	20	20.7	21.2	104	106	59-142	2	12	
Tetrachloroethene	ug/L	ND	20	20	21.7	21.7	108	109	72-136	0	15	
Toluene	ug/L	ND	20	20	20.1	20.7	100	104	65-135	3	32	
trans-1,2-Dichloroethene	ug/L	ND	20	20	19.2	19.8	96	99	75-137	3	15	
trans-1,3-Dichloropropene	ug/L	ND	20	20	20.4	20.2	102	101	60-128	1	13	
Trichloroethene	ug/L	ND	20	20	19.9	20.5	99	102	66-136	3	15	
Vinyl chloride	ug/L	ND	20	20	15.6	17.6	78	88	65-164	12	16	
Xylene (Total)	ug/L	ND	60	60	62.9	63.4	105	106	69-133	1	31	
1,2-Dichloroethane-d4 (S)	%						99	97	80-117			
4-Bromofluorobenzene (S)	%						93	93	80-119			
Toluene-d8 (S)	%						102	103	80-115			
Preservation pH		1.0			1.0	1.0				0		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		2139395			2139396							
Parameter	Units	60268487011 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	20.4	92	102	79-135	10	11	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	16.2	18.7	81	93	49-144	14	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	18.6	20.8	93	104	71-124	11	14	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268487

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2139395 2139396

Parameter	Units	60268487011 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	17.0	18.4	85	92	77-135	8	12	
1,1-Dichloroethene	ug/L	ND	20	20	19.3	22.5	96	113	77-138	15	14	R1
1,2-Dichloroethane	ug/L	ND	20	20	17.4	19.4	87	97	47-152	10	27	
1,2-Dichloropropane	ug/L	ND	20	20	16.7	18.3	84	92	74-128	9	13	
2-Butanone (MEK)	ug/L	ND	100	100	80.0	90.8	80	91	60-125	13	17	
2-Hexanone	ug/L	ND	100	100	82.7	94.7	83	95	53-133	13	15	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	79.7	90.2	80	90	62-134	12	15	
Acetone	ug/L	ND	100	100	81.8	94.2	82	94	50-127	14	28	
Benzene	ug/L	ND	20	20	17.5	19.1	88	95	62-138	9	34	
Bromodichloromethane	ug/L	ND	20	20	18.5	20.6	93	103	75-126	10	12	
Bromoform	ug/L	ND	20	20	19.9	22.2	99	111	70-122	11	14	
Bromomethane	ug/L	0.42J	20	20	17.4	19.1	85	93	41-155	9	42	
Carbon disulfide	ug/L	ND	20	20	18.1	20.2	90	101	70-148	11	14	
Carbon tetrachloride	ug/L	ND	20	20	19.6	21.7	98	109	78-139	10	23	
Chlorobenzene	ug/L	ND	20	20	18.6	20.9	93	104	74-130	11	10	R1
Chloroethane	ug/L	ND	20	20	18.3	37.5	92	187	67-153	69	27	M1,R1
Chloroform	ug/L	ND	20	20	17.8	19.5	89	98	75-127	9	12	
Chloromethane	ug/L	ND	20	20	13.7	13.9	69	70	22-188	1	68	
cis-1,2-Dichloroethene	ug/L	1.2	20	20	18.9	21.3	88	100	69-135	12	15	
cis-1,3-Dichloropropene	ug/L	ND	20	20	17.3	19.3	87	96	61-129	11	11	
Dibromochloromethane	ug/L	ND	20	20	20.6	22.8	103	114	60-133	10	14	
Ethylbenzene	ug/L	ND	20	20	18.6	20.9	93	105	60-140	12	32	
Methylene chloride	ug/L	ND	20	20	16.5	18.5	82	93	72-131	12	16	
Styrene	ug/L	ND	20	20	18.9	21.1	94	105	59-142	11	12	
Tetrachloroethene	ug/L	ND	20	20	19.0	22.2	95	111	72-136	16	15	R1
Toluene	ug/L	0.43J	20	20	19.4	21.0	95	103	65-135	8	32	
trans-1,2-Dichloroethene	ug/L	0.22J	20	20	18.1	19.7	89	98	75-137	9	15	
trans-1,3-Dichloropropene	ug/L	ND	20	20	18.5	20.4	93	102	60-128	10	13	
Trichloroethene	ug/L	0.67J	20	20	18.8	21.3	90	103	66-136	13	15	
Vinyl chloride	ug/L	0.59J	20	20	16.5	18.2	80	88	65-164	10	16	
Xylene (Total)	ug/L	ND	60	60	56.0	63.1	93	105	69-133	12	31	
1,2-Dichloroethane-d4 (S)	%						98	98	80-117			
4-Bromofluorobenzene (S)	%						94	94	80-119			
Toluene-d8 (S)	%						105	104	80-115			
Preservation pH		1.0			1.0	1.0				0		

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268487

QC Batch: 522630 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268487013, 60268487014, 60268487015, 60268487016, 60268487017, 60268487018, 60268487019

METHOD BLANK: 2139687 Matrix: Water
Associated Lab Samples: 60268487013, 60268487014, 60268487015, 60268487016, 60268487017, 60268487018, 60268487019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/21/18 01:10	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/21/18 01:10	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/21/18 01:10	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/21/18 01:10	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/21/18 01:10	
1,2-Dichloroethane	ug/L	0.21J	1.0	0.12	04/21/18 01:10	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/21/18 01:10	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/21/18 01:10	
2-Hexanone	ug/L	ND	10.0	1.2	04/21/18 01:10	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/21/18 01:10	
Acetone	ug/L	ND	10.0	1.9	04/21/18 01:10	
Benzene	ug/L	ND	1.0	0.060	04/21/18 01:10	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/21/18 01:10	
Bromoform	ug/L	ND	1.0	0.070	04/21/18 01:10	
Bromomethane	ug/L	ND	5.0	0.16	04/21/18 01:10	
Carbon disulfide	ug/L	ND	5.0	0.12	04/21/18 01:10	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/21/18 01:10	
Chlorobenzene	ug/L	ND	1.0	0.21	04/21/18 01:10	
Chloroethane	ug/L	ND	1.0	0.15	04/21/18 01:10	
Chloroform	ug/L	ND	1.0	0.14	04/21/18 01:10	
Chloromethane	ug/L	ND	1.0	0.080	04/21/18 01:10	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/21/18 01:10	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/21/18 01:10	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/21/18 01:10	
Ethylbenzene	ug/L	ND	1.0	0.18	04/21/18 01:10	
Methylene chloride	ug/L	ND	1.0	0.15	04/21/18 01:10	
Styrene	ug/L	ND	1.0	0.12	04/21/18 01:10	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/21/18 01:10	
Toluene	ug/L	ND	1.0	0.17	04/21/18 01:10	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/21/18 01:10	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/21/18 01:10	
Trichloroethene	ug/L	ND	1.0	0.17	04/21/18 01:10	
Vinyl chloride	ug/L	ND	1.0	0.13	04/21/18 01:10	
Xylene (Total)	ug/L	ND	3.0	0.42	04/21/18 01:10	
1,2-Dichloroethane-d4 (S)	%	101	80-117		04/21/18 01:10	
4-Bromofluorobenzene (S)	%	100	80-119		04/21/18 01:10	
Toluene-d8 (S)	%	100	80-115		04/21/18 01:10	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268487

LABORATORY CONTROL SAMPLE: 2139688

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.6	98	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	20.0	100	74-121	
1,1,2-Trichloroethane	ug/L	20	21.2	106	83-119	
1,1-Dichloroethane	ug/L	20	19.3	97	85-128	
1,1-Dichloroethene	ug/L	20	19.8	99	85-123	
1,2-Dichloroethane	ug/L	20	20.9	104	77-120	
1,2-Dichloropropane	ug/L	20	19.7	99	81-126	
2-Butanone (MEK)	ug/L	100	102	102	65-134	
2-Hexanone	ug/L	100	100	100	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.9	97	66-139	
Acetone	ug/L	100	98.4	98	62-142	
Benzene	ug/L	20	19.6	98	81-118	
Bromodichloromethane	ug/L	20	20.8	104	85-123	
Bromoform	ug/L	20	20.5	103	83-123	
Bromomethane	ug/L	20	17.4	87	39-149	
Carbon disulfide	ug/L	20	17.7	88	85-124	
Carbon tetrachloride	ug/L	20	20.2	101	85-126	
Chlorobenzene	ug/L	20	21.4	107	87-118	
Chloroethane	ug/L	20	14.0	70	73-134	L2
Chloroform	ug/L	20	19.9	99	85-119	
Chloromethane	ug/L	20	16.4	82	20-174	
cis-1,2-Dichloroethene	ug/L	20	19.4	97	84-121	
cis-1,3-Dichloropropene	ug/L	20	19.4	97	80-124	
Dibromochloromethane	ug/L	20	20.7	103	83-122	
Ethylbenzene	ug/L	20	20.2	101	80-118	
Methylene chloride	ug/L	20	19.3	97	81-126	
Styrene	ug/L	20	19.8	99	85-120	
Tetrachloroethene	ug/L	20	19.8	99	87-120	
Toluene	ug/L	20	20.0	100	82-118	
trans-1,2-Dichloroethene	ug/L	20	19.4	97	83-121	
trans-1,3-Dichloropropene	ug/L	20	20.5	102	80-122	
Trichloroethene	ug/L	20	22.1	111	82-120	
Vinyl chloride	ug/L	20	18.5	92	74-147	
Xylene (Total)	ug/L	60	59.2	99	81-120	
1,2-Dichloroethane-d4 (S)	%			99	80-117	
4-Bromofluorobenzene (S)	%			99	80-119	
Toluene-d8 (S)	%			100	80-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2139689 2139690

Parameter	Units	60268532011 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	21.2	17.9	106	90	79-135	17	11	R1
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	20.4	17.2	102	86	49-144	17	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	20.9	17.5	105	87	71-124	18	14	R1

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268487

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		2139689			2139690							
Parameter	Units	60268532011 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	17.4	101	87	77-135	15	12	R1
1,1-Dichloroethene	ug/L	ND	20	20	21.6	17.5	108	88	77-138	21	14	R1
1,2-Dichloroethane	ug/L	0.23J	20	20	20.8	17.9	103	89	47-152	15	27	
1,2-Dichloropropane	ug/L	ND	20	20	19.8	16.8	99	84	74-128	16	13	R1
2-Butanone (MEK)	ug/L	ND	100	100	96.7	82.5	97	83	60-125	16	17	
2-Hexanone	ug/L	ND	100	100	96.2	79.7	96	80	53-133	19	15	R1
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	95.0	79.2	95	79	62-134	18	15	R1
Acetone	ug/L	ND	100	100	96.9	79.9	97	80	50-127	19	28	
Benzene	ug/L	ND	20	20	20.6	17.5	103	88	62-138	16	34	
Bromodichloromethane	ug/L	ND	20	20	20.6	17.5	103	88	75-126	16	12	R1
Bromoform	ug/L	ND	20	20	19.5	16.8	97	84	70-122	15	14	R1
Bromomethane	ug/L	1.4J	20	20	17.8	16.8	82	77	41-155	6	42	
Carbon disulfide	ug/L	ND	20	20	19.7	17.0	99	85	70-148	15	14	R1
Carbon tetrachloride	ug/L	ND	20	20	22.5	18.5	113	93	78-139	19	23	
Chlorobenzene	ug/L	ND	20	20	21.1	17.6	106	88	74-130	18	10	R1
Chloroethane	ug/L	ND	20	20	16.3	13.7	81	68	67-153	17	27	
Chloroform	ug/L	ND	20	20	20.2	17.5	101	87	75-127	14	12	R1
Chloromethane	ug/L	ND	20	20	18.4	16.1	92	81	22-188	13	68	
cis-1,2-Dichloroethene	ug/L	ND	20	20	20.0	16.9	100	85	69-135	17	15	R1
cis-1,3-Dichloropropene	ug/L	ND	20	20	18.6	15.6	93	78	61-129	17	11	R1
Dibromochloromethane	ug/L	ND	20	20	20.4	17.3	102	87	60-133	16	14	R1
Ethylbenzene	ug/L	ND	20	20	20.1	16.6	100	83	60-140	19	32	
Methylene chloride	ug/L	ND	20	20	19.8	16.9	99	85	72-131	16	16	
Styrene	ug/L	ND	20	20	14.7	13.0	74	65	59-142	12	12	
Tetrachloroethene	ug/L	ND	20	20	20.1	16.2	100	81	72-136	21	15	R1
Toluene	ug/L	ND	20	20	20.3	16.9	102	85	65-135	18	32	
trans-1,2-Dichloroethene	ug/L	ND	20	20	20.7	17.6	104	88	75-137	16	15	R1
trans-1,3-Dichloropropene	ug/L	ND	20	20	19.6	16.3	98	81	60-128	18	13	R1
Trichloroethene	ug/L	ND	20	20	21.5	18.3	107	91	66-136	16	15	R1
Vinyl chloride	ug/L	ND	20	20	21.3	18.6	107	93	65-164	14	16	
Xylene (Total)	ug/L	ND	60	60	59.7	48.7	99	81	69-133	20	31	
1,2-Dichloroethane-d4 (S)	%						100	99	80-117			
4-Bromofluorobenzene (S)	%						97	100	80-119			
Toluene-d8 (S)	%						99	99	80-115			
Preservation pH		1.0			1.0	1.0				0		

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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9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268487

QC Batch: 523156
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268487013

METHOD BLANK: 2141662
Matrix: Water
Associated Lab Samples: 60268487013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichloroethene	ug/L	ND	1.0	0.17	04/25/18 10:26	
1,2-Dichloroethane-d4 (S)	%	93	80-117		04/25/18 10:26	
4-Bromofluorobenzene (S)	%	99	80-119		04/25/18 10:26	
Toluene-d8 (S)	%	96	80-115		04/25/18 10:26	

LABORATORY CONTROL SAMPLE: 2141663

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/L	20	20.8	104	82-120	
1,2-Dichloroethane-d4 (S)	%			96	80-117	
4-Bromofluorobenzene (S)	%			98	80-119	
Toluene-d8 (S)	%			97	80-115	

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.

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QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60268487

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: 523156

[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.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60268487

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60268487001	**MW-196-201804**	EPA 5030B/8260	522579		
60268487002	**MW-195-201804**	EPA 5030B/8260	522579		
60268487003	**DUP-02-201804**	EPA 5030B/8260	522579		
60268487004	**MW-68-201804**	EPA 5030B/8260	522579		
60268487005	**TMW-20-201804**	EPA 5030B/8260	522579		
60268487006	**TMW-29-201804**	EPA 5030B/8260	522579		
60268487007	**MW-60R-201804**	EPA 5030B/8260	522579		
60268487008	**MW-61R-201804**	EPA 5030B/8260	522579		
60268487009	**MW-62R-201804**	EPA 5030B/8260	522579		
60268487010	**MW-194-201804**	EPA 5030B/8260	522579		
60268487011	**TMW-11-201804**	EPA 5030B/8260	522579		
60268487012	**MW-50R-201804**	EPA 5030B/8260	522579		
60268487013	**MW-176-201804**	EPA 5030B/8260	522630		
60268487013	**MW-176-201804**	EPA 5030B/8260	523156		
60268487014	**EB-01-201804**	EPA 5030B/8260	522630		
60268487015	**MW-63R-201804**	EPA 5030B/8260	522630		
60268487016	**DUP-01-201804**	EPA 5030B/8260	522630		
60268487017	**MW-40R-201804**	EPA 5030B/8260	522630		
60268487018	**EB-02-201804**	EPA 5030B/8260	522630		
60268487019	**TB-01-201804**	EPA 5030B/8260	522630		

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Sample Condition Upon Receipt

WO# : 60268487

60268487

Client Name: 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: 301 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 3.8 **Corr. Factor** +1.0 **Corrected** 4.8

Date and initials of person examining contents: JB 4/19/19

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	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks:		
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	
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: 2018.04.19 14:21:07 -05'00' 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

Section A Required Client Information:

Company: ~~Environ~~ Ramboll
Address: 7500 College Blvd., Ste. 925
Overland Park, KS 66210
Email To: ~~victoriestreet@environcorp.com~~
Phone: 913-553-5926 Fax:
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: ~~Wendy Stonestreet~~ Tamara House-Knight
Copy To: ~~Tammy Gleason~~
Purchase Order No.: NA
Project Name: Fort Smith, AR
Project Number:

Section C Invoice Information:

Attention: ~~Tammy Gleason~~ Tamara House Knight
Company Name: Environ
Address: ~~HA 250 Monroe Ave. NW Grand Rapids~~ 124 W. Capitol Ave
Pace Quote Reference: ~~Michigan, 49503~~ Little Rock, AR 72201
Pace Project Manager: ~~Colleen Clyne~~ Richard Mannz
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	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	8260 VOCs	Alkalinity	TOC	Chloride, Sulfate	8015 Chloroethanol (Pace Dallas)	8010-Iron/Mn	Ferric Iron calc. (send field Ferrous)	Ammonia	Nitrate+Nitrite	Total Phosphate (Pace Dallas)	Sulfide	CO2 Calc (Alkalinity + field pH)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60268487
1	MW-196-201804	WT	G			4/17/18	1210		3				3					X												(6) DGH
2	MW-196-201804-MS/MSD	"	"			"	1210		"				"					"												-
3	MW-195-201804						1350																								(7) DGH
4	DUP-02-201804						1350																								
5	MW-68-201804						1515																								
6	TMW-20-201804						1245																								
7	TMW-29-201804						1500																								
8	MW-60R-201804						1255																								
9	MW-61R-201804						1400																								
10	MW-62R-201804						1510																								
11	MW-194-201804						1600																								(6) DGH
12	TMW-11-201804						1250																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Haley Anlers / Ramboll	4/17/18	1800		4/18	0645	4.8 Y Y Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Haley Anlers
SIGNATURE of SAMPLER: Haley Anlers
DATE Signed (MM/DD/YY): 4/17/18

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

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

Section A Required Client Information:

Company:	~~Environ~~ Ramboll
Address:	7500 College Blvd., Ste. 925
	Overland Park, KS 66210
Email To:	~~wstonestreet@environcorp.com~~
Phone: 913-553-5926	Fax:
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	~~Wendy Stonestreet~~ 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:	
Address:	124 W. Capitol Ave
Pace Quote Reference:	Little Rock, AR 72201
Pace Project Manager:	~~Colleen Clyne~~ Richard Mann
Pace Profile #:	7444, line 1

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

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	8260 VOCs	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	TMW-11-201804-MS/MSD	WT	G			4/17/18	1250		3				3						X						60268487
2	MW-50R-201804						1445																		(3) D6H 012
3	MW-176-201804						1350																		013
4	EB-01-201804						1610																		014
5	MW-63R-201804						1620																		015
6	DUP-01-201804						1620																		016
7	MW-40R-201804						1618																		017
8	EB-02-201804						1630																		018
9	TB-01-201804																								(2) D6H TO 019
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Level IV data package required	Haley Anlers/Ramboll	4/17/18	1800		4/18	0645

SAMPLE CONDITIONS			
4.8	X	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: Haley Anlers

SIGNATURE of SAMPLER: Haley Anlers DATE Signed (MM/DD/YY): 4/17/18

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

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

April 27, 2018

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

RE: Project: FORT SMITH, AR
Pace Project No.: 60268532

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on April 19, 2018. 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: Kristen Drucquer, Ramboll
Tamara House-Knight, Ramboll Environ
M. Wilson

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CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60268532

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.: 60268532

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60268532001	MW-99-201804	Water	04/18/18 09:30	04/19/18 08:35
60268532002	MW-184-201804	Water	04/18/18 11:05	04/19/18 08:35
60268532003	MW-98-201804	Water	04/18/18 12:40	04/19/18 08:35
60268532004	TMW-24-201804	Water	04/18/18 14:00	04/19/18 08:35
60268532005	MW-183-201804	Water	04/18/18 15:25	04/19/18 08:35
60268532006	IW-73-201804	Water	04/18/18 09:20	04/19/18 08:35
60268532007	IW-77-201804	Water	04/18/18 10:50	04/19/18 08:35
60268532008	RW-69-201804	Water	04/18/18 12:50	04/19/18 08:35
60268532009	MW-26-201804	Water	04/18/18 13:50	04/19/18 08:35
60268532010	MW-187-201804	Water	04/18/18 15:15	04/19/18 08:35
60268532011	ITMW-20-201804	Water	04/18/18 08:50	04/19/18 08:35
60268532012	MW-175-201804	Water	04/18/18 09:40	04/19/18 08:35
60268532013	MW-55R-201804	Water	04/18/18 11:22	04/19/18 08:35
60268532014	DUP-05-201804	Water	04/18/18 11:22	04/19/18 08:35
60268532015	MW-46R-201804	Water	04/18/18 13:25	04/19/18 08:35
60268532016	MW-178-201804	Water	04/18/18 14:15	04/19/18 08:35
60268532017	TMW-27-201804	Water	04/18/18 16:10	04/19/18 08:35
60268532018	MW-39R-201804	Water	04/18/18 09:40	04/19/18 08:35
60268532019	TMW-23-201804	Water	04/18/18 11:25	04/19/18 08:35
60268532020	TMW-10-201804	Water	04/18/18 13:10	04/19/18 08:35
60268532021	TMW-22-201804	Water	04/18/18 14:50	04/19/18 08:35
60268532022	TMW-14-201804	Water	04/18/18 09:30	04/19/18 08:35
60268532023	DUP-03-201804	Water	04/18/18 09:35	04/19/18 08:35
60268532024	TMW-12-201804	Water	04/18/18 10:42	04/19/18 08:35
60268532025	MW-190-201804	Water	04/18/18 13:50	04/19/18 08:35
60268532026	MW-191-201804	Water	04/18/18 15:10	04/19/18 08:35
60268532027	MW-192-201804	Water	04/18/18 16:40	04/19/18 08:35
60268532028	MW-84-201804	Water	04/18/18 16:55	04/19/18 08:35
60268532029	TMW-21-201804	Water	04/18/18 16:05	04/19/18 08:35
60268532030	TMW-32-201804	Water	04/18/18 16:30	04/19/18 08:35
60268532031	EB-03-201804	Water	04/18/18 17:00	04/19/18 08:35
60268532032	EB-04-201804	Water	04/18/18 17:15	04/19/18 08:35
60268532033	TB-02-201804	Water	04/18/18 08:50	04/19/18 08:35
60268532034	TB-03-201804	Water	04/18/18 08:50	04/19/18 08:35

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60268532

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60268532001	MW-99-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532002	MW-184-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532003	MW-98-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532004	TMW-24-201804	EPA 5030B/8260	JTK, PGH	38	PASI-K
60268532005	MW-183-201804	EPA 5030B/8260	JTK, PGH	38	PASI-K
60268532006	IW-73-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532007	IW-77-201804	EPA 5030B/8260	PGH	38	PASI-K
60268532008	RW-69-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532009	MW-26-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532010	MW-187-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532011	ITMW-20-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532012	MW-175-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532013	MW-55R-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532014	DUP-05-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532015	MW-46R-201804	EPA 5030B/8260	JTK, PGH	38	PASI-K
60268532016	MW-178-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532017	TMW-27-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532018	MW-39R-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532019	TMW-23-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532020	TMW-10-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532021	TMW-22-201804	EPA 5030B/8260	JTK, PGH	38	PASI-K
60268532022	TMW-14-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532023	DUP-03-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532024	TMW-12-201804	EPA 5030B/8260	JTK, PGH	38	PASI-K
60268532025	MW-190-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532026	MW-191-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532027	MW-192-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532028	MW-84-201804	EPA 5030B/8260	PGH	38	PASI-K
60268532029	TMW-21-201804	EPA 5030B/8260	JTK, PGH	38	PASI-K
60268532030	TMW-32-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532031	EB-03-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532032	EB-04-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532033	TB-02-201804	EPA 5030B/8260	JTK	38	PASI-K
60268532034	TB-03-201804	EPA 5030B/8260	JTK	38	PASI-K

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60268532

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 27, 2018

General Information:
34 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: 522628

B: Analyte was detected in the associated method blank.
- BLANK for HBN 522628 [MSV/8880 (Lab ID: 2139660)
  - 1,2-Dichloroethane
  - Chloromethane

QC Batch: 522630

B: Analyte was detected in the associated method blank.
- BLANK for HBN 522630 [MSV/8880 (Lab ID: 2139687)
  - 1,2-Dichloroethane

QC Batch: 522636

B: Analyte was detected in the associated method blank.
- BLANK for HBN 522636 [MSV/8880 (Lab ID: 2139748)
  - 1,2-Dichloroethane
  - Bromomethane
  - Chloromethane

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

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60268532

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 27, 2018

QC Batch: 522628

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- LCS (Lab ID: 2139661)
  - Chloroethane

QC Batch: 522630

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- LCS (Lab ID: 2139688)
  - Chloroethane

QC Batch: 522636

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- LCS (Lab ID: 2139749)
  - Chloroethane

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

QC Batch: 522628

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

QC Batch: 522630

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60268532011

R1: RPD value was outside control limits.

- MSD (Lab ID: 2139690)
  - 1,1,1-Trichloroethane
  - 1,1,2-Trichloroethane
  - 1,1-Dichloroethane
  - 1,1-Dichloroethene
  - 1,2-Dichloropropane
  - 2-Hexanone
  - 4-Methyl-2-pentanone (MIBK)
  - Bromodichloromethane
  - Bromoform
  - Carbon disulfide
  - Chlorobenzene
  - Chloroform
  - Dibromochloromethane
  - Tetrachloroethene
  - Trichloroethene
  - cis-1,2-Dichloroethene
  - cis-1,3-Dichloropropene
  - trans-1,2-Dichloroethene
  - trans-1,3-Dichloropropene

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60268532

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 27, 2018

QC Batch: 522636

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

QC Batch: 523154

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

QC Batch: 523156

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, AR
Pace Project No.: 60268532

Sample: MW-99-201804 **Lab ID: 60268532001** Collected: 04/18/18 09:30 Received: 04/19/18 08:35 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		04/20/18 21:53	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 21:53	71-43-2	
Bromodichloromethane	**0.41J**	ug/L	1.0	0.19	1		04/20/18 21:53	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 21:53	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 21:53	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 21:53	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 21:53	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 21:53	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 21:53	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 21:53	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 21:53	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 21:53	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 21:53	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 21:53	75-34-3	
1,2-Dichloroethane	**0.22J**	ug/L	1.0	0.12	1		04/20/18 21:53	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 21:53	75-35-4	
cis-1,2-Dichloroethene	**0.12J**	ug/L	1.0	0.080	1		04/20/18 21:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 21:53	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 21:53	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 21:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 21:53	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 21:53	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 21:53	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 21:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 21:53	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 21:53	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 21:53	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 21:53	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 21:53	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 21:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 21:53	79-00-5	
Trichloroethene	**1.3**	ug/L	1.0	0.17	1		04/20/18 21:53	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 21:53	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 21:53	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/20/18 21:53	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/20/18 21:53	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/20/18 21:53	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 21:53		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-184-201804 **Lab ID: 60268532002** Collected: 04/18/18 11:05 Received: 04/19/18 08:35 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		04/20/18 22:08	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 22:08	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 22:08	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 22:08	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 22:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 22:08	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 22:08	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 22:08	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 22:08	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 22:08	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 22:08	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 22:08	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 22:08	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 22:08	75-34-3	
1,2-Dichloroethane	**0.24J**	ug/L	1.0	0.12	1		04/20/18 22:08	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 22:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 22:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 22:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 22:08	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 22:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 22:08	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 22:08	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 22:08	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 22:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 22:08	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 22:08	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 22:08	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 22:08	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 22:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 22:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 22:08	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 22:08	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 22:08	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 22:08	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/20/18 22:08	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/20/18 22:08	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/20/18 22:08	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 22:08		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-98-201804 **Lab ID: 60268532003** Collected: 04/18/18 12:40 Received: 04/19/18 08:35 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		04/20/18 22:24	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 22:24	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 22:24	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 22:24	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 22:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 22:24	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 22:24	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 22:24	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 22:24	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 22:24	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 22:24	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 22:24	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 22:24	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 22:24	75-34-3	
1,2-Dichloroethane	**0.24J**	ug/L	1.0	0.12	1		04/20/18 22:24	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 22:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 22:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 22:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 22:24	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 22:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 22:24	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 22:24	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 22:24	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 22:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 22:24	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 22:24	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 22:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 22:24	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 22:24	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 22:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 22:24	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 22:24	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 22:24	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 22:24	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/20/18 22:24	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/20/18 22:24	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/20/18 22:24	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 22:24		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TMW-24-201804 **Lab ID: 60268532004** Collected: 04/18/18 14:00 Received: 04/19/18 08:35 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		04/20/18 22:39	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 22:39	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 22:39	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 22:39	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 22:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 22:39	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 22:39	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 22:39	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 22:39	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 22:39	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 22:39	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 22:39	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 22:39	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 22:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 22:39	107-06-2	
1,1-Dichloroethene	**1.4**	ug/L	1.0	0.20	1		04/20/18 22:39	75-35-4	
cis-1,2-Dichloroethene	**11.9**	ug/L	1.0	0.080	1		04/20/18 22:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 22:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 22:39	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 22:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 22:39	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 22:39	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 22:39	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 22:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 22:39	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 22:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 22:39	79-34-5	
Tetrachloroethene	**0.12J**	ug/L	1.0	0.10	1		04/20/18 22:39	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 22:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 22:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 22:39	79-00-5	
Trichloroethene	**601**	ug/L	10.0	1.7	10		04/25/18 13:41	79-01-6	
Vinyl chloride	**0.25J**	ug/L	1.0	0.13	1		04/20/18 22:39	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 22:39	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/20/18 22:39	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/20/18 22:39	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/20/18 22:39	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 22:39		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-183-201804 **Lab ID: 60268532005** Collected: 04/18/18 15:25 Received: 04/19/18 08:35 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		04/20/18 22:54	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 22:54	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 22:54	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 22:54	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 22:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 22:54	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 22:54	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 22:54	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 22:54	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 22:54	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 22:54	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 22:54	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 22:54	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 22:54	75-34-3	
1,2-Dichloroethane	**0.22J**	ug/L	1.0	0.12	1		04/20/18 22:54	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 22:54	75-35-4	
cis-1,2-Dichloroethene	**0.14J**	ug/L	1.0	0.080	1		04/20/18 22:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 22:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 22:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 22:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 22:54	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 22:54	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 22:54	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 22:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 22:54	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 22:54	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 22:54	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 22:54	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 22:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 22:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 22:54	79-00-5	
Trichloroethene	**1.9**	ug/L	1.0	0.17	1		04/25/18 13:27	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 22:54	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 22:54	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/20/18 22:54	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/20/18 22:54	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/20/18 22:54	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 22:54		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: IW-73-201804 **Lab ID: 60268532006** Collected: 04/18/18 09:20 Received: 04/19/18 08:35 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		04/20/18 23:09	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 23:09	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 23:09	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 23:09	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 23:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 23:09	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 23:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 23:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 23:09	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 23:09	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 23:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 23:09	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 23:09	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 23:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 23:09	107-06-2	
1,1-Dichloroethene	**0.51J**	ug/L	1.0	0.20	1		04/20/18 23:09	75-35-4	
cis-1,2-Dichloroethene	**4.0**	ug/L	1.0	0.080	1		04/20/18 23:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 23:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 23:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 23:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 23:09	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 23:09	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 23:09	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 23:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 23:09	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 23:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 23:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 23:09	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 23:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 23:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 23:09	79-00-5	
Trichloroethene	**176**	ug/L	1.0	0.17	1		04/20/18 23:09	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 23:09	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 23:09	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/20/18 23:09	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/20/18 23:09	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/20/18 23:09	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 23:09		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: IW-77-201804 **Lab ID: 60268532007** Collected: 04/18/18 10:50 Received: 04/19/18 08:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**5.3J**	ug/L	10.0	1.9	1		04/25/18 11:50	67-64-1	
Benzene	**0.10J**	ug/L	1.0	0.060	1		04/25/18 11:50	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/25/18 11:50	75-27-4	
Bromoform	**0.43J**	ug/L	1.0	0.070	1		04/25/18 11:50	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/25/18 11:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/25/18 11:50	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/25/18 11:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/25/18 11:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/25/18 11:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/25/18 11:50	75-00-3	
Chloroform	**0.20J**	ug/L	1.0	0.14	1		04/25/18 11:50	67-66-3	
Chloromethane	**0.091J**	ug/L	1.0	0.080	1		04/25/18 11:50	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/25/18 11:50	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/25/18 11:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/18 11:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/25/18 11:50	75-35-4	
cis-1,2-Dichloroethene	**3.6**	ug/L	1.0	0.080	1		04/25/18 11:50	156-59-2	
trans-1,2-Dichloroethene	**0.50J**	ug/L	1.0	0.20	1		04/25/18 11:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/25/18 11:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/25/18 11:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/25/18 11:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/25/18 11:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/25/18 11:50	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/25/18 11:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/25/18 11:50	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/25/18 11:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/25/18 11:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/25/18 11:50	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/25/18 11:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/25/18 11:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/25/18 11:50	79-00-5	
Trichloroethene	**181**	ug/L	1.0	0.17	1		04/25/18 11:50	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/25/18 11:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/25/18 11:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/25/18 11:50	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	80-117		1		04/25/18 11:50	17060-07-0	
Toluene-d8 (S)	98	%	80-115		1		04/25/18 11:50	2037-26-5	
Preservation pH	**7.0**		0.10	0.10	1		04/25/18 11:50		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: RW-69-201804 **Lab ID: 60268532008** Collected: 04/18/18 12:50 Received: 04/19/18 08:35 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		04/20/18 23:25	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 23:25	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 23:25	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 23:25	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 23:25	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 23:25	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 23:25	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 23:25	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 23:25	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 23:25	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 23:25	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 23:25	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 23:25	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 23:25	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/20/18 23:25	107-06-2	
1,1-Dichloroethene	**0.70J**	ug/L	1.0	0.20	1		04/20/18 23:25	75-35-4	
cis-1,2-Dichloroethene	**5.0**	ug/L	1.0	0.080	1		04/20/18 23:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 23:25	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 23:25	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 23:25	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 23:25	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 23:25	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 23:25	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 23:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 23:25	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 23:25	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 23:25	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 23:25	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 23:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 23:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 23:25	79-00-5	
Trichloroethene	**110**	ug/L	1.0	0.17	1		04/20/18 23:25	79-01-6	
Vinyl chloride	**0.19J**	ug/L	1.0	0.13	1		04/20/18 23:25	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 23:25	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/20/18 23:25	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/20/18 23:25	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/20/18 23:25	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 23:25		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-26-201804 **Lab ID: 60268532009** Collected: 04/18/18 13:50 Received: 04/19/18 08:35 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		04/20/18 23:40	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 23:40	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 23:40	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 23:40	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 23:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 23:40	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 23:40	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 23:40	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 23:40	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 23:40	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 23:40	67-66-3	
Chloromethane	**0.13J**	ug/L	1.0	0.080	1		04/20/18 23:40	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 23:40	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 23:40	75-34-3	
1,2-Dichloroethane	**0.27J**	ug/L	1.0	0.12	1		04/20/18 23:40	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 23:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/20/18 23:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 23:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 23:40	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 23:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 23:40	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 23:40	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 23:40	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 23:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 23:40	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 23:40	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 23:40	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 23:40	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 23:40	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 23:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 23:40	79-00-5	
Trichloroethene	**1.0**	ug/L	1.0	0.17	1		04/20/18 23:40	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 23:40	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 23:40	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/20/18 23:40	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/20/18 23:40	17060-07-0	
Toluene-d8 (S)	102	%	80-115		1		04/20/18 23:40	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 23:40		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-187-201804 **Lab ID: 60268532010** Collected: 04/18/18 15:15 Received: 04/19/18 08:35 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		04/20/18 23:55	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/20/18 23:55	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/20/18 23:55	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/20/18 23:55	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/20/18 23:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/20/18 23:55	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/20/18 23:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/20/18 23:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/20/18 23:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/20/18 23:55	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/20/18 23:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/20/18 23:55	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/20/18 23:55	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/20/18 23:55	75-34-3	
1,2-Dichloroethane	**0.27J**	ug/L	1.0	0.12	1		04/20/18 23:55	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 23:55	75-35-4	
cis-1,2-Dichloroethene	**0.77J**	ug/L	1.0	0.080	1		04/20/18 23:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/20/18 23:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/20/18 23:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/20/18 23:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/20/18 23:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/20/18 23:55	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/20/18 23:55	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/20/18 23:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/20/18 23:55	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/20/18 23:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/20/18 23:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/20/18 23:55	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/20/18 23:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/20/18 23:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/20/18 23:55	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/20/18 23:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/20/18 23:55	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/20/18 23:55	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/20/18 23:55	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/20/18 23:55	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/20/18 23:55	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/20/18 23:55		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: ITMW-20-201804 **Lab ID: 60268532011** Collected: 04/18/18 08:50 Received: 04/19/18 08:35 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		04/21/18 03:12	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 03:12	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 03:12	75-27-4	R1
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 03:12	75-25-2	R1
Bromomethane	**1.4J**	ug/L	5.0	0.16	1		04/21/18 03:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 03:12	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 03:12	75-15-0	R1
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 03:12	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 03:12	108-90-7	R1
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 03:12	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 03:12	67-66-3	R1
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 03:12	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 03:12	124-48-1	R1
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 03:12	75-34-3	R1
1,2-Dichloroethane	**0.23J**	ug/L	1.0	0.12	1		04/21/18 03:12	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 03:12	75-35-4	R1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 03:12	156-59-2	R1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 03:12	156-60-5	R1
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 03:12	78-87-5	R1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 03:12	10061-01-5	R1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 03:12	10061-02-6	R1
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 03:12	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 03:12	591-78-6	R1
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 03:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 03:12	108-10-1	R1
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 03:12	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 03:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 03:12	127-18-4	R1
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 03:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 03:12	71-55-6	R1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 03:12	79-00-5	R1
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 03:12	79-01-6	R1
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 03:12	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 03:12	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 03:12	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 03:12	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 03:12	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 03:12		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-175-201804 **Lab ID: 60268532012** Collected: 04/18/18 09:40 Received: 04/19/18 08:35 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		04/21/18 03:27	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 03:27	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 03:27	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 03:27	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 03:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 03:27	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 03:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 03:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 03:27	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 03:27	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 03:27	67-66-3	
Chloromethane	**0.14J**	ug/L	1.0	0.080	1		04/21/18 03:27	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 03:27	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 03:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/21/18 03:27	107-06-2	
1,1-Dichloroethene	**0.55J**	ug/L	1.0	0.20	1		04/21/18 03:27	75-35-4	
cis-1,2-Dichloroethene	**1.9**	ug/L	1.0	0.080	1		04/21/18 03:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 03:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 03:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 03:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 03:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 03:27	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 03:27	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 03:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 03:27	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 03:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 03:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 03:27	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 03:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 03:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 03:27	79-00-5	
Trichloroethene	**117**	ug/L	1.0	0.17	1		04/21/18 03:27	79-01-6	
Vinyl chloride	**0.15J**	ug/L	1.0	0.13	1		04/21/18 03:27	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 03:27	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/21/18 03:27	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/21/18 03:27	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 03:27	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 03:27		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-55R-201804 **Lab ID: 60268532013** Collected: 04/18/18 11:22 Received: 04/19/18 08:35 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		04/21/18 03:42	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 03:42	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 03:42	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 03:42	75-25-2	
Bromomethane	**1.4J**	ug/L	5.0	0.16	1		04/21/18 03:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 03:42	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 03:42	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 03:42	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 03:42	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 03:42	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 03:42	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 03:42	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 03:42	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 03:42	75-34-3	
1,2-Dichloroethane	**0.24J**	ug/L	1.0	0.12	1		04/21/18 03:42	107-06-2	B
1,1-Dichloroethene	**0.28J**	ug/L	1.0	0.20	1		04/21/18 03:42	75-35-4	
cis-1,2-Dichloroethene	**0.77J**	ug/L	1.0	0.080	1		04/21/18 03:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 03:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 03:42	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 03:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 03:42	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 03:42	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 03:42	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 03:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 03:42	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 03:42	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 03:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 03:42	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 03:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 03:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 03:42	79-00-5	
Trichloroethene	**17.0**	ug/L	1.0	0.17	1		04/21/18 03:42	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 03:42	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 03:42	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/21/18 03:42	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/21/18 03:42	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 03:42	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 03:42		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: DUP-05-201804 **Lab ID: 60268532014** Collected: 04/18/18 11:22 Received: 04/19/18 08:35 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		04/21/18 03:57	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 03:57	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 03:57	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 03:57	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 03:57	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 03:57	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 03:57	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 03:57	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 03:57	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 03:57	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 03:57	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 03:57	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 03:57	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 03:57	75-34-3	
1,2-Dichloroethane	**0.22J**	ug/L	1.0	0.12	1		04/21/18 03:57	107-06-2	B
1,1-Dichloroethene	**0.28J**	ug/L	1.0	0.20	1		04/21/18 03:57	75-35-4	
cis-1,2-Dichloroethene	**0.82J**	ug/L	1.0	0.080	1		04/21/18 03:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 03:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 03:57	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 03:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 03:57	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 03:57	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 03:57	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 03:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 03:57	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 03:57	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 03:57	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 03:57	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 03:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 03:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 03:57	79-00-5	
Trichloroethene	**18.1**	ug/L	1.0	0.17	1		04/21/18 03:57	79-01-6	
Vinyl chloride	**0.16J**	ug/L	1.0	0.13	1		04/21/18 03:57	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 03:57	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 03:57	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/21/18 03:57	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 03:57	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 03:57		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-46R-201804 **Lab ID: 60268532015** Collected: 04/18/18 13:25 Received: 04/19/18 08:35 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		04/21/18 04:13	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 04:13	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 04:13	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 04:13	75-25-2	
Bromomethane	**1.4J**	ug/L	5.0	0.16	1		04/21/18 04:13	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 04:13	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 04:13	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 04:13	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 04:13	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 04:13	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 04:13	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 04:13	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 04:13	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 04:13	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/21/18 04:13	107-06-2	
1,1-Dichloroethene	**1.4**	ug/L	1.0	0.20	1		04/21/18 04:13	75-35-4	
cis-1,2-Dichloroethene	**12.6**	ug/L	1.0	0.080	1		04/21/18 04:13	156-59-2	
trans-1,2-Dichloroethene	**0.40J**	ug/L	1.0	0.20	1		04/21/18 04:13	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 04:13	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 04:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 04:13	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 04:13	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 04:13	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 04:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 04:13	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 04:13	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 04:13	79-34-5	
Tetrachloroethene	**0.13J**	ug/L	1.0	0.10	1		04/21/18 04:13	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 04:13	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 04:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 04:13	79-00-5	
Trichloroethene	**520**	ug/L	10.0	1.7	10		04/25/18 13:55	79-01-6	
Vinyl chloride	**0.56J**	ug/L	1.0	0.13	1		04/21/18 04:13	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 04:13	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 04:13	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 04:13	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 04:13	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 04:13		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-178-201804 **Lab ID: 60268532016** Collected: 04/18/18 14:15 Received: 04/19/18 08:35 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		04/21/18 04:28	67-64-1	
Benzene	**0.21J**	ug/L	1.0	0.060	1		04/21/18 04:28	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 04:28	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 04:28	75-25-2	
Bromomethane	**1.4J**	ug/L	5.0	0.16	1		04/21/18 04:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 04:28	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 04:28	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 04:28	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 04:28	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 04:28	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 04:28	67-66-3	
Chloromethane	**0.11J**	ug/L	1.0	0.080	1		04/21/18 04:28	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 04:28	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 04:28	75-34-3	
1,2-Dichloroethane	**0.22J**	ug/L	1.0	0.12	1		04/21/18 04:28	107-06-2	B
1,1-Dichloroethene	**0.22J**	ug/L	1.0	0.20	1		04/21/18 04:28	75-35-4	
cis-1,2-Dichloroethene	**1.4**	ug/L	1.0	0.080	1		04/21/18 04:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 04:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 04:28	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 04:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 04:28	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 04:28	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 04:28	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 04:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 04:28	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 04:28	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 04:28	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 04:28	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 04:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 04:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 04:28	79-00-5	
Trichloroethene	**5.3**	ug/L	1.0	0.17	1		04/21/18 04:28	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 04:28	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 04:28	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 04:28	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 04:28	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 04:28	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 04:28		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TMW-27-201804 **Lab ID: 60268532017** Collected: 04/18/18 16:10 Received: 04/19/18 08:35 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		04/21/18 04:43	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 04:43	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 04:43	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 04:43	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 04:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 04:43	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 04:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 04:43	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 04:43	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 04:43	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 04:43	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 04:43	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 04:43	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 04:43	75-34-3	
1,2-Dichloroethane	**0.21J**	ug/L	1.0	0.12	1		04/21/18 04:43	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 04:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 04:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 04:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 04:43	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 04:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 04:43	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 04:43	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 04:43	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 04:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 04:43	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 04:43	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 04:43	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 04:43	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 04:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 04:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 04:43	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 04:43	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 04:43	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 04:43	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 04:43	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 04:43	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/21/18 04:43	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 04:43		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-39R-201804 **Lab ID: 60268532018** Collected: 04/18/18 09:40 Received: 04/19/18 08:35 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		04/21/18 04:58	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 04:58	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 04:58	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 04:58	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 04:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 04:58	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 04:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 04:58	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 04:58	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 04:58	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 04:58	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 04:58	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 04:58	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 04:58	75-34-3	
1,2-Dichloroethane	**0.24J**	ug/L	1.0	0.12	1		04/21/18 04:58	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 04:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 04:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 04:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 04:58	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 04:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 04:58	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 04:58	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 04:58	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 04:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 04:58	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 04:58	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 04:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 04:58	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 04:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 04:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 04:58	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 04:58	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 04:58	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 04:58	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 04:58	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 04:58	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 04:58	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 04:58		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TMW-23-201804 **Lab ID: 60268532019** Collected: 04/18/18 11:25 Received: 04/19/18 08:35 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		04/21/18 05:13	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 05:13	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 05:13	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 05:13	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 05:13	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 05:13	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 05:13	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 05:13	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 05:13	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 05:13	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 05:13	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 05:13	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 05:13	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 05:13	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/21/18 05:13	107-06-2	
1,1-Dichloroethene	**0.26J**	ug/L	1.0	0.20	1		04/21/18 05:13	75-35-4	
cis-1,2-Dichloroethene	**1.5**	ug/L	1.0	0.080	1		04/21/18 05:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 05:13	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 05:13	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 05:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 05:13	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 05:13	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 05:13	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 05:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 05:13	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 05:13	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 05:13	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 05:13	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 05:13	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 05:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 05:13	79-00-5	
Trichloroethene	**125**	ug/L	1.0	0.17	1		04/21/18 05:13	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 05:13	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 05:13	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 05:13	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/21/18 05:13	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 05:13	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 05:13		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TMW-10-201804 **Lab ID: 60268532020** Collected: 04/18/18 13:10 Received: 04/19/18 08:35 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		04/21/18 05:28	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 05:28	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 05:28	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 05:28	75-25-2	
Bromomethane	**1.4J**	ug/L	5.0	0.16	1		04/21/18 05:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 05:28	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 05:28	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 05:28	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 05:28	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 05:28	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 05:28	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 05:28	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 05:28	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 05:28	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/21/18 05:28	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 05:28	75-35-4	
cis-1,2-Dichloroethene	**5.2**	ug/L	1.0	0.080	1		04/21/18 05:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 05:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 05:28	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 05:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 05:28	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 05:28	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 05:28	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 05:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 05:28	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 05:28	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 05:28	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 05:28	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 05:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 05:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 05:28	79-00-5	
Trichloroethene	**85.0**	ug/L	1.0	0.17	1		04/21/18 05:28	79-01-6	
Vinyl chloride	**0.46J**	ug/L	1.0	0.13	1		04/21/18 05:28	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 05:28	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 05:28	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 05:28	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 05:28	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 05:28		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TMW-22-201804 **Lab ID: 60268532021** Collected: 04/18/18 14:50 Received: 04/19/18 08:35 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		04/21/18 05:43	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 05:43	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 05:43	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 05:43	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 05:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 05:43	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 05:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 05:43	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 05:43	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 05:43	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 05:43	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 05:43	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 05:43	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 05:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/21/18 05:43	107-06-2	
1,1-Dichloroethene	**0.61J**	ug/L	1.0	0.20	1		04/21/18 05:43	75-35-4	
cis-1,2-Dichloroethene	**20.1**	ug/L	1.0	0.080	1		04/21/18 05:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 05:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 05:43	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 05:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 05:43	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 05:43	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 05:43	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 05:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 05:43	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 05:43	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 05:43	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 05:43	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 05:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 05:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 05:43	79-00-5	
Trichloroethene	**224**	ug/L	5.0	0.85	5		04/25/18 14:09	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 05:43	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 05:43	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 05:43	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 05:43	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 05:43	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 05:43		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TMW-14-201804 **Lab ID: 60268532022** Collected: 04/18/18 09:30 Received: 04/19/18 08:35 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		04/21/18 05:58	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 05:58	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 05:58	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 05:58	75-25-2	
Bromomethane	**1.4J**	ug/L	5.0	0.16	1		04/21/18 05:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 05:58	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 05:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 05:58	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 05:58	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 05:58	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 05:58	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 05:58	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 05:58	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 05:58	75-34-3	
1,2-Dichloroethane	**0.26J**	ug/L	1.0	0.12	1		04/21/18 05:58	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 05:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 05:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 05:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 05:58	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 05:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 05:58	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 05:58	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 05:58	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 05:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 05:58	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 05:58	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 05:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 05:58	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 05:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 05:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 05:58	79-00-5	
Trichloroethene	**2.1**	ug/L	1.0	0.17	1		04/21/18 05:58	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 05:58	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 05:58	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 05:58	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 05:58	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 05:58	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 05:58		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: DUP-03-201804 **Lab ID: 60268532023** Collected: 04/18/18 09:35 Received: 04/19/18 08:35 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		04/21/18 06:14	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 06:14	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 06:14	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 06:14	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 06:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 06:14	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 06:14	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 06:14	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 06:14	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 06:14	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 06:14	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 06:14	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 06:14	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 06:14	75-34-3	
1,2-Dichloroethane	**0.22J**	ug/L	1.0	0.12	1		04/21/18 06:14	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 06:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 06:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 06:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 06:14	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 06:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 06:14	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 06:14	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 06:14	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 06:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 06:14	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 06:14	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 06:14	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 06:14	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 06:14	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 06:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 06:14	79-00-5	
Trichloroethene	**2.0**	ug/L	1.0	0.17	1		04/21/18 06:14	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 06:14	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 06:14	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 06:14	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-117		1		04/21/18 06:14	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 06:14	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 06:14		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TMW-12-201804 **Lab ID: 60268532024** Collected: 04/18/18 10:42 Received: 04/19/18 08:35 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		04/21/18 07:45	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 07:45	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 07:45	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 07:45	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 07:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 07:45	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 07:45	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 07:45	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 07:45	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 07:45	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 07:45	67-66-3	
Chloromethane	**0.13J**	ug/L	1.0	0.080	1		04/21/18 07:45	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 07:45	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 07:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/21/18 07:45	107-06-2	
1,1-Dichloroethene	**1.8**	ug/L	1.0	0.20	1		04/21/18 07:45	75-35-4	
cis-1,2-Dichloroethene	**12.0**	ug/L	1.0	0.080	1		04/21/18 07:45	156-59-2	
trans-1,2-Dichloroethene	**0.21J**	ug/L	1.0	0.20	1		04/21/18 07:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 07:45	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 07:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 07:45	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 07:45	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 07:45	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 07:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 07:45	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 07:45	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 07:45	79-34-5	
Tetrachloroethene	**0.15J**	ug/L	1.0	0.10	1		04/21/18 07:45	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 07:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 07:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 07:45	79-00-5	
Trichloroethene	**563**	ug/L	10.0	1.7	10		04/25/18 14:23	79-01-6	
Vinyl chloride	**0.37J**	ug/L	1.0	0.13	1		04/21/18 07:45	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 07:45	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 07:45	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/21/18 07:45	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 07:45	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 07:45		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-190-201804 **Lab ID: 60268532025** Collected: 04/18/18 13:50 Received: 04/19/18 08:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**3.4J**	ug/L	10.0	1.9	1		04/21/18 08:00	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 08:00	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 08:00	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 08:00	75-25-2	
Bromomethane	**1.7J**	ug/L	5.0	0.16	1		04/21/18 08:00	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 08:00	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 08:00	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 08:00	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 08:00	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 08:00	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 08:00	67-66-3	
Chloromethane	**0.18J**	ug/L	1.0	0.080	1		04/21/18 08:00	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 08:00	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 08:00	75-34-3	
1,2-Dichloroethane	**0.24J**	ug/L	1.0	0.12	1		04/21/18 08:00	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 08:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 08:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 08:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 08:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 08:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 08:00	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 08:00	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 08:00	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 08:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 08:00	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 08:00	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 08:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 08:00	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 08:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 08:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 08:00	79-00-5	
Trichloroethene	**0.58J**	ug/L	1.0	0.17	1		04/21/18 08:00	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 08:00	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 08:00	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 08:00	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 08:00	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 08:00	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 08:00		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-191-201804 **Lab ID: 60268532026** Collected: 04/18/18 15:10 Received: 04/19/18 08:35 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		04/21/18 08:15	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 08:15	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 08:15	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 08:15	75-25-2	
Bromomethane	**1.5J**	ug/L	5.0	0.16	1		04/21/18 08:15	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 08:15	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 08:15	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 08:15	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 08:15	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 08:15	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 08:15	67-66-3	
Chloromethane	**0.11J**	ug/L	1.0	0.080	1		04/21/18 08:15	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 08:15	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 08:15	75-34-3	
1,2-Dichloroethane	**0.26J**	ug/L	1.0	0.12	1		04/21/18 08:15	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 08:15	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 08:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 08:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 08:15	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 08:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 08:15	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 08:15	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 08:15	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 08:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 08:15	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 08:15	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 08:15	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 08:15	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 08:15	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 08:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 08:15	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 08:15	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 08:15	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 08:15	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 08:15	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 08:15	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 08:15	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 08:15		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-192-201804 **Lab ID: 60268532027** Collected: 04/18/18 16:40 Received: 04/19/18 08:35 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		04/21/18 08:31	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 08:31	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 08:31	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 08:31	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 08:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 08:31	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 08:31	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 08:31	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 08:31	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 08:31	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 08:31	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 08:31	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 08:31	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 08:31	75-34-3	
1,2-Dichloroethane	**0.26J**	ug/L	1.0	0.12	1		04/21/18 08:31	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 08:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 08:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 08:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 08:31	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 08:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 08:31	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 08:31	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 08:31	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 08:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 08:31	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 08:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 08:31	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 08:31	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 08:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 08:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 08:31	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 08:31	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 08:31	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 08:31	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 08:31	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 08:31	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 08:31	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 08:31		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: MW-84-201804 **Lab ID: 60268532028** Collected: 04/18/18 16:55 Received: 04/19/18 08:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**7.0J**	ug/L	10.0	1.9	1		04/25/18 11:36	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/25/18 11:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/25/18 11:36	75-27-4	
Bromoform	**5.1**	ug/L	1.0	0.070	1		04/25/18 11:36	75-25-2	
Bromomethane	**1.2J**	ug/L	5.0	0.16	1		04/25/18 11:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/25/18 11:36	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/25/18 11:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/25/18 11:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/25/18 11:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/25/18 11:36	75-00-3	
Chloroform	**0.24J**	ug/L	1.0	0.14	1		04/25/18 11:36	67-66-3	
Chloromethane	**1.6**	ug/L	1.0	0.080	1		04/25/18 11:36	74-87-3	
Dibromochloromethane	**0.31J**	ug/L	1.0	0.21	1		04/25/18 11:36	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/25/18 11:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/18 11:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/25/18 11:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/25/18 11:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/25/18 11:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/25/18 11:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/25/18 11:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/25/18 11:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/25/18 11:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/25/18 11:36	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/25/18 11:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/25/18 11:36	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/25/18 11:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/25/18 11:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/25/18 11:36	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/25/18 11:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/25/18 11:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/25/18 11:36	79-00-5	
Trichloroethene	**0.54J**	ug/L	1.0	0.17	1		04/25/18 11:36	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/25/18 11:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/25/18 11:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/25/18 11:36	460-00-4	
1,2-Dichloroethane-d4 (S)	90	%	80-117		1		04/25/18 11:36	17060-07-0	
Toluene-d8 (S)	95	%	80-115		1		04/25/18 11:36	2037-26-5	
Preservation pH	**7.0**		0.10	0.10	1		04/25/18 11:36		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TMW-21-201804 **Lab ID: 60268532029** Collected: 04/18/18 16:05 Received: 04/19/18 08:35 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		04/21/18 08:46	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 08:46	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 08:46	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 08:46	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 08:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 08:46	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 08:46	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 08:46	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 08:46	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 08:46	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 08:46	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 08:46	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 08:46	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 08:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/21/18 08:46	107-06-2	
1,1-Dichloroethene	**0.86J**	ug/L	1.0	0.20	1		04/21/18 08:46	75-35-4	
cis-1,2-Dichloroethene	**7.4**	ug/L	1.0	0.080	1		04/21/18 08:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 08:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 08:46	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 08:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 08:46	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 08:46	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 08:46	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 08:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 08:46	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 08:46	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 08:46	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 08:46	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 08:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 08:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 08:46	79-00-5	
Trichloroethene	**340**	ug/L	5.0	0.85	5		04/25/18 14:37	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 08:46	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 08:46	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/21/18 08:46	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 08:46	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 08:46	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 08:46		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TMW-32-201804 **Lab ID: 60268532030** Collected: 04/18/18 16:30 Received: 04/19/18 08:35 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		04/21/18 09:01	67-64-1	
Benzene	**0.12J**	ug/L	1.0	0.060	1		04/21/18 09:01	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 09:01	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 09:01	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 09:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 09:01	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 09:01	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 09:01	56-23-5	
Chlorobenzene	**4.4**	ug/L	1.0	0.21	1		04/21/18 09:01	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 09:01	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 09:01	67-66-3	
Chloromethane	**0.13J**	ug/L	1.0	0.080	1		04/21/18 09:01	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 09:01	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 09:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/21/18 09:01	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 09:01	75-35-4	
cis-1,2-Dichloroethene	**3.7**	ug/L	1.0	0.080	1		04/21/18 09:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 09:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 09:01	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 09:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 09:01	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 09:01	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 09:01	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/21/18 09:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 09:01	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 09:01	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 09:01	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 09:01	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 09:01	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 09:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 09:01	79-00-5	
Trichloroethene	**101**	ug/L	1.0	0.17	1		04/21/18 09:01	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 09:01	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 09:01	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/21/18 09:01	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 09:01	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 09:01	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 09:01		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: EB-03-201804 **Lab ID: 60268532031** Collected: 04/18/18 17:00 Received: 04/19/18 08:35 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		04/21/18 09:16	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 09:16	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 09:16	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 09:16	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 09:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 09:16	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 09:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 09:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 09:16	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 09:16	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 09:16	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 09:16	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 09:16	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 09:16	75-34-3	
1,2-Dichloroethane	**0.23J**	ug/L	1.0	0.12	1		04/21/18 09:16	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 09:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 09:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 09:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 09:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 09:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 09:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 09:16	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 09:16	591-78-6	
Methylene chloride	**0.41J**	ug/L	1.0	0.15	1		04/21/18 09:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 09:16	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 09:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 09:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 09:16	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 09:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 09:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 09:16	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 09:16	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 09:16	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 09:16	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 09:16	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/21/18 09:16	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 09:16	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 09:16		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: EB-04-201804 **Lab ID: 60268532032** Collected: 04/18/18 17:15 Received: 04/19/18 08:35 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		04/21/18 09:31	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 09:31	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 09:31	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 09:31	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 09:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 09:31	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 09:31	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 09:31	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 09:31	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 09:31	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 09:31	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 09:31	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 09:31	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 09:31	75-34-3	
1,2-Dichloroethane	**0.25J**	ug/L	1.0	0.12	1		04/21/18 09:31	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 09:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 09:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 09:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 09:31	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 09:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 09:31	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 09:31	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 09:31	591-78-6	
Methylene chloride	**0.29J**	ug/L	1.0	0.15	1		04/21/18 09:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 09:31	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 09:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 09:31	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 09:31	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 09:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 09:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 09:31	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 09:31	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 09:31	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 09:31	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/21/18 09:31	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 09:31	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/21/18 09:31	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 09:31		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TB-02-201804 **Lab ID: 60268532033** Collected: 04/18/18 08:50 Received: 04/19/18 08:35 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		04/21/18 09:46	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 09:46	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 09:46	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 09:46	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 09:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 09:46	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 09:46	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 09:46	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 09:46	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 09:46	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 09:46	67-66-3	
Chloromethane	**0.13J**	ug/L	1.0	0.080	1		04/21/18 09:46	74-87-3	B
Dibromochloromethane	**0.22J**	ug/L	1.0	0.21	1		04/21/18 09:46	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 09:46	75-34-3	
1,2-Dichloroethane	**0.22J**	ug/L	1.0	0.12	1		04/21/18 09:46	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 09:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 09:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 09:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 09:46	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 09:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 09:46	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 09:46	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 09:46	591-78-6	
Methylene chloride	**0.49J**	ug/L	1.0	0.15	1		04/21/18 09:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 09:46	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 09:46	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 09:46	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 09:46	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 09:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 09:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 09:46	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 09:46	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 09:46	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 09:46	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 09:46	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/21/18 09:46	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/21/18 09:46	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 09:46		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268532

Sample: TB-03-201804 **Lab ID: 60268532034** Collected: 04/18/18 08:50 Received: 04/19/18 08:35 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		04/21/18 10:02	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/21/18 10:02	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/21/18 10:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/21/18 10:02	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/21/18 10:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/21/18 10:02	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/21/18 10:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/21/18 10:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/21/18 10:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/21/18 10:02	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		04/21/18 10:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/21/18 10:02	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/21/18 10:02	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/21/18 10:02	75-34-3	
1,2-Dichloroethane	**0.21J**	ug/L	1.0	0.12	1		04/21/18 10:02	107-06-2	B
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 10:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/21/18 10:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/21/18 10:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/21/18 10:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/21/18 10:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/21/18 10:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/21/18 10:02	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/21/18 10:02	591-78-6	
Methylene chloride	**0.43J**	ug/L	1.0	0.15	1		04/21/18 10:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/21/18 10:02	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/21/18 10:02	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/21/18 10:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/21/18 10:02	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/21/18 10:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/21/18 10:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/21/18 10:02	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/21/18 10:02	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/21/18 10:02	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/21/18 10:02	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/21/18 10:02	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/21/18 10:02	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/21/18 10:02	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/21/18 10:02		

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268532

QC Batch: 522628 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268532001, 60268532002, 60268532003, 60268532004, 60268532005, 60268532006, 60268532008, 60268532009, 60268532010

METHOD BLANK: 2139660 Matrix: Water
Associated Lab Samples: 60268532001, 60268532002, 60268532003, 60268532004, 60268532005, 60268532006, 60268532008, 60268532009, 60268532010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/20/18 18:51	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/20/18 18:51	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/20/18 18:51	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/20/18 18:51	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/20/18 18:51	
1,2-Dichloroethane	ug/L	0.24J	1.0	0.12	04/20/18 18:51	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/20/18 18:51	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/20/18 18:51	
2-Hexanone	ug/L	ND	10.0	1.2	04/20/18 18:51	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/20/18 18:51	
Acetone	ug/L	ND	10.0	1.9	04/20/18 18:51	
Benzene	ug/L	ND	1.0	0.060	04/20/18 18:51	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/20/18 18:51	
Bromoform	ug/L	ND	1.0	0.070	04/20/18 18:51	
Bromomethane	ug/L	1.4J	5.0	0.16	04/20/18 18:51	
Carbon disulfide	ug/L	ND	5.0	0.12	04/20/18 18:51	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/20/18 18:51	
Chlorobenzene	ug/L	ND	1.0	0.21	04/20/18 18:51	
Chloroethane	ug/L	ND	1.0	0.15	04/20/18 18:51	
Chloroform	ug/L	ND	1.0	0.14	04/20/18 18:51	
Chloromethane	ug/L	0.12J	1.0	0.080	04/20/18 18:51	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/20/18 18:51	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/20/18 18:51	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/20/18 18:51	
Ethylbenzene	ug/L	ND	1.0	0.18	04/20/18 18:51	
Methylene chloride	ug/L	ND	1.0	0.15	04/20/18 18:51	
Styrene	ug/L	ND	1.0	0.12	04/20/18 18:51	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/20/18 18:51	
Toluene	ug/L	ND	1.0	0.17	04/20/18 18:51	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/20/18 18:51	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/20/18 18:51	
Trichloroethene	ug/L	ND	1.0	0.17	04/20/18 18:51	
Vinyl chloride	ug/L	ND	1.0	0.13	04/20/18 18:51	
Xylene (Total)	ug/L	ND	3.0	0.42	04/20/18 18:51	
1,2-Dichloroethane-d4 (S)	%	98	80-117		04/20/18 18:51	
4-Bromofluorobenzene (S)	%	100	80-119		04/20/18 18:51	
Toluene-d8 (S)	%	100	80-115		04/20/18 18:51	

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.

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268532

LABORATORY CONTROL SAMPLE: 2139661

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.0	100	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	20.8	104	74-121	
1,1,2-Trichloroethane	ug/L	20	21.1	105	83-119	
1,1-Dichloroethane	ug/L	20	19.5	98	85-128	
1,1-Dichloroethene	ug/L	20	19.3	97	85-123	
1,2-Dichloroethane	ug/L	20	20.9	105	77-120	
1,2-Dichloropropane	ug/L	20	19.8	99	81-126	
2-Butanone (MEK)	ug/L	100	99.2	99	65-134	
2-Hexanone	ug/L	100	101	101	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	98.1	98	66-139	
Acetone	ug/L	100	94.2	94	62-142	
Benzene	ug/L	20	20.1	101	81-118	
Bromodichloromethane	ug/L	20	20.8	104	85-123	
Bromoform	ug/L	20	19.9	100	83-123	
Bromomethane	ug/L	20	17.5	87	39-149	
Carbon disulfide	ug/L	20	18.5	92	85-124	
Carbon tetrachloride	ug/L	20	20.9	104	85-126	
Chlorobenzene	ug/L	20	20.9	105	87-118	
Chloroethane	ug/L	20	14.5	72	73-134	L2
Chloroform	ug/L	20	20.0	100	85-119	
Chloromethane	ug/L	20	16.8	84	20-174	
cis-1,2-Dichloroethene	ug/L	20	19.3	96	84-121	
cis-1,3-Dichloropropene	ug/L	20	19.4	97	80-124	
Dibromochloromethane	ug/L	20	20.7	103	83-122	
Ethylbenzene	ug/L	20	20.2	101	80-118	
Methylene chloride	ug/L	20	19.1	96	81-126	
Styrene	ug/L	20	19.9	100	85-120	
Tetrachloroethene	ug/L	20	19.8	99	87-120	
Toluene	ug/L	20	20.2	101	82-118	
trans-1,2-Dichloroethene	ug/L	20	20.1	100	83-121	
trans-1,3-Dichloropropene	ug/L	20	20.2	101	80-122	
Trichloroethene	ug/L	20	21.0	105	82-120	
Vinyl chloride	ug/L	20	19.3	96	74-147	
Xylene (Total)	ug/L	60	59.9	100	81-120	
1,2-Dichloroethane-d4 (S)	%			100	80-117	
4-Bromofluorobenzene (S)	%			99	80-119	
Toluene-d8 (S)	%			100	80-115	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268532

QC Batch: 522630 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268532011, 60268532012, 60268532013, 60268532014, 60268532015, 60268532016, 60268532017, 60268532018, 60268532019, 60268532020, 60268532021, 60268532022, 60268532023

METHOD BLANK: 2139687 Matrix: Water
Associated Lab Samples: 60268532011, 60268532012, 60268532013, 60268532014, 60268532015, 60268532016, 60268532017, 60268532018, 60268532019, 60268532020, 60268532021, 60268532022, 60268532023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/21/18 01:10	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/21/18 01:10	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/21/18 01:10	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/21/18 01:10	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/21/18 01:10	
1,2-Dichloroethane	ug/L	0.21J	1.0	0.12	04/21/18 01:10	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/21/18 01:10	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/21/18 01:10	
2-Hexanone	ug/L	ND	10.0	1.2	04/21/18 01:10	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/21/18 01:10	
Acetone	ug/L	ND	10.0	1.9	04/21/18 01:10	
Benzene	ug/L	ND	1.0	0.060	04/21/18 01:10	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/21/18 01:10	
Bromoform	ug/L	ND	1.0	0.070	04/21/18 01:10	
Bromomethane	ug/L	ND	5.0	0.16	04/21/18 01:10	
Carbon disulfide	ug/L	ND	5.0	0.12	04/21/18 01:10	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/21/18 01:10	
Chlorobenzene	ug/L	ND	1.0	0.21	04/21/18 01:10	
Chloroethane	ug/L	ND	1.0	0.15	04/21/18 01:10	
Chloroform	ug/L	ND	1.0	0.14	04/21/18 01:10	
Chloromethane	ug/L	ND	1.0	0.080	04/21/18 01:10	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/21/18 01:10	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/21/18 01:10	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/21/18 01:10	
Ethylbenzene	ug/L	ND	1.0	0.18	04/21/18 01:10	
Methylene chloride	ug/L	ND	1.0	0.15	04/21/18 01:10	
Styrene	ug/L	ND	1.0	0.12	04/21/18 01:10	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/21/18 01:10	
Toluene	ug/L	ND	1.0	0.17	04/21/18 01:10	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/21/18 01:10	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/21/18 01:10	
Trichloroethene	ug/L	ND	1.0	0.17	04/21/18 01:10	
Vinyl chloride	ug/L	ND	1.0	0.13	04/21/18 01:10	
Xylene (Total)	ug/L	ND	3.0	0.42	04/21/18 01:10	
1,2-Dichloroethane-d4 (S)	%	101	80-117		04/21/18 01:10	
4-Bromofluorobenzene (S)	%	100	80-119		04/21/18 01:10	
Toluene-d8 (S)	%	100	80-115		04/21/18 01:10	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268532

LABORATORY CONTROL SAMPLE: 2139688

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.6	98	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	20.0	100	74-121	
1,1,2-Trichloroethane	ug/L	20	21.2	106	83-119	
1,1-Dichloroethane	ug/L	20	19.3	97	85-128	
1,1-Dichloroethene	ug/L	20	19.8	99	85-123	
1,2-Dichloroethane	ug/L	20	20.9	104	77-120	
1,2-Dichloropropane	ug/L	20	19.7	99	81-126	
2-Butanone (MEK)	ug/L	100	102	102	65-134	
2-Hexanone	ug/L	100	100	100	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.9	97	66-139	
Acetone	ug/L	100	98.4	98	62-142	
Benzene	ug/L	20	19.6	98	81-118	
Bromodichloromethane	ug/L	20	20.8	104	85-123	
Bromoform	ug/L	20	20.5	103	83-123	
Bromomethane	ug/L	20	17.4	87	39-149	
Carbon disulfide	ug/L	20	17.7	88	85-124	
Carbon tetrachloride	ug/L	20	20.2	101	85-126	
Chlorobenzene	ug/L	20	21.4	107	87-118	
Chloroethane	ug/L	20	14.0	70	73-134	L2
Chloroform	ug/L	20	19.9	99	85-119	
Chloromethane	ug/L	20	16.4	82	20-174	
cis-1,2-Dichloroethene	ug/L	20	19.4	97	84-121	
cis-1,3-Dichloropropene	ug/L	20	19.4	97	80-124	
Dibromochloromethane	ug/L	20	20.7	103	83-122	
Ethylbenzene	ug/L	20	20.2	101	80-118	
Methylene chloride	ug/L	20	19.3	97	81-126	
Styrene	ug/L	20	19.8	99	85-120	
Tetrachloroethene	ug/L	20	19.8	99	87-120	
Toluene	ug/L	20	20.0	100	82-118	
trans-1,2-Dichloroethene	ug/L	20	19.4	97	83-121	
trans-1,3-Dichloropropene	ug/L	20	20.5	102	80-122	
Trichloroethene	ug/L	20	22.1	111	82-120	
Vinyl chloride	ug/L	20	18.5	92	74-147	
Xylene (Total)	ug/L	60	59.2	99	81-120	
1,2-Dichloroethane-d4 (S)	%			99	80-117	
4-Bromofluorobenzene (S)	%			99	80-119	
Toluene-d8 (S)	%			100	80-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2139689 2139690

Parameter	Units	60268532011 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	21.2	17.9	106	90	79-135	17	11	R1
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	20.4	17.2	102	86	49-144	17	17	
1,1,2-Trichloroethane	ug/L	ND	20	20	20.9	17.5	105	87	71-124	18	14	R1

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268532

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2139689 2139690

Parameter	Units	60268532011 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	17.4	101	87	77-135	15	12	R1
1,1-Dichloroethene	ug/L	ND	20	20	21.6	17.5	108	88	77-138	21	14	R1
1,2-Dichloroethane	ug/L	0.23J	20	20	20.8	17.9	103	89	47-152	15	27	
1,2-Dichloropropane	ug/L	ND	20	20	19.8	16.8	99	84	74-128	16	13	R1
2-Butanone (MEK)	ug/L	ND	100	100	96.7	82.5	97	83	60-125	16	17	
2-Hexanone	ug/L	ND	100	100	96.2	79.7	96	80	53-133	19	15	R1
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	95.0	79.2	95	79	62-134	18	15	R1
Acetone	ug/L	ND	100	100	96.9	79.9	97	80	50-127	19	28	
Benzene	ug/L	ND	20	20	20.6	17.5	103	88	62-138	16	34	
Bromodichloromethane	ug/L	ND	20	20	20.6	17.5	103	88	75-126	16	12	R1
Bromoform	ug/L	ND	20	20	19.5	16.8	97	84	70-122	15	14	R1
Bromomethane	ug/L	1.4J	20	20	17.8	16.8	82	77	41-155	6	42	
Carbon disulfide	ug/L	ND	20	20	19.7	17.0	99	85	70-148	15	14	R1
Carbon tetrachloride	ug/L	ND	20	20	22.5	18.5	113	93	78-139	19	23	
Chlorobenzene	ug/L	ND	20	20	21.1	17.6	106	88	74-130	18	10	R1
Chloroethane	ug/L	ND	20	20	16.3	13.7	81	68	67-153	17	27	
Chloroform	ug/L	ND	20	20	20.2	17.5	101	87	75-127	14	12	R1
Chloromethane	ug/L	ND	20	20	18.4	16.1	92	81	22-188	13	68	
cis-1,2-Dichloroethene	ug/L	ND	20	20	20.0	16.9	100	85	69-135	17	15	R1
cis-1,3-Dichloropropene	ug/L	ND	20	20	18.6	15.6	93	78	61-129	17	11	R1
Dibromochloromethane	ug/L	ND	20	20	20.4	17.3	102	87	60-133	16	14	R1
Ethylbenzene	ug/L	ND	20	20	20.1	16.6	100	83	60-140	19	32	
Methylene chloride	ug/L	ND	20	20	19.8	16.9	99	85	72-131	16	16	
Styrene	ug/L	ND	20	20	14.7	13.0	74	65	59-142	12	12	
Tetrachloroethene	ug/L	ND	20	20	20.1	16.2	100	81	72-136	21	15	R1
Toluene	ug/L	ND	20	20	20.3	16.9	102	85	65-135	18	32	
trans-1,2-Dichloroethene	ug/L	ND	20	20	20.7	17.6	104	88	75-137	16	15	R1
trans-1,3-Dichloropropene	ug/L	ND	20	20	19.6	16.3	98	81	60-128	18	13	R1
Trichloroethene	ug/L	ND	20	20	21.5	18.3	107	91	66-136	16	15	R1
Vinyl chloride	ug/L	ND	20	20	21.3	18.6	107	93	65-164	14	16	
Xylene (Total)	ug/L	ND	60	60	59.7	48.7	99	81	69-133	20	31	
1,2-Dichloroethane-d4 (S)	%						100	99	80-117			
4-Bromofluorobenzene (S)	%						97	100	80-119			
Toluene-d8 (S)	%						99	99	80-115			
Preservation pH		1.0			1.0	1.0				0		

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268532

QC Batch: 522636 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268532024, 60268532025, 60268532026, 60268532027, 60268532029, 60268532030, 60268532031, 60268532032, 60268532033, 60268532034

METHOD BLANK: 2139748 Matrix: Water
Associated Lab Samples: 60268532024, 60268532025, 60268532026, 60268532027, 60268532029, 60268532030, 60268532031, 60268532032, 60268532033, 60268532034

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/21/18 07:29	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/21/18 07:29	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/21/18 07:29	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/21/18 07:29	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/21/18 07:29	
1,2-Dichloroethane	ug/L	0.24J	1.0	0.12	04/21/18 07:29	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/21/18 07:29	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/21/18 07:29	
2-Hexanone	ug/L	ND	10.0	1.2	04/21/18 07:29	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/21/18 07:29	
Acetone	ug/L	ND	10.0	1.9	04/21/18 07:29	
Benzene	ug/L	ND	1.0	0.060	04/21/18 07:29	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/21/18 07:29	
Bromoform	ug/L	ND	1.0	0.070	04/21/18 07:29	
Bromomethane	ug/L	1.5J	5.0	0.16	04/21/18 07:29	
Carbon disulfide	ug/L	ND	5.0	0.12	04/21/18 07:29	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/21/18 07:29	
Chlorobenzene	ug/L	ND	1.0	0.21	04/21/18 07:29	
Chloroethane	ug/L	ND	1.0	0.15	04/21/18 07:29	
Chloroform	ug/L	ND	1.0	0.14	04/21/18 07:29	
Chloromethane	ug/L	0.15J	1.0	0.080	04/21/18 07:29	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/21/18 07:29	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/21/18 07:29	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/21/18 07:29	
Ethylbenzene	ug/L	ND	1.0	0.18	04/21/18 07:29	
Methylene chloride	ug/L	ND	1.0	0.15	04/21/18 07:29	
Styrene	ug/L	ND	1.0	0.12	04/21/18 07:29	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/21/18 07:29	
Toluene	ug/L	ND	1.0	0.17	04/21/18 07:29	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/21/18 07:29	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/21/18 07:29	
Trichloroethene	ug/L	ND	1.0	0.17	04/21/18 07:29	
Vinyl chloride	ug/L	ND	1.0	0.13	04/21/18 07:29	
Xylene (Total)	ug/L	ND	3.0	0.42	04/21/18 07:29	
1,2-Dichloroethane-d4 (S)	%	100	80-117		04/21/18 07:29	
4-Bromofluorobenzene (S)	%	99	80-119		04/21/18 07:29	
Toluene-d8 (S)	%	100	80-115		04/21/18 07:29	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268532

LABORATORY CONTROL SAMPLE: 2139749

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.5	98	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	18.8	94	74-121	
1,1,2-Trichloroethane	ug/L	20	21.1	105	83-119	
1,1-Dichloroethane	ug/L	20	18.9	95	85-128	
1,1-Dichloroethene	ug/L	20	19.5	97	85-123	
1,2-Dichloroethane	ug/L	20	20.3	102	77-120	
1,2-Dichloropropane	ug/L	20	19.3	96	81-126	
2-Butanone (MEK)	ug/L	100	98.1	98	65-134	
2-Hexanone	ug/L	100	99.5	100	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.2	96	66-139	
Acetone	ug/L	100	92.9	93	62-142	
Benzene	ug/L	20	19.2	96	81-118	
Bromodichloromethane	ug/L	20	20.5	102	85-123	
Bromoform	ug/L	20	20.0	100	83-123	
Bromomethane	ug/L	20	18.4	92	39-149	
Carbon disulfide	ug/L	20	17.5	88	85-124	
Carbon tetrachloride	ug/L	20	20.3	102	85-126	
Chlorobenzene	ug/L	20	20.4	102	87-118	
Chloroethane	ug/L	20	14.1	71	73-134	L2
Chloroform	ug/L	20	19.4	97	85-119	
Chloromethane	ug/L	20	15.8	79	20-174	
cis-1,2-Dichloroethene	ug/L	20	18.8	94	84-121	
cis-1,3-Dichloropropene	ug/L	20	18.3	91	80-124	
Dibromochloromethane	ug/L	20	20.5	103	83-122	
Ethylbenzene	ug/L	20	19.4	97	80-118	
Methylene chloride	ug/L	20	18.6	93	81-126	
Styrene	ug/L	20	19.3	97	85-120	
Tetrachloroethene	ug/L	20	19.5	98	87-120	
Toluene	ug/L	20	19.2	96	82-118	
trans-1,2-Dichloroethene	ug/L	20	19.4	97	83-121	
trans-1,3-Dichloropropene	ug/L	20	19.4	97	80-122	
Trichloroethene	ug/L	20	21.3	106	82-120	
Vinyl chloride	ug/L	20	18.2	91	74-147	
Xylene (Total)	ug/L	60	57.6	96	81-120	
1,2-Dichloroethane-d4 (S)	%			101	80-117	
4-Bromofluorobenzene (S)	%			99	80-119	
Toluene-d8 (S)	%			99	80-115	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268532

QC Batch: 523156 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268532004, 60268532005, 60268532015, 60268532021, 60268532024, 60268532029

METHOD BLANK: 2141662 Matrix: Water
Associated Lab Samples: 60268532004, 60268532005, 60268532015, 60268532021, 60268532024, 60268532029

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichloroethene	ug/L	ND	1.0	0.17	04/25/18 10:26	
1,2-Dichloroethane-d4 (S)	%	93	80-117		04/25/18 10:26	
4-Bromofluorobenzene (S)	%	99	80-119		04/25/18 10:26	
Toluene-d8 (S)	%	96	80-115		04/25/18 10:26	

LABORATORY CONTROL SAMPLE: 2141663

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/L	20	20.8	104	82-120	
1,2-Dichloroethane-d4 (S)	%			96	80-117	
4-Bromofluorobenzene (S)	%			98	80-119	
Toluene-d8 (S)	%			97	80-115	

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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.: 60268532

QC Batch: 523154
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 7 day
Associated Lab Samples: 60268532007, 60268532028

METHOD BLANK: 2141660
Matrix: Water
Associated Lab Samples: 60268532007, 60268532028

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/25/18 10:26	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/25/18 10:26	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/25/18 10:26	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/25/18 10:26	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/25/18 10:26	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/25/18 10:26	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/25/18 10:26	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/25/18 10:26	
2-Hexanone	ug/L	ND	10.0	1.2	04/25/18 10:26	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/25/18 10:26	
Acetone	ug/L	ND	10.0	1.9	04/25/18 10:26	
Benzene	ug/L	ND	1.0	0.060	04/25/18 10:26	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/25/18 10:26	
Bromoform	ug/L	ND	1.0	0.070	04/25/18 10:26	
Bromomethane	ug/L	ND	5.0	0.16	04/25/18 10:26	
Carbon disulfide	ug/L	ND	5.0	0.12	04/25/18 10:26	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/25/18 10:26	
Chlorobenzene	ug/L	ND	1.0	0.21	04/25/18 10:26	
Chloroethane	ug/L	ND	1.0	0.15	04/25/18 10:26	
Chloroform	ug/L	ND	1.0	0.14	04/25/18 10:26	
Chloromethane	ug/L	ND	1.0	0.080	04/25/18 10:26	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/25/18 10:26	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/25/18 10:26	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/25/18 10:26	
Ethylbenzene	ug/L	ND	1.0	0.18	04/25/18 10:26	
Methylene chloride	ug/L	ND	1.0	0.15	04/25/18 10:26	
Styrene	ug/L	ND	1.0	0.12	04/25/18 10:26	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/25/18 10:26	
Toluene	ug/L	ND	1.0	0.17	04/25/18 10:26	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/25/18 10:26	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/25/18 10:26	
Trichloroethene	ug/L	ND	1.0	0.17	04/25/18 10:26	
Vinyl chloride	ug/L	ND	1.0	0.13	04/25/18 10:26	
Xylene (Total)	ug/L	ND	3.0	0.42	04/25/18 10:26	
1,2-Dichloroethane-d4 (S)	%	93	80-117		04/25/18 10:26	
4-Bromofluorobenzene (S)	%	99	80-119		04/25/18 10:26	
Toluene-d8 (S)	%	96	80-115		04/25/18 10:26	

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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.: 60268532

LABORATORY CONTROL SAMPLE: 2141661

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.3	102	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	18.6	93	74-121	
1,1,2-Trichloroethane	ug/L	20	19.6	98	83-119	
1,1-Dichloroethane	ug/L	20	19.8	99	85-128	
1,1-Dichloroethene	ug/L	20	17.4	87	85-123	
1,2-Dichloroethane	ug/L	20	19.4	97	77-120	
1,2-Dichloropropane	ug/L	20	20.5	102	81-126	
2-Butanone (MEK)	ug/L	100	95.7	96	65-134	
2-Hexanone	ug/L	100	87.2	87	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	99.1	99	66-139	
Acetone	ug/L	100	87.0	87	62-142	
Benzene	ug/L	20	21.0	105	81-118	
Bromodichloromethane	ug/L	20	19.2	96	85-123	
Bromoform	ug/L	20	18.3	92	83-123	
Bromomethane	ug/L	20	22.4	112	39-149	
Carbon disulfide	ug/L	20	21.6	108	85-124	
Carbon tetrachloride	ug/L	20	19.5	97	85-126	
Chlorobenzene	ug/L	20	19.6	98	87-118	
Chloroethane	ug/L	20	17.2	86	73-134	
Chloroform	ug/L	20	20.6	103	85-119	
Chloromethane	ug/L	20	20.0	100	20-174	
cis-1,2-Dichloroethene	ug/L	20	20.6	103	84-121	
cis-1,3-Dichloropropene	ug/L	20	20.2	101	80-124	
Dibromochloromethane	ug/L	20	18.0	90	83-122	
Ethylbenzene	ug/L	20	18.9	94	80-118	
Methylene chloride	ug/L	20	21.0	105	81-126	
Styrene	ug/L	20	19.8	99	85-120	
Tetrachloroethene	ug/L	20	18.9	95	87-120	
Toluene	ug/L	20	19.2	96	82-118	
trans-1,2-Dichloroethene	ug/L	20	20.6	103	83-121	
trans-1,3-Dichloropropene	ug/L	20	18.3	92	80-122	
Trichloroethene	ug/L	20	20.8	104	82-120	
Vinyl chloride	ug/L	20	22.4	112	74-147	
Xylene (Total)	ug/L	60	58.1	97	81-120	
1,2-Dichloroethane-d4 (S)	%			96	80-117	
4-Bromofluorobenzene (S)	%			98	80-119	
Toluene-d8 (S)	%			97	80-115	

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QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60268532

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: 522628

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 522636

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 523154

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 523156

[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.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60268532

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60268532001	MW-99-201804	EPA 5030B/8260	522628		
60268532002	MW-184-201804	EPA 5030B/8260	522628		
60268532003	MW-98-201804	EPA 5030B/8260	522628		
60268532004	TMW-24-201804	EPA 5030B/8260	522628		
60268532004	TMW-24-201804	EPA 5030B/8260	523156		
60268532005	MW-183-201804	EPA 5030B/8260	522628		
60268532005	MW-183-201804	EPA 5030B/8260	523156		
60268532006	IW-73-201804	EPA 5030B/8260	522628		
60268532008	RW-69-201804	EPA 5030B/8260	522628		
60268532009	MW-26-201804	EPA 5030B/8260	522628		
60268532010	MW-187-201804	EPA 5030B/8260	522628		
60268532011	ITMW-20-201804	EPA 5030B/8260	522630		
60268532012	MW-175-201804	EPA 5030B/8260	522630		
60268532013	MW-55R-201804	EPA 5030B/8260	522630		
60268532014	DUP-05-201804	EPA 5030B/8260	522630		
60268532015	MW-46R-201804	EPA 5030B/8260	522630		
60268532015	MW-46R-201804	EPA 5030B/8260	523156		
60268532016	MW-178-201804	EPA 5030B/8260	522630		
60268532017	TMW-27-201804	EPA 5030B/8260	522630		
60268532018	MW-39R-201804	EPA 5030B/8260	522630		
60268532019	TMW-23-201804	EPA 5030B/8260	522630		
60268532020	TMW-10-201804	EPA 5030B/8260	522630		
60268532021	TMW-22-201804	EPA 5030B/8260	522630		
60268532021	TMW-22-201804	EPA 5030B/8260	523156		
60268532022	TMW-14-201804	EPA 5030B/8260	522630		
60268532023	DUP-03-201804	EPA 5030B/8260	522630		
60268532024	TMW-12-201804	EPA 5030B/8260	522636		
60268532024	TMW-12-201804	EPA 5030B/8260	523156		
60268532025	MW-190-201804	EPA 5030B/8260	522636		
60268532026	MW-191-201804	EPA 5030B/8260	522636		
60268532027	MW-192-201804	EPA 5030B/8260	522636		
60268532029	TMW-21-201804	EPA 5030B/8260	522636		
60268532029	TMW-21-201804	EPA 5030B/8260	523156		
60268532030	TMW-32-201804	EPA 5030B/8260	522636		
60268532031	EB-03-201804	EPA 5030B/8260	522636		
60268532032	EB-04-201804	EPA 5030B/8260	522636		
60268532033	TB-02-201804	EPA 5030B/8260	522636		
60268532034	TB-03-201804	EPA 5030B/8260	522636		
60268532007	IW-77-201804	EPA 5030B/8260	523154		
60268532028	MW-84-201804	EPA 5030B/8260	523154		

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Sample Condition Upon Receipt

WO# : 60268532

60268532

Client Name: Bambs II

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: T-300 **Type of Ice:** ~~Wet~~ Blue None

Cooler Temperature (°C): **As-read** 0.4 **Corr. Factor** +1.2 **Corrected** 1.6

Date and initials of person examining contents: BM 4-19-18

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?	6M 4-19-18 ☑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	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: 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	
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: 2018.04.19 14:33:57 -05'00' Date: _____

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Page: 1 of 3 4

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Ramboll	Report To: Tamara House-Knight	Attention: Tamara House-Knight
Address: 124 W. Capitol Ave. Little Rock, AR 72201	Copy To:	Company Name: Ramboll
		Address: 124 W. Capitol Ave Little Rock, AR 72201
Email To:	Purchase Order No.: NA	Pace Quote Reference:
Phone: Fax:	Project Name: Fort Smith, AR	Pace Project Manager: Richard Mannz
Requested Due Date/TAT: Standard	Project Number:	Pace Profile #: 7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER

☐ UST ☐ RCRA ☒ OTHER _____

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	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	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-99-201804	WT	G			4/18/18	0930		3				3						X		60268532
2	MW-184-201804						1105														
3	MW-98-201804						1240														
4	TMW-24-201804						1400														
5	MW-183-201804						1525														
6	IW-73-201804						0920														
7	IW-77-201804						1050										3				
8	RW-69-201804						1250						3								
9	MW-26-201804						1350														
10	MW-187-201804						1515														
11	IW-73-201804-MS/MSD						0920														
12	~~DUP-04-201804~~						1250														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Haley Ahlers / Ramboll	4/18/18	1800		4-19-18	0835	16 Y Y Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Haley Ahlers

SIGNATURE of SAMPLER: Haley Ahlers DATE Signed (MM/DD/YY): 04/18/18

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

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

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

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Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Ramboll	Report To: Tamara House-Knight	Attention: Tamara House-Knight
Address: 124 W. Capitol Ave. Little Rock, AR 72201	Copy To:	Company Name: Ramboll
Email To:	Purchase Order No.: NA	Address: 124 W. Capitol Ave Little Rock, AR 72201
Phone: Fax:	Project Name: Fort Smith, AR	Pace Quote Reference:
Requested Due Date/TAT: Standard	Project Number:	Pace Project Manager: Richard Mannz
		Pace Profile #: 7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER _____

Site Location STATE: AR

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

ITEM #	Section D Required Client Information: 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	Requested Analysis Filtered (Y/N): Y/N	Analysis Test: 8240 VOCs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60268532
1	ITMW-20-201804	WT	G			4/18/18	0850		3				3						X		3-0G9H 011
2	ITMW-20-201804-MS/MSD	"	"			"	0850		"				"						"		-
3	MW-175-201804						0940														012
4	MW-55R-201804						1122														013
5	DUP-05-201804						1122														014
6	MW-46R-201804						1325														015
7	MW-178-201804						1415														016
8	TMW-27-201804						1610														017
9	MW-39R-201804						0940														018
10	TMW-23-201804						1125														019
11	TMW-10-201804						1310														020
12	TMW-22-201804	↓	↓			↓	1450		↓				↓						↓		021

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)
	Haley Ahlers / Ramboll	4/18/18	1800		4-19-18	0835	1.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Haley Ahlers

SIGNATURE of SAMPLER: Haley Ahlers DATE Signed (MM/DD/YY): 04/18/18

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

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

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Page: 3 of ~~3~~ 4 HA

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Email To:	Purchase Order No.: NA	Pace Quote Reference: Little Rock, AR 72201
Phone: Fax:	Project Name: Fort Smith, AR	Pace Project Manager: Richard Mannz
Requested Due Date/TAT: Standard	Project Number:	Pace Profile #: 7444, line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER _____

Site Location STATE: AR

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other Ascorbic Acid	Analysis Test (Y/N) 8260 VOCs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TMW-14-201804	WT	G			4/18/18	0930		3				3					X		3-DG9H 022
2	DUP-03-201804						0935													023
3	TMW-12-201804						1042													024
4	MW-190-201804						1350													025
5	MW-191-201804						1510													026
6	MW-192-201804						1640													027
7	MW-84-201804						1655										3			DG9A 028
8	TMW-21-201804						~~1610~~ 1605 HA		5				3							3-DG9H 029
9	TMW-32-201804						1630													030
10	EB-03-201804						1700													031
11	EB-04-201804						1715													032
12																				HA

60268532

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)
				[signature]	4-19-18	0835	1.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Haley Ahlers

SIGNATURE of SAMPLER: Haley Ahlers

DATE Signed (MM/DD/YY): 04/18/18

*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

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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www.pacelabs.com

Page: 4 of 4

Section A Required Client Information:

Company:	Ramboll
Address:	124 W. Capitol Ave, Little Rock, AR 72201
Email To:	
Phone: / 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:	Ramboll
Address:	124 W. Capitol Ave Little Rock, AR 72201
Pace Quote Reference:	
Pace Project Manager:	Richard Mannz
Pace Profile #:	7444, line 1

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	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TB-02-201804																			60268532 0G9H 033
2	TB-03-201804																			60268532 0G9H 034
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Haley Ahlers / Ramboll	4/18/18	1800		4-19-18	0835	1.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Haley Ahlers

SIGNATURE of SAMPLER: Haley Ahlers DATE Signed (MM/DD/YY): 04/18/18

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

April 27, 2018

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

RE: Project: FORT SMITH, AR
Pace Project No.: 60268614

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on April 20, 2018. 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: Kristen Drucquer, Ramboll
Tamara House-Knight, Ramboll Environ
M. Wilson

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CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60268614

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.: 60268614

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60268614001	**MW-97-201804**	Water	04/19/18 09:05	04/20/18 06:25
60268614002	**MW-96-201804**	Water	04/19/18 10:15	04/20/18 06:25
60268614003	**MW-29-201804**	Water	04/19/18 11:40	04/20/18 06:25
60268614004	**MW-185-201804**	Water	04/19/18 12:55	04/20/18 06:25
60268614005	**DUP-07-201804**	Water	04/19/18 12:55	04/20/18 06:25
60268614006	**MW-189-201804**	Water	04/19/18 14:45	04/20/18 06:25
60268614007	**MW-188-201804**	Water	04/19/18 09:15	04/20/18 06:25
60268614008	**DUP-04-201804**	Water	04/19/18 09:15	04/20/18 06:25
60268614009	**MW-186-201804**	Water	04/19/18 10:35	04/20/18 06:25
60268614010	**ITMW-7-201804**	Water	04/19/18 09:30	04/20/18 06:25
60268614011	**TMW-19-201804**	Water	04/19/18 12:40	04/20/18 06:25
60268614012	**TMW-26-201804**	Water	04/19/18 13:00	04/20/18 06:25
60268614013	**MW-86-201804**	Water	04/19/18 15:35	04/20/18 06:25
60268614014	**TMW-25-201804**	Water	04/19/18 14:10	04/20/18 06:25
60268614015	**ITMW-10-201804**	Water	04/19/18 11:15	04/20/18 06:25
60268614016	**ITMW-5-201804**	Water	04/19/18 15:25	04/20/18 06:25
60268614017	**ITMW-21-201804**	Water	04/19/18 14:10	04/20/18 06:25
60268614018	**TMW-16-201804**	Water	04/19/18 15:30	04/20/18 06:25
60268614019	**MW-182-201804**	Water	04/19/18 09:25	04/20/18 06:25
60268614020	**DUP-06-201804**	Water	04/19/18 09:30	04/20/18 06:25
60268614021	**TMW-21-201804**	Water	04/19/18 10:48	04/20/18 06:25
60268614022	**MW-91-201804**	Water	04/19/18 12:35	04/20/18 06:25
60268614023	**MW-38-201804**	Water	04/19/18 13:35	04/20/18 06:25
60268614024	**MW-95-201804**	Water	04/19/18 15:12	04/20/18 06:25
60268614025	**MW-179-201804**	Water	04/19/18 15:55	04/20/18 06:25
60268614026	**EB-05-201804**	Water	04/19/18 16:00	04/20/18 06:25
60268614027	**MW-93-201804**	Water	04/19/18 16:45	04/20/18 06:25
60268614028	**TB-04-201804**	Water	04/19/18 09:05	04/20/18 06:25
60268614029	**TB-05-201804**	Water	04/19/18 09:05	04/20/18 06:25

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60268614

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60268614001	MW-97-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614002	MW-96-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614003	MW-29-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614004	MW-185-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614005	DUP-07-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614006	MW-189-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614007	MW-188-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614008	DUP-04-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614009	MW-186-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614010	ITMW-7-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614011	TMW-19-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614012	TMW-26-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614013	MW-86-201804	EPA 5030B/8260	EAG, PGH	38	PASI-K
60268614014	TMW-25-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614015	ITMW-10-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614016	ITMW-5-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614017	ITMW-21-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614018	TMW-16-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614019	MW-182-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614020	DUP-06-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614021	TMW-21-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614022	MW-91-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614023	MW-38-201804	EPA 5030B/8260	EAG, PGH	38	PASI-K
60268614024	MW-95-201804	EPA 5030B/8260	EAG, PGH	38	PASI-K
60268614025	MW-179-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614026	EB-05-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614027	MW-93-201804	EPA 5030B/8260	EAG, PGH	38	PASI-K
60268614028	TB-04-201804	EPA 5030B/8260	PGH	38	PASI-K
60268614029	TB-05-201804	EPA 5030B/8260	PGH	38	PASI-K

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60268614

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 27, 2018

General Information:
29 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: 522725

B: Analyte was detected in the associated method blank.
- BLANK for HBN 522725 [MSV/8881 (Lab ID: 2140287)
  - Acetone

QC Batch: 522727

B: Analyte was detected in the associated method blank.
- BLANK for HBN 522727 [MSV/8881 (Lab ID: 2140289)
  - Carbon disulfide

QC Batch: 523344

B: Analyte was detected in the associated method blank.
- BLANK for HBN 523344 [MSV/8889 (Lab ID: 2142612)
  - Bromomethane

QC Batch: 523345

B: Analyte was detected in the associated method blank.
- BLANK for HBN 523345 [MSV/8889 (Lab ID: 2142614)
  - Bromomethane

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

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60268614

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 27, 2018

QC Batch: 523344

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- LCS (Lab ID: 2142613)
  - Carbon disulfide

QC Batch: 523345

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- LCS (Lab ID: 2142615)
  - Carbon disulfide

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

QC Batch: 522725

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

QC Batch: 522727

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

QC Batch: 522958

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

QC Batch: 523154

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

QC Batch: 523344

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

QC Batch: 523345

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, AR
Pace Project No.: 60268614

Sample: MW-97-201804 **Lab ID: 60268614001** Collected: 04/19/18 09:05 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.9J**	ug/L	10.0	1.9	1		04/23/18 21:24	67-64-1	B
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 21:24	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 21:24	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 21:24	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 21:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 21:24	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 21:24	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 21:24	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 21:24	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 21:24	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 21:24	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 21:24	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 21:24	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 21:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 21:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 21:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 21:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 21:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 21:24	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 21:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 21:24	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 21:24	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 21:24	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 21:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 21:24	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 21:24	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 21:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 21:24	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 21:24	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 21:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 21:24	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/23/18 21:24	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 21:24	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 21:24	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/23/18 21:24	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/23/18 21:24	17060-07-0	
Toluene-d8 (S)	98	%	80-115		1		04/23/18 21:24	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 21:24		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-96-201804 **Lab ID: 60268614002** Collected: 04/19/18 10:15 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.8J**	ug/L	10.0	1.9	1		04/23/18 21:38	67-64-1	B
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 21:38	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 21:38	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 21:38	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 21:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 21:38	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 21:38	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 21:38	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 21:38	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 21:38	75-00-3	
Chloroform	**0.36J**	ug/L	1.0	0.14	1		04/23/18 21:38	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 21:38	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 21:38	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 21:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 21:38	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 21:38	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 21:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 21:38	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 21:38	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 21:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 21:38	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 21:38	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 21:38	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 21:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 21:38	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 21:38	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 21:38	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 21:38	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 21:38	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 21:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 21:38	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/23/18 21:38	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 21:38	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 21:38	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/23/18 21:38	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-117		1		04/23/18 21:38	17060-07-0	
Toluene-d8 (S)	98	%	80-115		1		04/23/18 21:38	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 21:38		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-29-201804 **Lab ID: 60268614003** Collected: 04/19/18 11:40 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**3.2J**	ug/L	10.0	1.9	1		04/23/18 21:52	67-64-1	B
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 21:52	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 21:52	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 21:52	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 21:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 21:52	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 21:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 21:52	56-23-5	
Chlorobenzene	**1.7**	ug/L	1.0	0.21	1		04/23/18 21:52	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 21:52	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 21:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 21:52	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 21:52	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 21:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 21:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 21:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 21:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 21:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 21:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 21:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 21:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 21:52	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 21:52	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 21:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 21:52	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 21:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 21:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 21:52	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 21:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 21:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 21:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/23/18 21:52	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 21:52	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 21:52	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/23/18 21:52	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	80-117		1		04/23/18 21:52	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/23/18 21:52	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 21:52		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-185-201804 **Lab ID: 60268614004** Collected: 04/19/18 12:55 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**3.0J**	ug/L	10.0	1.9	1		04/23/18 22:06	67-64-1	B
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 22:06	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 22:06	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 22:06	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 22:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 22:06	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 22:06	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 22:06	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 22:06	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 22:06	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 22:06	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 22:06	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 22:06	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 22:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 22:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 22:06	75-35-4	
cis-1,2-Dichloroethene	**1.4**	ug/L	1.0	0.080	1		04/23/18 22:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 22:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 22:06	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 22:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 22:06	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 22:06	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 22:06	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 22:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 22:06	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 22:06	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 22:06	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 22:06	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 22:06	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 22:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 22:06	79-00-5	
Trichloroethene	**12.0**	ug/L	1.0	0.17	1		04/23/18 22:06	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 22:06	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 22:06	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/23/18 22:06	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/23/18 22:06	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/23/18 22:06	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 22:06		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: DUP-07-201804 **Lab ID: 60268614005** Collected: 04/19/18 12:55 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**3.0J**	ug/L	10.0	1.9	1		04/23/18 23:02	67-64-1	B
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 23:02	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 23:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 23:02	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 23:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 23:02	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 23:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 23:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 23:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 23:02	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 23:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 23:02	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 23:02	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 23:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 23:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 23:02	75-35-4	
cis-1,2-Dichloroethene	**1.4**	ug/L	1.0	0.080	1		04/23/18 23:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 23:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 23:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 23:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 23:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 23:02	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 23:02	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 23:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 23:02	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 23:02	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 23:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 23:02	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 23:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 23:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 23:02	79-00-5	
Trichloroethene	**11.1**	ug/L	1.0	0.17	1		04/23/18 23:02	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 23:02	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 23:02	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/23/18 23:02	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-117		1		04/23/18 23:02	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/23/18 23:02	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 23:02		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-189-201804 **Lab ID: 60268614006** Collected: 04/19/18 14:45 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.4J**	ug/L	10.0	1.9	1		04/23/18 23:30	67-64-1	B
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 23:30	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 23:30	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 23:30	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 23:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 23:30	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 23:30	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 23:30	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 23:30	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 23:30	75-00-3	
Chloroform	**0.18J**	ug/L	1.0	0.14	1		04/23/18 23:30	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 23:30	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 23:30	124-48-1	
1,1-Dichloroethane	**1.6**	ug/L	1.0	0.050	1		04/23/18 23:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 23:30	107-06-2	
1,1-Dichloroethene	**1.8**	ug/L	1.0	0.20	1		04/23/18 23:30	75-35-4	
cis-1,2-Dichloroethene	**11.1**	ug/L	1.0	0.080	1		04/23/18 23:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 23:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 23:30	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 23:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 23:30	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 23:30	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 23:30	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 23:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 23:30	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 23:30	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 23:30	79-34-5	
Tetrachloroethene	**0.19J**	ug/L	1.0	0.10	1		04/23/18 23:30	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 23:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 23:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 23:30	79-00-5	
Trichloroethene	**385**	ug/L	5.0	0.85	5		04/24/18 22:05	79-01-6	
Vinyl chloride	**0.48J**	ug/L	1.0	0.13	1		04/23/18 23:30	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 23:30	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/23/18 23:30	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-117		1		04/23/18 23:30	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/23/18 23:30	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 23:30		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-188-201804 **Lab ID: 60268614007** Collected: 04/19/18 09:15 Received: 04/20/18 06:25 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		04/23/18 22:20	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 22:20	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 22:20	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 22:20	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 22:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 22:20	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 22:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 22:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 22:20	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 22:20	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 22:20	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 22:20	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 22:20	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 22:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 22:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 22:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 22:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 22:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 22:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 22:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 22:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 22:20	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 22:20	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 22:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 22:20	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 22:20	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 22:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 22:20	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 22:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 22:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 22:20	79-00-5	
Trichloroethene	**0.20J**	ug/L	1.0	0.17	1		04/23/18 22:20	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 22:20	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 22:20	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/23/18 22:20	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/23/18 22:20	17060-07-0	
Toluene-d8 (S)	98	%	80-115		1		04/23/18 22:20	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 22:20		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: DUP-04-201804 **Lab ID: 60268614008** Collected: 04/19/18 09:15 Received: 04/20/18 06:25 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		04/23/18 23:16	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 23:16	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 23:16	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 23:16	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 23:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 23:16	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 23:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 23:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 23:16	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 23:16	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 23:16	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 23:16	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 23:16	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 23:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 23:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 23:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 23:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 23:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 23:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 23:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 23:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 23:16	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 23:16	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 23:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 23:16	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 23:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 23:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 23:16	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 23:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 23:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 23:16	79-00-5	
Trichloroethene	**0.18J**	ug/L	1.0	0.17	1		04/23/18 23:16	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 23:16	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 23:16	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	80-119		1		04/23/18 23:16	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	80-117		1		04/23/18 23:16	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/23/18 23:16	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 23:16		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-186-201804 **Lab ID: 60268614009** Collected: 04/19/18 10:35 Received: 04/20/18 06:25 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		04/23/18 22:34	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 22:34	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 22:34	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 22:34	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 22:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 22:34	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 22:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 22:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 22:34	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 22:34	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 22:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 22:34	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 22:34	124-48-1	
1,1-Dichloroethane	**1.2**	ug/L	1.0	0.050	1		04/23/18 22:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 22:34	107-06-2	
1,1-Dichloroethene	**0.60J**	ug/L	1.0	0.20	1		04/23/18 22:34	75-35-4	
cis-1,2-Dichloroethene	**4.8**	ug/L	1.0	0.080	1		04/23/18 22:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 22:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 22:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 22:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 22:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 22:34	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 22:34	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 22:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 22:34	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 22:34	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 22:34	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 22:34	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 22:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 22:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 22:34	79-00-5	
Trichloroethene	**14.2**	ug/L	1.0	0.17	1		04/23/18 22:34	79-01-6	
Vinyl chloride	**0.23J**	ug/L	1.0	0.13	1		04/23/18 22:34	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 22:34	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/23/18 22:34	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/23/18 22:34	17060-07-0	
Toluene-d8 (S)	98	%	80-115		1		04/23/18 22:34	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 22:34		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: ITMW-7-201804 **Lab ID: 60268614010** Collected: 04/19/18 09:30 Received: 04/20/18 06:25 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		04/23/18 22:48	67-64-1	
Benzene	**0.13J**	ug/L	1.0	0.060	1		04/23/18 22:48	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 22:48	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 22:48	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 22:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 22:48	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 22:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 22:48	56-23-5	
Chlorobenzene	**2.6**	ug/L	1.0	0.21	1		04/23/18 22:48	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 22:48	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 22:48	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 22:48	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 22:48	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 22:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 22:48	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 22:48	75-35-4	
cis-1,2-Dichloroethene	**8.3**	ug/L	1.0	0.080	1		04/23/18 22:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 22:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 22:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 22:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 22:48	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 22:48	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 22:48	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 22:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 22:48	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 22:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 22:48	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 22:48	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 22:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 22:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 22:48	79-00-5	
Trichloroethene	**24.2**	ug/L	1.0	0.17	1		04/23/18 22:48	79-01-6	
Vinyl chloride	**0.13J**	ug/L	1.0	0.13	1		04/23/18 22:48	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 22:48	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/23/18 22:48	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/23/18 22:48	17060-07-0	
Toluene-d8 (S)	97	%	80-115		1		04/23/18 22:48	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 22:48		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: TMW-19-201804 **Lab ID: 60268614011** Collected: 04/19/18 12:40 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**6.5J**	ug/L	10.0	1.9	1		04/23/18 12:46	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 12:46	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 12:46	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 12:46	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 12:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 12:46	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 12:46	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 12:46	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 12:46	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 12:46	75-00-3	
Chloroform	**0.22J**	ug/L	1.0	0.14	1		04/23/18 12:46	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 12:46	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 12:46	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 12:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 12:46	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 12:46	75-35-4	
cis-1,2-Dichloroethene	**0.32J**	ug/L	1.0	0.080	1		04/23/18 12:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 12:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 12:46	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 12:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 12:46	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 12:46	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 12:46	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 12:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 12:46	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 12:46	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 12:46	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 12:46	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 12:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 12:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 12:46	79-00-5	
Trichloroethene	**0.41J**	ug/L	1.0	0.17	1		04/23/18 12:46	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 12:46	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 12:46	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/23/18 12:46	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	80-117		1		04/23/18 12:46	17060-07-0	
Toluene-d8 (S)	102	%	80-115		1		04/23/18 12:46	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 12:46		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: TMW-26-201804 **Lab ID: 60268614012** Collected: 04/19/18 13:00 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.5J**	ug/L	10.0	1.9	1		04/23/18 13:56	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 13:56	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 13:56	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 13:56	75-25-2	
Bromomethane	**1.4J**	ug/L	5.0	0.16	1		04/23/18 13:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 13:56	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 13:56	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 13:56	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 13:56	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:56	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 13:56	67-66-3	
Chloromethane	**0.086J**	ug/L	1.0	0.080	1		04/23/18 13:56	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 13:56	124-48-1	
1,1-Dichloroethane	**0.19J**	ug/L	1.0	0.050	1		04/23/18 13:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 13:56	107-06-2	
1,1-Dichloroethene	**0.21J**	ug/L	1.0	0.20	1		04/23/18 13:56	75-35-4	
cis-1,2-Dichloroethene	**1.1**	ug/L	1.0	0.080	1		04/23/18 13:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 13:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 13:56	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 13:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 13:56	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 13:56	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 13:56	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 13:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 13:56	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 13:56	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:56	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 13:56	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 13:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 13:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 13:56	79-00-5	
Trichloroethene	**28.3**	ug/L	1.0	0.17	1		04/23/18 13:56	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 13:56	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 13:56	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/23/18 13:56	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-117		1		04/23/18 13:56	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/23/18 13:56	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 13:56		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-86-201804 **Lab ID: 60268614013** Collected: 04/19/18 15:35 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**9.5J**	ug/L	10.0	1.9	1		04/26/18 13:30	67-64-1	
Benzene	**0.38J**	ug/L	1.0	0.060	1		04/26/18 13:30	71-43-2	
Bromodichloromethane	**2.9**	ug/L	1.0	0.19	1		04/26/18 13:30	75-27-4	
Bromoform	**6.5**	ug/L	1.0	0.070	1		04/26/18 13:30	75-25-2	
Bromomethane	**1.3J**	ug/L	5.0	0.16	1		04/26/18 13:30	74-83-9	B
2-Butanone (MEK)	**3.5J**	ug/L	10.0	0.59	1		04/26/18 13:30	78-93-3	
Carbon disulfide	**3.0J**	ug/L	5.0	0.12	1		04/26/18 13:30	75-15-0	L2
Carbon tetrachloride	**0.91J**	ug/L	1.0	0.18	1		04/26/18 13:30	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/26/18 13:30	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/26/18 13:30	75-00-3	
Chloroform	**23.0**	ug/L	1.0	0.14	1		04/26/18 13:30	67-66-3	
Chloromethane	**2.9**	ug/L	1.0	0.080	1		04/26/18 13:30	74-87-3	
Dibromochloromethane	**1.2**	ug/L	1.0	0.21	1		04/26/18 13:30	124-48-1	
1,1-Dichloroethane	**2.9**	ug/L	1.0	0.050	1		04/26/18 13:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/26/18 13:30	107-06-2	
1,1-Dichloroethene	**49.8**	ug/L	1.0	0.20	1		04/26/18 13:30	75-35-4	
cis-1,2-Dichloroethene	**2450**	ug/L	1000	80.0	1000		04/25/18 12:45	156-59-2	
trans-1,2-Dichloroethene	**304J**	ug/L	1000	200	1000		04/25/18 12:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/26/18 13:30	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/26/18 13:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/26/18 13:30	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/26/18 13:30	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/26/18 13:30	591-78-6	
Methylene chloride	**4.0**	ug/L	1.0	0.15	1		04/26/18 13:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/26/18 13:30	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/26/18 13:30	100-42-5	
1,1,2,2-Tetrachloroethane	**104**	ug/L	1.0	0.15	1		04/26/18 13:30	79-34-5	
Tetrachloroethene	**41.5**	ug/L	1.0	0.10	1		04/26/18 13:30	127-18-4	
Toluene	**3.4**	ug/L	1.0	0.17	1		04/26/18 13:30	108-88-3	
1,1,1-Trichloroethane	**87.7**	ug/L	1.0	0.11	1		04/26/18 13:30	71-55-6	
1,1,2-Trichloroethane	**2.8**	ug/L	1.0	0.20	1		04/26/18 13:30	79-00-5	
Trichloroethene	**61200**	ug/L	1000	170	1000		04/25/18 12:45	79-01-6	
Vinyl chloride	**171**	ug/L	1.0	0.13	1		04/26/18 13:30	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/26/18 13:30	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-119		1		04/26/18 13:30	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	80-117		1		04/26/18 13:30	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/26/18 13:30	2037-26-5	
Preservation pH	**6.0**		0.10	0.10	1		04/26/18 13:30		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: TMW-25-201804 **Lab ID: 60268614014** Collected: 04/19/18 14:10 Received: 04/20/18 06:25 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		04/23/18 14:24	67-64-1	
Benzene	**0.11J**	ug/L	1.0	0.060	1		04/23/18 14:24	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 14:24	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 14:24	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 14:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 14:24	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 14:24	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 14:24	56-23-5	
Chlorobenzene	**3.5**	ug/L	1.0	0.21	1		04/23/18 14:24	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 14:24	75-00-3	
Chloroform	**0.26J**	ug/L	1.0	0.14	1		04/23/18 14:24	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 14:24	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 14:24	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 14:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 14:24	107-06-2	
1,1-Dichloroethene	**0.31J**	ug/L	1.0	0.20	1		04/23/18 14:24	75-35-4	
cis-1,2-Dichloroethene	**10.9**	ug/L	1.0	0.080	1		04/23/18 14:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 14:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 14:24	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 14:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 14:24	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 14:24	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 14:24	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 14:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 14:24	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 14:24	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 14:24	79-34-5	
Tetrachloroethene	**0.14J**	ug/L	1.0	0.10	1		04/23/18 14:24	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 14:24	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 14:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 14:24	79-00-5	
Trichloroethene	**240**	ug/L	5.0	0.85	5		04/23/18 14:38	79-01-6	
Vinyl chloride	**0.29J**	ug/L	1.0	0.13	1		04/23/18 14:24	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 14:24	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/23/18 14:24	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/23/18 14:24	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/23/18 14:24	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 14:24		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: ITMW-10-201804 **Lab ID: 60268614015** Collected: 04/19/18 11:15 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**4.4J**	ug/L	10.0	1.9	1		04/23/18 13:28	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 13:28	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 13:28	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 13:28	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 13:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 13:28	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 13:28	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 13:28	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 13:28	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:28	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 13:28	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 13:28	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 13:28	124-48-1	
1,1-Dichloroethane	**0.78J**	ug/L	1.0	0.050	1		04/23/18 13:28	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 13:28	107-06-2	
1,1-Dichloroethene	**1.1**	ug/L	1.0	0.20	1		04/23/18 13:28	75-35-4	
cis-1,2-Dichloroethene	**12.2**	ug/L	1.0	0.080	1		04/23/18 13:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 13:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 13:28	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 13:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 13:28	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 13:28	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 13:28	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 13:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 13:28	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 13:28	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:28	79-34-5	
Tetrachloroethene	**0.27J**	ug/L	1.0	0.10	1		04/23/18 13:28	127-18-4	
Toluene	**1.3**	ug/L	1.0	0.17	1		04/23/18 13:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 13:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 13:28	79-00-5	
Trichloroethene	**65.4**	ug/L	1.0	0.17	1		04/23/18 13:28	79-01-6	
Vinyl chloride	**0.65J**	ug/L	1.0	0.13	1		04/23/18 13:28	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 13:28	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/23/18 13:28	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/23/18 13:28	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/23/18 13:28	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 13:28		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: ITMW-5-201804 **Lab ID: 60268614016** Collected: 04/19/18 15:25 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.5J**	ug/L	10.0	1.9	1		04/23/18 16:44	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 16:44	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 16:44	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 16:44	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 16:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 16:44	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 16:44	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 16:44	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 16:44	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 16:44	75-00-3	
Chloroform	**0.55J**	ug/L	1.0	0.14	1		04/23/18 16:44	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 16:44	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 16:44	124-48-1	
1,1-Dichloroethane	**1.6**	ug/L	1.0	0.050	1		04/23/18 16:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 16:44	107-06-2	
1,1-Dichloroethene	**4.9**	ug/L	1.0	0.20	1		04/23/18 16:44	75-35-4	
cis-1,2-Dichloroethene	**34.2**	ug/L	1.0	0.080	1		04/23/18 16:44	156-59-2	
trans-1,2-Dichloroethene	**0.37J**	ug/L	1.0	0.20	1		04/23/18 16:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 16:44	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 16:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 16:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 16:44	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 16:44	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 16:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 16:44	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 16:44	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 16:44	79-34-5	
Tetrachloroethene	**1.3**	ug/L	1.0	0.10	1		04/23/18 16:44	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 16:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 16:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 16:44	79-00-5	
Trichloroethene	**1590**	ug/L	20.0	3.4	20		04/23/18 16:58	79-01-6	
Vinyl chloride	**1.4**	ug/L	1.0	0.13	1		04/23/18 16:44	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 16:44	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/23/18 16:44	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/23/18 16:44	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/23/18 16:44	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 16:44		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: ITMW-21-201804 **Lab ID: 60268614017** Collected: 04/19/18 14:10 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**1.9J**	ug/L	10.0	1.9	1		04/23/18 13:00	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 13:00	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 13:00	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 13:00	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 13:00	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 13:00	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 13:00	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 13:00	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 13:00	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:00	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 13:00	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 13:00	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 13:00	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 13:00	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 13:00	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 13:00	75-35-4	
cis-1,2-Dichloroethene	**0.38J**	ug/L	1.0	0.080	1		04/23/18 13:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 13:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 13:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 13:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 13:00	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 13:00	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 13:00	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 13:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 13:00	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 13:00	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 13:00	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 13:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 13:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 13:00	79-00-5	
Trichloroethene	**13.2**	ug/L	1.0	0.17	1		04/23/18 13:00	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 13:00	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 13:00	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/23/18 13:00	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/23/18 13:00	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/23/18 13:00	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 13:00		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: TMW-16-201804 **Lab ID: 60268614018** Collected: 04/19/18 15:30 Received: 04/20/18 06:25 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		04/23/18 15:20	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 15:20	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 15:20	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 15:20	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 15:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 15:20	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 15:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 15:20	56-23-5	
Chlorobenzene	**0.31J**	ug/L	1.0	0.21	1		04/23/18 15:20	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 15:20	75-00-3	
Chloroform	**1.7**	ug/L	1.0	0.14	1		04/23/18 15:20	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 15:20	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 15:20	124-48-1	
1,1-Dichloroethane	**0.42J**	ug/L	1.0	0.050	1		04/23/18 15:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 15:20	107-06-2	
1,1-Dichloroethene	**1.4**	ug/L	1.0	0.20	1		04/23/18 15:20	75-35-4	
cis-1,2-Dichloroethene	**13.6**	ug/L	1.0	0.080	1		04/23/18 15:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 15:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 15:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 15:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 15:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 15:20	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 15:20	591-78-6	
Methylene chloride	**0.87J**	ug/L	1.0	0.15	1		04/23/18 15:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 15:20	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 15:20	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 15:20	79-34-5	
Tetrachloroethene	**0.35J**	ug/L	1.0	0.10	1		04/23/18 15:20	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 15:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 15:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 15:20	79-00-5	
Trichloroethene	**1030**	ug/L	10.0	1.7	10		04/23/18 15:34	79-01-6	
Vinyl chloride	**0.90J**	ug/L	1.0	0.13	1		04/23/18 15:20	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 15:20	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/23/18 15:20	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	80-117		1		04/23/18 15:20	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/23/18 15:20	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 15:20		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-182-201804 **Lab ID: 60268614019** Collected: 04/19/18 09:25 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.5J**	ug/L	10.0	1.9	1		04/23/18 14:52	67-64-1	
Benzene	**0.16J**	ug/L	1.0	0.060	1		04/23/18 14:52	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 14:52	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 14:52	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 14:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 14:52	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 14:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 14:52	56-23-5	
Chlorobenzene	**5.3**	ug/L	1.0	0.21	1		04/23/18 14:52	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 14:52	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 14:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 14:52	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 14:52	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 14:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 14:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 14:52	75-35-4	
cis-1,2-Dichloroethene	**3.9**	ug/L	1.0	0.080	1		04/23/18 14:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 14:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 14:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 14:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 14:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 14:52	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 14:52	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 14:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 14:52	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 14:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 14:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 14:52	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 14:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 14:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 14:52	79-00-5	
Trichloroethene	**58.3**	ug/L	1.0	0.17	1		04/23/18 14:52	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 14:52	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 14:52	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-119		1		04/23/18 14:52	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/23/18 14:52	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/23/18 14:52	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 14:52		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: DUP-06-201804 **Lab ID: 60268614020** Collected: 04/19/18 09:30 Received: 04/20/18 06:25 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		04/23/18 13:42	67-64-1	
Benzene	**0.17J**	ug/L	1.0	0.060	1		04/23/18 13:42	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 13:42	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 13:42	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 13:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 13:42	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 13:42	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 13:42	56-23-5	
Chlorobenzene	**5.2**	ug/L	1.0	0.21	1		04/23/18 13:42	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:42	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 13:42	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 13:42	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 13:42	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 13:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 13:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 13:42	75-35-4	
cis-1,2-Dichloroethene	**4.1**	ug/L	1.0	0.080	1		04/23/18 13:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 13:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 13:42	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 13:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 13:42	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 13:42	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 13:42	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 13:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 13:42	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 13:42	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 13:42	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 13:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 13:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 13:42	79-00-5	
Trichloroethene	**59.3**	ug/L	1.0	0.17	1		04/23/18 13:42	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 13:42	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 13:42	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/23/18 13:42	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/23/18 13:42	17060-07-0	
Toluene-d8 (S)	98	%	80-115		1		04/23/18 13:42	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 13:42		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: TMW-21-201804 **Lab ID: 60268614021** Collected: 04/19/18 10:48 Received: 04/20/18 06:25 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		04/23/18 15:48	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 15:48	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 15:48	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 15:48	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 15:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 15:48	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 15:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 15:48	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 15:48	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 15:48	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 15:48	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 15:48	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 15:48	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 15:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 15:48	107-06-2	
1,1-Dichloroethene	**1.1**	ug/L	1.0	0.20	1		04/23/18 15:48	75-35-4	
cis-1,2-Dichloroethene	**10.0**	ug/L	1.0	0.080	1		04/23/18 15:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 15:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 15:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 15:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 15:48	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 15:48	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 15:48	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 15:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 15:48	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 15:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 15:48	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 15:48	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 15:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 15:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 15:48	79-00-5	
Trichloroethene	**420**	ug/L	10.0	1.7	10		04/23/18 16:02	79-01-6	
Vinyl chloride	**0.21J**	ug/L	1.0	0.13	1		04/23/18 15:48	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 15:48	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/23/18 15:48	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/23/18 15:48	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/23/18 15:48	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 15:48		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-91-201804 **Lab ID: 60268614022** Collected: 04/19/18 12:35 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**4.4J**	ug/L	10.0	1.9	1		04/23/18 16:16	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 16:16	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 16:16	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 16:16	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 16:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 16:16	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 16:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 16:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 16:16	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 16:16	75-00-3	
Chloroform	**0.26J**	ug/L	1.0	0.14	1		04/23/18 16:16	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 16:16	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 16:16	124-48-1	
1,1-Dichloroethane	**1.7**	ug/L	1.0	0.050	1		04/23/18 16:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 16:16	107-06-2	
1,1-Dichloroethene	**4.3**	ug/L	1.0	0.20	1		04/23/18 16:16	75-35-4	
cis-1,2-Dichloroethene	**38.6**	ug/L	1.0	0.080	1		04/23/18 16:16	156-59-2	
trans-1,2-Dichloroethene	**0.76J**	ug/L	1.0	0.20	1		04/23/18 16:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 16:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 16:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 16:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 16:16	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 16:16	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 16:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 16:16	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 16:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 16:16	79-34-5	
Tetrachloroethene	**4.1**	ug/L	1.0	0.10	1		04/23/18 16:16	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 16:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 16:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 16:16	79-00-5	
Trichloroethene	**557**	ug/L	10.0	1.7	10		04/23/18 16:30	79-01-6	
Vinyl chloride	**0.21J**	ug/L	1.0	0.13	1		04/23/18 16:16	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 16:16	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/23/18 16:16	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-117		1		04/23/18 16:16	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/23/18 16:16	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 16:16		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-38-201804 **Lab ID: 60268614023** Collected: 04/19/18 13:35 Received: 04/20/18 06:25 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		04/26/18 12:47	67-64-1	
Benzene	**0.18J**	ug/L	1.0	0.060	1		04/26/18 12:47	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/26/18 12:47	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/26/18 12:47	75-25-2	
Bromomethane	**0.47J**	ug/L	5.0	0.16	1		04/26/18 12:47	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/26/18 12:47	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/26/18 12:47	75-15-0	L2
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/26/18 12:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/26/18 12:47	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/26/18 12:47	75-00-3	
Chloroform	**0.50J**	ug/L	1.0	0.14	1		04/26/18 12:47	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/26/18 12:47	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/26/18 12:47	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/26/18 12:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/26/18 12:47	107-06-2	
1,1-Dichloroethene	**9.8**	ug/L	1.0	0.20	1		04/26/18 12:47	75-35-4	
cis-1,2-Dichloroethene	**777**	ug/L	50.0	4.0	50		04/23/18 17:12	156-59-2	
trans-1,2-Dichloroethene	**10.5**	ug/L	1.0	0.20	1		04/26/18 12:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/26/18 12:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/26/18 12:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/26/18 12:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/26/18 12:47	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/26/18 12:47	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/26/18 12:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/26/18 12:47	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/26/18 12:47	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/26/18 12:47	79-34-5	
Tetrachloroethene	**0.42J**	ug/L	1.0	0.10	1		04/26/18 12:47	127-18-4	
Toluene	**0.32J**	ug/L	1.0	0.17	1		04/26/18 12:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/26/18 12:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/26/18 12:47	79-00-5	
Trichloroethene	**2560**	ug/L	50.0	8.5	50		04/23/18 17:12	79-01-6	
Vinyl chloride	**23.6**	ug/L	1.0	0.13	1		04/26/18 12:47	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/26/18 12:47	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-119		1		04/26/18 12:47	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	80-117		1		04/26/18 12:47	17060-07-0	
Toluene-d8 (S)	102	%	80-115		1		04/26/18 12:47	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/26/18 12:47		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-95-201804 **Lab ID: 60268614024** Collected: 04/19/18 15:12 Received: 04/20/18 06:25 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		04/26/18 13:02	67-64-1	
Benzene	**0.11J**	ug/L	1.0	0.060	1		04/26/18 13:02	71-43-2	
Bromodichloromethane	**0.37J**	ug/L	1.0	0.19	1		04/26/18 13:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/26/18 13:02	75-25-2	
Bromomethane	**0.93J**	ug/L	5.0	0.16	1		04/26/18 13:02	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/26/18 13:02	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/26/18 13:02	75-15-0	L2
Carbon tetrachloride	**0.28J**	ug/L	1.0	0.18	1		04/26/18 13:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/26/18 13:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/26/18 13:02	75-00-3	
Chloroform	**5.0**	ug/L	1.0	0.14	1		04/26/18 13:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/26/18 13:02	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/26/18 13:02	124-48-1	
1,1-Dichloroethane	**0.36J**	ug/L	1.0	0.050	1		04/26/18 13:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/26/18 13:02	107-06-2	
1,1-Dichloroethene	**36.3**	ug/L	1.0	0.20	1		04/26/18 13:02	75-35-4	
cis-1,2-Dichloroethene	**153**	ug/L	1.0	0.080	1		04/26/18 13:02	156-59-2	
trans-1,2-Dichloroethene	**5.0**	ug/L	1.0	0.20	1		04/26/18 13:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/26/18 13:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/26/18 13:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/26/18 13:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/26/18 13:02	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/26/18 13:02	591-78-6	
Methylene chloride	**1.2**	ug/L	1.0	0.15	1		04/26/18 13:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/26/18 13:02	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/26/18 13:02	100-42-5	
1,1,2,2-Tetrachloroethane	**0.19J**	ug/L	1.0	0.15	1		04/26/18 13:02	79-34-5	
Tetrachloroethene	**7.7**	ug/L	1.0	0.10	1		04/26/18 13:02	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/26/18 13:02	108-88-3	
1,1,1-Trichloroethane	**0.46J**	ug/L	1.0	0.11	1		04/26/18 13:02	71-55-6	
1,1,2-Trichloroethane	**1.7**	ug/L	1.0	0.20	1		04/26/18 13:02	79-00-5	
Trichloroethene	**24100**	ug/L	200	34.0	200		04/23/18 17:26	79-01-6	
Vinyl chloride	**13.1**	ug/L	1.0	0.13	1		04/26/18 13:02	75-01-4	
Xylene (Total)	ND	ug/L	600	84.0	200		04/23/18 17:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	92	%	80-119		1		04/26/18 13:02	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-117		1		04/26/18 13:02	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/26/18 13:02	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/26/18 13:02		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-179-201804 **Lab ID: 60268614025** Collected: 04/19/18 15:55 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.9J**	ug/L	10.0	1.9	1		04/23/18 13:14	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 13:14	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 13:14	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 13:14	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 13:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 13:14	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 13:14	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 13:14	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 13:14	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:14	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 13:14	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 13:14	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 13:14	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 13:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 13:14	107-06-2	
1,1-Dichloroethene	**0.27J**	ug/L	1.0	0.20	1		04/23/18 13:14	75-35-4	
cis-1,2-Dichloroethene	**0.85J**	ug/L	1.0	0.080	1		04/23/18 13:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 13:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 13:14	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 13:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 13:14	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 13:14	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 13:14	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 13:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 13:14	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 13:14	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 13:14	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 13:14	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 13:14	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 13:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 13:14	79-00-5	
Trichloroethene	**21.7**	ug/L	1.0	0.17	1		04/23/18 13:14	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 13:14	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 13:14	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/23/18 13:14	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-117		1		04/23/18 13:14	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/23/18 13:14	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 13:14		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: EB-05-201804 **Lab ID: 60268614026** Collected: 04/19/18 16:00 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.4J**	ug/L	10.0	1.9	1		04/23/18 12:04	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 12:04	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 12:04	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 12:04	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 12:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 12:04	78-93-3	
Carbon disulfide	**0.13J**	ug/L	5.0	0.12	1		04/23/18 12:04	75-15-0	B
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 12:04	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 12:04	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 12:04	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 12:04	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 12:04	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 12:04	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 12:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 12:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 12:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 12:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 12:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 12:04	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 12:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 12:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 12:04	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 12:04	591-78-6	
Methylene chloride	**0.27J**	ug/L	1.0	0.15	1		04/23/18 12:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 12:04	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 12:04	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 12:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 12:04	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 12:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 12:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 12:04	79-00-5	
Trichloroethene	**0.24J**	ug/L	1.0	0.17	1		04/23/18 12:04	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 12:04	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 12:04	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/23/18 12:04	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	80-117		1		04/23/18 12:04	17060-07-0	
Toluene-d8 (S)	100	%	80-115		1		04/23/18 12:04	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 12:04		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: MW-93-201804 **Lab ID: 60268614027** Collected: 04/19/18 16:45 Received: 04/20/18 06:25 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		04/26/18 13:16	67-64-1	
Benzene	**0.14J**	ug/L	1.0	0.060	1		04/26/18 13:16	71-43-2	
Bromodichloromethane	**0.22J**	ug/L	1.0	0.19	1		04/26/18 13:16	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/26/18 13:16	75-25-2	
Bromomethane	**0.60J**	ug/L	5.0	0.16	1		04/26/18 13:16	74-83-9	B
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/26/18 13:16	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/26/18 13:16	75-15-0	L2
Carbon tetrachloride	**0.24J**	ug/L	1.0	0.18	1		04/26/18 13:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/26/18 13:16	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/26/18 13:16	75-00-3	
Chloroform	**3.8**	ug/L	1.0	0.14	1		04/26/18 13:16	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/26/18 13:16	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/26/18 13:16	124-48-1	
1,1-Dichloroethane	**0.28J**	ug/L	1.0	0.050	1		04/26/18 13:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/26/18 13:16	107-06-2	
1,1-Dichloroethene	**19.6**	ug/L	1.0	0.20	1		04/26/18 13:16	75-35-4	
cis-1,2-Dichloroethene	**97.9**	ug/L	1.0	0.080	1		04/26/18 13:16	156-59-2	
trans-1,2-Dichloroethene	**6.9**	ug/L	1.0	0.20	1		04/26/18 13:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/26/18 13:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/26/18 13:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/26/18 13:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/26/18 13:16	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/26/18 13:16	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/26/18 13:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/26/18 13:16	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/26/18 13:16	100-42-5	
1,1,2,2-Tetrachloroethane	**0.40J**	ug/L	1.0	0.15	1		04/26/18 13:16	79-34-5	
Tetrachloroethene	**5.0**	ug/L	1.0	0.10	1		04/26/18 13:16	127-18-4	
Toluene	**0.18J**	ug/L	1.0	0.17	1		04/26/18 13:16	108-88-3	
1,1,1-Trichloroethane	**0.30J**	ug/L	1.0	0.11	1		04/26/18 13:16	71-55-6	
1,1,2-Trichloroethane	**1.1**	ug/L	1.0	0.20	1		04/26/18 13:16	79-00-5	
Trichloroethene	**17000**	ug/L	200	34.0	200		04/23/18 17:40	79-01-6	
Vinyl chloride	**4.5**	ug/L	1.0	0.13	1		04/26/18 13:16	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/26/18 13:16	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	91	%	80-119		1		04/26/18 13:16	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/26/18 13:16	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/26/18 13:16	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/26/18 13:16		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: TB-04-201804 **Lab ID: 60268614028** Collected: 04/19/18 09:05 Received: 04/20/18 06:25 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		04/23/18 11:36	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 11:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 11:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 11:36	75-25-2	
Bromomethane	**0.90J**	ug/L	5.0	0.16	1		04/23/18 11:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 11:36	78-93-3	
Carbon disulfide	**0.21J**	ug/L	5.0	0.12	1		04/23/18 11:36	75-15-0	B
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 11:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 11:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 11:36	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 11:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 11:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 11:36	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 11:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 11:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 11:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 11:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 11:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 11:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 11:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 11:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 11:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 11:36	591-78-6	
Methylene chloride	**0.60J**	ug/L	1.0	0.15	1		04/23/18 11:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 11:36	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 11:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 11:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 11:36	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 11:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 11:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 11:36	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/23/18 11:36	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 11:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 11:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-119		1		04/23/18 11:36	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	80-117		1		04/23/18 11:36	17060-07-0	
Toluene-d8 (S)	97	%	80-115		1		04/23/18 11:36	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 11:36		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268614

Sample: TB-05-201804 **Lab ID: 60268614029** Collected: 04/19/18 09:05 Received: 04/20/18 06:25 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		04/23/18 11:50	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/23/18 11:50	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 11:50	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 11:50	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 11:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/23/18 11:50	78-93-3	
Carbon disulfide	**0.13J**	ug/L	5.0	0.12	1		04/23/18 11:50	75-15-0	B
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 11:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 11:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 11:50	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 11:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 11:50	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 11:50	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 11:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 11:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 11:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 11:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 11:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 11:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 11:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 11:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 11:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 11:50	591-78-6	
Methylene chloride	**0.52J**	ug/L	1.0	0.15	1		04/23/18 11:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/23/18 11:50	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 11:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 11:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 11:50	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/23/18 11:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 11:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 11:50	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/23/18 11:50	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 11:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 11:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-119		1		04/23/18 11:50	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/23/18 11:50	17060-07-0	
Toluene-d8 (S)	98	%	80-115		1		04/23/18 11:50	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 11:50		

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268614

QC Batch: 522725 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268614001, 60268614002, 60268614003, 60268614004, 60268614005, 60268614006, 60268614007, 60268614008, 60268614009, 60268614010

METHOD BLANK: 2140287 Matrix: Water
Associated Lab Samples: 60268614001, 60268614002, 60268614003, 60268614004, 60268614005, 60268614006, 60268614007, 60268614008, 60268614009, 60268614010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/23/18 19:18	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/23/18 19:18	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/23/18 19:18	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/23/18 19:18	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/23/18 19:18	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/23/18 19:18	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/23/18 19:18	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/23/18 19:18	
2-Hexanone	ug/L	ND	10.0	1.2	04/23/18 19:18	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/23/18 19:18	
Acetone	ug/L	2.1J	10.0	1.9	04/23/18 19:18	
Benzene	ug/L	ND	1.0	0.060	04/23/18 19:18	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/23/18 19:18	
Bromoform	ug/L	ND	1.0	0.070	04/23/18 19:18	
Bromomethane	ug/L	ND	5.0	0.16	04/23/18 19:18	
Carbon disulfide	ug/L	ND	5.0	0.12	04/23/18 19:18	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/23/18 19:18	
Chlorobenzene	ug/L	ND	1.0	0.21	04/23/18 19:18	
Chloroethane	ug/L	ND	1.0	0.15	04/23/18 19:18	
Chloroform	ug/L	ND	1.0	0.14	04/23/18 19:18	
Chloromethane	ug/L	ND	1.0	0.080	04/23/18 19:18	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/23/18 19:18	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/23/18 19:18	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/23/18 19:18	
Ethylbenzene	ug/L	ND	1.0	0.18	04/23/18 19:18	
Methylene chloride	ug/L	ND	1.0	0.15	04/23/18 19:18	
Styrene	ug/L	ND	1.0	0.12	04/23/18 19:18	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/23/18 19:18	
Toluene	ug/L	ND	1.0	0.17	04/23/18 19:18	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/23/18 19:18	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/23/18 19:18	
Trichloroethene	ug/L	ND	1.0	0.17	04/23/18 19:18	
Vinyl chloride	ug/L	ND	1.0	0.13	04/23/18 19:18	
Xylene (Total)	ug/L	ND	3.0	0.42	04/23/18 19:18	
1,2-Dichloroethane-d4 (S)	%	101	80-117		04/23/18 19:18	
4-Bromofluorobenzene (S)	%	99	80-119		04/23/18 19:18	
Toluene-d8 (S)	%	99	80-115		04/23/18 19:18	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268614

LABORATORY CONTROL SAMPLE: 2140288

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.6	108	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	19.3	96	74-121	
1,1,2-Trichloroethane	ug/L	20	19.9	99	83-119	
1,1-Dichloroethane	ug/L	20	20.8	104	85-128	
1,1-Dichloroethene	ug/L	20	19.2	96	85-123	
1,2-Dichloroethane	ug/L	20	19.9	99	77-120	
1,2-Dichloropropane	ug/L	20	21.4	107	81-126	
2-Butanone (MEK)	ug/L	100	99.0	99	65-134	
2-Hexanone	ug/L	100	99.5	99	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	103	103	66-139	
Acetone	ug/L	100	91.9	92	62-142	
Benzene	ug/L	20	21.2	106	81-118	
Bromodichloromethane	ug/L	20	19.2	96	85-123	
Bromoform	ug/L	20	20.2	101	83-123	
Bromomethane	ug/L	20	23.8	119	39-149	
Carbon disulfide	ug/L	20	21.9	110	85-124	
Carbon tetrachloride	ug/L	20	20.6	103	85-126	
Chlorobenzene	ug/L	20	20.9	105	87-118	
Chloroethane	ug/L	20	16.6	83	73-134	
Chloroform	ug/L	20	20.6	103	85-119	
Chloromethane	ug/L	20	22.3	111	20-174	
cis-1,2-Dichloroethene	ug/L	20	21.0	105	84-121	
cis-1,3-Dichloropropene	ug/L	20	20.2	101	80-124	
Dibromochloromethane	ug/L	20	19.1	96	83-122	
Ethylbenzene	ug/L	20	20.6	103	80-118	
Methylene chloride	ug/L	20	20.1	100	81-126	
Styrene	ug/L	20	20.5	103	85-120	
Tetrachloroethene	ug/L	20	20.9	104	87-120	
Toluene	ug/L	20	21.1	105	82-118	
trans-1,2-Dichloroethene	ug/L	20	21.5	107	83-121	
trans-1,3-Dichloropropene	ug/L	20	20.0	100	80-122	
Trichloroethene	ug/L	20	21.8	109	82-120	
Vinyl chloride	ug/L	20	23.2	116	74-147	
Xylene (Total)	ug/L	60	60.9	101	81-120	
1,2-Dichloroethane-d4 (S)	%			98	80-117	
4-Bromofluorobenzene (S)	%			99	80-119	
Toluene-d8 (S)	%			99	80-115	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268614

QC Batch: 522727 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268614011, 60268614012, 60268614014, 60268614015, 60268614016, 60268614017, 60268614018, 60268614019, 60268614020, 60268614021, 60268614022, 60268614023, 60268614024, 60268614025, 60268614026, 60268614027, 60268614028, 60268614029

METHOD BLANK: 2140289 Matrix: Water
Associated Lab Samples: 60268614011, 60268614012, 60268614014, 60268614015, 60268614016, 60268614017, 60268614018, 60268614019, 60268614020, 60268614021, 60268614022, 60268614023, 60268614024, 60268614025, 60268614026, 60268614027, 60268614028, 60268614029

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/23/18 11:22	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/23/18 11:22	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/23/18 11:22	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/23/18 11:22	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/23/18 11:22	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/23/18 11:22	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/23/18 11:22	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/23/18 11:22	
2-Hexanone	ug/L	ND	10.0	1.2	04/23/18 11:22	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/23/18 11:22	
Acetone	ug/L	ND	10.0	1.9	04/23/18 11:22	
Benzene	ug/L	ND	1.0	0.060	04/23/18 11:22	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/23/18 11:22	
Bromoform	ug/L	ND	1.0	0.070	04/23/18 11:22	
Bromomethane	ug/L	ND	5.0	0.16	04/23/18 11:22	
Carbon disulfide	ug/L	0.19J	5.0	0.12	04/23/18 11:22	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/23/18 11:22	
Chlorobenzene	ug/L	ND	1.0	0.21	04/23/18 11:22	
Chloroethane	ug/L	ND	1.0	0.15	04/23/18 11:22	
Chloroform	ug/L	ND	1.0	0.14	04/23/18 11:22	
Chloromethane	ug/L	ND	1.0	0.080	04/23/18 11:22	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/23/18 11:22	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/23/18 11:22	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/23/18 11:22	
Ethylbenzene	ug/L	ND	1.0	0.18	04/23/18 11:22	
Methylene chloride	ug/L	ND	1.0	0.15	04/23/18 11:22	
Styrene	ug/L	ND	1.0	0.12	04/23/18 11:22	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/23/18 11:22	
Toluene	ug/L	ND	1.0	0.17	04/23/18 11:22	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/23/18 11:22	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/23/18 11:22	
Trichloroethene	ug/L	ND	1.0	0.17	04/23/18 11:22	
Vinyl chloride	ug/L	ND	1.0	0.13	04/23/18 11:22	
Xylene (Total)	ug/L	ND	3.0	0.42	04/23/18 11:22	
1,2-Dichloroethane-d4 (S)	%	99	80-117		04/23/18 11:22	
4-Bromofluorobenzene (S)	%	100	80-119		04/23/18 11:22	
Toluene-d8 (S)	%	99	80-115		04/23/18 11:22	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268614

LABORATORY CONTROL SAMPLE: 2140290

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.1	101	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	19.0	95	74-121	
1,1,2-Trichloroethane	ug/L	20	19.5	97	83-119	
1,1-Dichloroethane	ug/L	20	19.8	99	85-128	
1,1-Dichloroethene	ug/L	20	18.3	91	85-123	
1,2-Dichloroethane	ug/L	20	19.6	98	77-120	
1,2-Dichloropropane	ug/L	20	20.4	102	81-126	
2-Butanone (MEK)	ug/L	100	102	102	65-134	
2-Hexanone	ug/L	100	99.5	99	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	103	103	66-139	
Acetone	ug/L	100	95.6	96	62-142	
Benzene	ug/L	20	20.7	103	81-118	
Bromodichloromethane	ug/L	20	19.2	96	85-123	
Bromoform	ug/L	20	20.6	103	83-123	
Bromomethane	ug/L	20	18.1	90	39-149	
Carbon disulfide	ug/L	20	21.1	106	85-124	
Carbon tetrachloride	ug/L	20	20.3	102	85-126	
Chlorobenzene	ug/L	20	19.8	99	87-118	
Chloroethane	ug/L	20	15.4	77	73-134	
Chloroform	ug/L	20	20.0	100	85-119	
Chloromethane	ug/L	20	21.8	109	20-174	
cis-1,2-Dichloroethene	ug/L	20	19.5	98	84-121	
cis-1,3-Dichloropropene	ug/L	20	19.5	97	80-124	
Dibromochloromethane	ug/L	20	18.7	94	83-122	
Ethylbenzene	ug/L	20	20.0	100	80-118	
Methylene chloride	ug/L	20	19.4	97	81-126	
Styrene	ug/L	20	20.1	100	85-120	
Tetrachloroethene	ug/L	20	18.5	92	87-120	
Toluene	ug/L	20	19.8	99	82-118	
trans-1,2-Dichloroethene	ug/L	20	20.2	101	83-121	
trans-1,3-Dichloropropene	ug/L	20	19.6	98	80-122	
Trichloroethene	ug/L	20	20.7	103	82-120	
Vinyl chloride	ug/L	20	21.9	110	74-147	
Xylene (Total)	ug/L	60	59.1	98	81-120	
1,2-Dichloroethane-d4 (S)	%			101	80-117	
4-Bromofluorobenzene (S)	%			101	80-119	
Toluene-d8 (S)	%			98	80-115	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268614

QC Batch: 522958
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268614006

METHOD BLANK: 2140814 Matrix: Water
Associated Lab Samples: 60268614006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichloroethene	ug/L	ND	1.0	0.17	04/24/18 20:55	
1,2-Dichloroethane-d4 (S)	%	96	80-117		04/24/18 20:55	
4-Bromofluorobenzene (S)	%	98	80-119		04/24/18 20:55	
Toluene-d8 (S)	%	97	80-115		04/24/18 20:55	

LABORATORY CONTROL SAMPLE: 2140815

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/L	20	22.4	112	82-120	
1,2-Dichloroethane-d4 (S)	%			89	80-117	
4-Bromofluorobenzene (S)	%			97	80-119	
Toluene-d8 (S)	%			100	80-115	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268614

QC Batch: 523345 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268614023, 60268614024, 60268614027

METHOD BLANK: 2142614 Matrix: Water
Associated Lab Samples: 60268614023, 60268614024, 60268614027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/26/18 12:24	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/26/18 12:24	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/26/18 12:24	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/26/18 12:24	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/26/18 12:24	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/26/18 12:24	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/26/18 12:24	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/26/18 12:24	
2-Hexanone	ug/L	ND	10.0	1.2	04/26/18 12:24	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/26/18 12:24	
Acetone	ug/L	ND	10.0	1.9	04/26/18 12:24	
Benzene	ug/L	ND	1.0	0.060	04/26/18 12:24	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/26/18 12:24	
Bromoform	ug/L	ND	1.0	0.070	04/26/18 12:24	
Bromomethane	ug/L	0.48J	5.0	0.16	04/26/18 12:24	
Carbon disulfide	ug/L	ND	5.0	0.12	04/26/18 12:24	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/26/18 12:24	
Chlorobenzene	ug/L	ND	1.0	0.21	04/26/18 12:24	
Chloroethane	ug/L	ND	1.0	0.15	04/26/18 12:24	
Chloroform	ug/L	ND	1.0	0.14	04/26/18 12:24	
Chloromethane	ug/L	ND	1.0	0.080	04/26/18 12:24	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/26/18 12:24	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/26/18 12:24	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/26/18 12:24	
Ethylbenzene	ug/L	ND	1.0	0.18	04/26/18 12:24	
Methylene chloride	ug/L	ND	1.0	0.15	04/26/18 12:24	
Styrene	ug/L	ND	1.0	0.12	04/26/18 12:24	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/26/18 12:24	
Toluene	ug/L	ND	1.0	0.17	04/26/18 12:24	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/26/18 12:24	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/26/18 12:24	
Vinyl chloride	ug/L	ND	1.0	0.13	04/26/18 12:24	
Xylene (Total)	ug/L	ND	3.0	0.42	04/26/18 12:24	
1,2-Dichloroethane-d4 (S)	%	101	80-117		04/26/18 12:24	
4-Bromofluorobenzene (S)	%	91	80-119		04/26/18 12:24	
Toluene-d8 (S)	%	101	80-115		04/26/18 12:24	

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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.: 60268614

LABORATORY CONTROL SAMPLE: 2142615

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.7	93	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	17.1	86	74-121	
1,1,2-Trichloroethane	ug/L	20	19.9	99	83-119	
1,1-Dichloroethane	ug/L	20	17.0	85	85-128	
1,1-Dichloroethene	ug/L	20	18.5	93	85-123	
1,2-Dichloroethane	ug/L	20	18.2	91	77-120	
1,2-Dichloropropane	ug/L	20	17.6	88	81-126	
2-Butanone (MEK)	ug/L	100	96.7	97	65-134	
2-Hexanone	ug/L	100	98.1	98	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	94.2	94	66-139	
Acetone	ug/L	100	86.7	87	62-142	
Benzene	ug/L	20	17.9	89	81-118	
Bromodichloromethane	ug/L	20	19.6	98	85-123	
Bromoform	ug/L	20	23.1	115	83-123	
Bromomethane	ug/L	20	20.4	102	39-149	
Carbon disulfide	ug/L	20	16.4	82	85-124	L2
Carbon tetrachloride	ug/L	20	19.6	98	85-126	
Chlorobenzene	ug/L	20	19.4	97	87-118	
Chloroethane	ug/L	20	16.3	82	73-134	
Chloroform	ug/L	20	18.1	91	85-119	
Chloromethane	ug/L	20	14.9	74	20-174	
cis-1,2-Dichloroethene	ug/L	20	18.8	94	84-121	
cis-1,3-Dichloropropene	ug/L	20	19.6	98	80-124	
Dibromochloromethane	ug/L	20	22.0	110	83-122	
Ethylbenzene	ug/L	20	19.6	98	80-118	
Methylene chloride	ug/L	20	17.7	88	81-126	
Styrene	ug/L	20	20.7	103	85-120	
Tetrachloroethene	ug/L	20	20.6	103	87-120	
Toluene	ug/L	20	19.2	96	82-118	
trans-1,2-Dichloroethene	ug/L	20	18.7	93	83-121	
trans-1,3-Dichloropropene	ug/L	20	20.5	103	80-122	
Vinyl chloride	ug/L	20	16.6	83	74-147	
Xylene (Total)	ug/L	60	59.7	100	81-120	
1,2-Dichloroethane-d4 (S)	%			98	80-117	
4-Bromofluorobenzene (S)	%			92	80-119	
Toluene-d8 (S)	%			103	80-115	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268614

QC Batch: 523154
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 7 day
Associated Lab Samples: 60268614013

METHOD BLANK: 2141660
Matrix: Water
Associated Lab Samples: 60268614013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/25/18 10:26	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/25/18 10:26	
Trichloroethene	ug/L	ND	1.0	0.17	04/25/18 10:26	
1,2-Dichloroethane-d4 (S)	%	93	80-117		04/25/18 10:26	
4-Bromofluorobenzene (S)	%	99	80-119		04/25/18 10:26	
Toluene-d8 (S)	%	96	80-115		04/25/18 10:26	

LABORATORY CONTROL SAMPLE: 2141661

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	20	20.6	103	84-121	
trans-1,2-Dichloroethene	ug/L	20	20.6	103	83-121	
Trichloroethene	ug/L	20	20.8	104	82-120	
1,2-Dichloroethane-d4 (S)	%			96	80-117	
4-Bromofluorobenzene (S)	%			98	80-119	
Toluene-d8 (S)	%			97	80-115	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268614

QC Batch: 523344
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 7 day
Associated Lab Samples: 60268614013

METHOD BLANK: 2142612
Matrix: Water
Associated Lab Samples: 60268614013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/26/18 12:24	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/26/18 12:24	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/26/18 12:24	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/26/18 12:24	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/26/18 12:24	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/26/18 12:24	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/26/18 12:24	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/26/18 12:24	
2-Hexanone	ug/L	ND	10.0	1.2	04/26/18 12:24	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/26/18 12:24	
Acetone	ug/L	ND	10.0	1.9	04/26/18 12:24	
Benzene	ug/L	ND	1.0	0.060	04/26/18 12:24	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/26/18 12:24	
Bromoform	ug/L	ND	1.0	0.070	04/26/18 12:24	
Bromomethane	ug/L	0.48J	5.0	0.16	04/26/18 12:24	
Carbon disulfide	ug/L	ND	5.0	0.12	04/26/18 12:24	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/26/18 12:24	
Chlorobenzene	ug/L	ND	1.0	0.21	04/26/18 12:24	
Chloroethane	ug/L	ND	1.0	0.15	04/26/18 12:24	
Chloroform	ug/L	ND	1.0	0.14	04/26/18 12:24	
Chloromethane	ug/L	ND	1.0	0.080	04/26/18 12:24	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/26/18 12:24	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/26/18 12:24	
Ethylbenzene	ug/L	ND	1.0	0.18	04/26/18 12:24	
Methylene chloride	ug/L	ND	1.0	0.15	04/26/18 12:24	
Styrene	ug/L	ND	1.0	0.12	04/26/18 12:24	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/26/18 12:24	
Toluene	ug/L	ND	1.0	0.17	04/26/18 12:24	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/26/18 12:24	
Vinyl chloride	ug/L	ND	1.0	0.13	04/26/18 12:24	
Xylene (Total)	ug/L	ND	3.0	0.42	04/26/18 12:24	
1,2-Dichloroethane-d4 (S)	%	101	80-117		04/26/18 12:24	
4-Bromofluorobenzene (S)	%	91	80-119		04/26/18 12:24	
Toluene-d8 (S)	%	101	80-115		04/26/18 12:24	

LABORATORY CONTROL SAMPLE: 2142613

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.7	93	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	17.1	86	74-121	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268614

LABORATORY CONTROL SAMPLE: 2142613

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2-Trichloroethane	ug/L	20	19.9	99	83-119	
1,1-Dichloroethane	ug/L	20	17.0	85	85-128	
1,1-Dichloroethene	ug/L	20	18.5	93	85-123	
1,2-Dichloroethane	ug/L	20	18.2	91	77-120	
1,2-Dichloropropane	ug/L	20	17.6	88	81-126	
2-Butanone (MEK)	ug/L	100	96.7	97	65-134	
2-Hexanone	ug/L	100	98.1	98	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	94.2	94	66-139	
Acetone	ug/L	100	86.7	87	62-142	
Benzene	ug/L	20	17.9	89	81-118	
Bromodichloromethane	ug/L	20	19.6	98	85-123	
Bromoform	ug/L	20	23.1	115	83-123	
Bromomethane	ug/L	20	20.4	102	39-149	
Carbon disulfide	ug/L	20	16.4	82	85-124	L2
Carbon tetrachloride	ug/L	20	19.6	98	85-126	
Chlorobenzene	ug/L	20	19.4	97	87-118	
Chloroethane	ug/L	20	16.3	82	73-134	
Chloroform	ug/L	20	18.1	91	85-119	
Chloromethane	ug/L	20	14.9	74	20-174	
cis-1,3-Dichloropropene	ug/L	20	19.6	98	80-124	
Dibromochloromethane	ug/L	20	22.0	110	83-122	
Ethylbenzene	ug/L	20	19.6	98	80-118	
Methylene chloride	ug/L	20	17.7	88	81-126	
Styrene	ug/L	20	20.7	103	85-120	
Tetrachloroethene	ug/L	20	20.6	103	87-120	
Toluene	ug/L	20	19.2	96	82-118	
trans-1,3-Dichloropropene	ug/L	20	20.5	103	80-122	
Vinyl chloride	ug/L	20	16.6	83	74-147	
Xylene (Total)	ug/L	60	59.7	100	81-120	
1,2-Dichloroethane-d4 (S)	%			98	80-117	
4-Bromofluorobenzene (S)	%			92	80-119	
Toluene-d8 (S)	%			103	80-115	

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QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60268614

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: 522725	
[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 522727	
[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 522958	
[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 523154	
[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 523344	
[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: 523345	
[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.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60268614

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60268614001	MW-97-201804	EPA 5030B/8260	522725		
60268614002	MW-96-201804	EPA 5030B/8260	522725		
60268614003	MW-29-201804	EPA 5030B/8260	522725		
60268614004	MW-185-201804	EPA 5030B/8260	522725		
60268614005	DUP-07-201804	EPA 5030B/8260	522725		
60268614006	MW-189-201804	EPA 5030B/8260	522725		
60268614006	MW-189-201804	EPA 5030B/8260	522958		
60268614007	MW-188-201804	EPA 5030B/8260	522725		
60268614008	DUP-04-201804	EPA 5030B/8260	522725		
60268614009	MW-186-201804	EPA 5030B/8260	522725		
60268614010	ITMW-7-201804	EPA 5030B/8260	522725		
60268614011	TMW-19-201804	EPA 5030B/8260	522727		
60268614012	TMW-26-201804	EPA 5030B/8260	522727		
60268614014	TMW-25-201804	EPA 5030B/8260	522727		
60268614015	ITMW-10-201804	EPA 5030B/8260	522727		
60268614016	ITMW-5-201804	EPA 5030B/8260	522727		
60268614017	ITMW-21-201804	EPA 5030B/8260	522727		
60268614018	TMW-16-201804	EPA 5030B/8260	522727		
60268614019	MW-182-201804	EPA 5030B/8260	522727		
60268614020	DUP-06-201804	EPA 5030B/8260	522727		
60268614021	TMW-21-201804	EPA 5030B/8260	522727		
60268614022	MW-91-201804	EPA 5030B/8260	522727		
60268614023	MW-38-201804	EPA 5030B/8260	522727		
60268614023	MW-38-201804	EPA 5030B/8260	523345		
60268614024	MW-95-201804	EPA 5030B/8260	522727		
60268614024	MW-95-201804	EPA 5030B/8260	523345		
60268614025	MW-179-201804	EPA 5030B/8260	522727		
60268614026	EB-05-201804	EPA 5030B/8260	522727		
60268614027	MW-93-201804	EPA 5030B/8260	522727		
60268614027	MW-93-201804	EPA 5030B/8260	523345		
60268614028	TB-04-201804	EPA 5030B/8260	522727		
60268614029	TB-05-201804	EPA 5030B/8260	522727		
60268614013	MW-86-201804	EPA 5030B/8260	523154		
60268614013	MW-86-201804	EPA 5030B/8260	523344		

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Sample Condition Upon Receipt

WO# : 60268614

60268614

Client Name: 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: 296 **Type of Ice:** ~~Wet~~ Blue None

Cooler Temperature (°C): **As-read** 1.5 3.3 **Corr. Factor** +1.3 **Corrected** 2.8 5.0

Date and initials of person examining contents: 4/20/18

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	MW-17q labeled as MW-20 - collection D/T match
Samples contain multiple phases? Matrix: W T	☐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	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: 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	
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: 2018.04.20 13:23:02 -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 3

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Ramboll	Report To: Tamara House-Knight	Attention: Tamara House-Knight
Address: 124 W. Capitol Ave. Little Rock, AR 72201	Copy To:	Company Name: Ramboll
		Address: 124 W. Capitol Ave
Email To:	Purchase Order No.: NA	Pace Quote Reference: Little Rock, AR 72201
Phone: Fax:	Project Name: Fort Smith, AR	Pace Project Manager: Richard Mannz
Requested Due Date/TAT: Standard	Project Number:	Pace Profile #: 7444, line1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER ADEQ

Site Location STATE: AR

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	8260 VOCs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-97-201804	WT	G			4/19/18	0905		3				3						X		3(DG9H) 001
2	MW-96-201804						1015														002
3	MW-29-201804						1140														003
4	MW-185-201804						1255														004
5	DUP-07-201804						1255														005
6	MW-189-201804						1445														006
7	MW-188-201804						0915														007
8	DUP-04-201804						0915														008
9	MW-186-201804						1035														009
10	ITMW-7-201804						0930														010
11	TMW-19-201804						1240														011
12	TMW-26-201804						1300														012

60268614

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)
	Haley Ahlers / Ramboll	4/19/18	1800	[signature] / PACE	4/20/18	0625	2.8	Y	Y	Y
							5.0	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Haley Ahlers

SIGNATURE of SAMPLER: Haley Ahlers

DATE Signed (MM/DD/YY): 04/19/18

*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

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: 2 of 3

Section A Required Client Information:

Company:	Ramboll
Address:	124 W. Capitol Ave. Little Rock, AR 72201
Email To:	
Phone:	Fax:
Requested Due Date/TAT:	Standard

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:	Ramboll
Address:	124 W. Capitol Ave Little Rock, AR 72201
Pace Quote Reference:	
Pace Project Manager:	Richard Mannz
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

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	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 Ascorbic Acid	Analysis Test Y/N	8260 VOCs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60268614
1	MW-86-201804	WT	G			4/19/18	1535		3								3		X		013
2	TMW-25-201804	"	"			"	1410		"				3				"		"		014
3	ITMW-10-201804						1115														015
4	ITMW-5-201804						1525														016
5	ITMW-21-201804						1410														017
6	TMW-16-201804						1530														018
7	MW-182-201804						0925														019
8	DUP-06-201804						0930														020
9	TMW-21-201804						1048														021
10	MW-91-201804						1235														022
11	MW-38-201804						1335														023
12	MW-95-201804	↓	↓			↓	1512		↓				↓				↓		↓		024

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Haley Anders / Ramboll	4/19/18	1800	/PACE	4/20/18	0625	2.8	Y	Y	Y
							5.0	Y	Y	Y

SAMPLER NAME AND SIGNATURE			Temp In °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Haley Anders					
SIGNATURE of SAMPLER:	Haley Anders	DATE Signed (MM/DD/YY): 04/19/18				

*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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Pace Analytical
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Section A Required Client Information:

Company:	Ramboll
Address:	124 W. Capitol Ave
	Little Rock, AR 72201
Email To:	
Phone:	Fax:
Requested Due Date/TAT:	Standard

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:	Ramboll
Address:	124 W. Capitol Ave
Pace Quote Reference:	Little Rock, AR 72201
Pace Project Manager:	Richard Mannz
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

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

ITEM #	SAMPLE ID	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	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-179-201804	WT	G			4/19/18	1555		3				X						X		60268014 3(DLAH) 025
2	EB-05-201804						1600		3										1		026
3	MW-93-201804						1645		3												027
4	TB-04-201804								2												2(DLAH) 028
5	TB-05-201804								2												029
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Haley Ahlers / Ramboll	4/19/18	1800	PACE	4/20/18	0625	2-8	Y	Y	Y
							5-0	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Haley Ahlers

SIGNATURE of SAMPLER: Haley Ahlers DATE Signed (MM/DD/YY): 04/19/18

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.

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

April 30, 2018

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

RE: Project: FORT SMITH, AR
Pace Project No.: 60268615

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on April 20, 2018. 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: Kristen Drucquer, Ramboll
Tamara House-Knight, Ramboll Environ
M. Wilson

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CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60268615

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.: 60268615

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60268615001	**VP-7-201804**	Water	04/19/18 10:00	04/20/18 06:25
60268615002	**VP-8-201804**	Water	04/19/18 10:20	04/20/18 06:25
60268615003	**VP-10-201804**	Water	04/19/18 09:20	04/20/18 06:25
60268615004	**VP-12-201804**	Water	04/19/18 11:00	04/20/18 06:25
60268615005	**VP-14-201804**	Water	04/19/18 11:45	04/20/18 06:25
60268615006	**TB-06-201804**	Water	04/19/18 09:20	04/20/18 06:25

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60268615

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60268615001	**VP-7-201804**	EPA 5030B/8260	PGH	38	PASI-K
60268615002	**VP-8-201804**	EPA 5030B/8260	PGH	38	PASI-K
60268615003	**VP-10-201804**	EPA 5030B/8260	PGH	38	PASI-K
60268615004	**VP-12-201804**	EPA 5030B/8260	PGH	38	PASI-K
60268615005	**VP-14-201804**	EPA 5030B/8260	PGH	38	PASI-K
60268615006	**TB-06-201804**	EPA 5030B/8260	PGH	38	PASI-K

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60268615

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 30, 2018

General Information:
6 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: 522727

B: Analyte was detected in the associated method blank.

- BLANK for HBN 522727 [MSV/8881 (Lab ID: 2140289)
  - Carbon disulfide

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: 522727

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

QC Batch: 522958

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

QC Batch: 523326

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.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268615

Sample: VP-7-201804 **Lab ID: 60268615001** Collected: 04/19/18 10:00 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**25.6**	ug/L	10.0	1.9	1		04/23/18 12:18	67-64-1	
Benzene	**0.90J**	ug/L	1.0	0.060	1		04/23/18 12:18	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 12:18	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 12:18	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 12:18	74-83-9	
2-Butanone (MEK)	**4.0J**	ug/L	10.0	0.59	1		04/23/18 12:18	78-93-3	
Carbon disulfide	**0.13J**	ug/L	5.0	0.12	1		04/23/18 12:18	75-15-0	B
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 12:18	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 12:18	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 12:18	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 12:18	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/23/18 12:18	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 12:18	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 12:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/23/18 12:18	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 12:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 12:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 12:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 12:18	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 12:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 12:18	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 12:18	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/23/18 12:18	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 12:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	**0.92J**	ug/L	10.0	0.42	1		04/23/18 12:18	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 12:18	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 12:18	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 12:18	127-18-4	
Toluene	**0.21J**	ug/L	1.0	0.17	1		04/23/18 12:18	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 12:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 12:18	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/23/18 12:18	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/23/18 12:18	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 12:18	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/23/18 12:18	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-117		1		04/23/18 12:18	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/23/18 12:18	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 12:18		

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268615

Sample: VP-8-201804 **Lab ID: 60268615002** Collected: 04/19/18 10:20 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**61.0**	ug/L	10.0	1.9	1		04/23/18 12:32	67-64-1	
Benzene	**0.82J**	ug/L	1.0	0.060	1		04/23/18 12:32	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/23/18 12:32	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/23/18 12:32	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/23/18 12:32	74-83-9	
2-Butanone (MEK)	**12.1**	ug/L	10.0	0.59	1		04/23/18 12:32	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/23/18 12:32	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/23/18 12:32	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/23/18 12:32	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/23/18 12:32	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/23/18 12:32	67-66-3	
Chloromethane	**0.45J**	ug/L	1.0	0.080	1		04/23/18 12:32	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/23/18 12:32	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/23/18 12:32	75-34-3	
1,2-Dichloroethane	**0.14J**	ug/L	1.0	0.12	1		04/23/18 12:32	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 12:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/23/18 12:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/23/18 12:32	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/23/18 12:32	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/23/18 12:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/23/18 12:32	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/23/18 12:32	100-41-4	
2-Hexanone	**2.9J**	ug/L	10.0	1.2	1		04/23/18 12:32	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/23/18 12:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	**0.89J**	ug/L	10.0	0.42	1		04/23/18 12:32	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/23/18 12:32	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/23/18 12:32	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/23/18 12:32	127-18-4	
Toluene	**0.25J**	ug/L	1.0	0.17	1		04/23/18 12:32	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/23/18 12:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/23/18 12:32	79-00-5	
Trichloroethene	**3.4**	ug/L	1.0	0.17	1		04/23/18 12:32	79-01-6	
Vinyl chloride	**0.17J**	ug/L	1.0	0.13	1		04/23/18 12:32	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/23/18 12:32	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/23/18 12:32	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/23/18 12:32	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/23/18 12:32	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/23/18 12:32		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268615

Sample: VP-10-201804 **Lab ID: 60268615003** Collected: 04/19/18 09:20 Received: 04/20/18 06:25 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		04/24/18 21:51	67-64-1	
Benzene	**0.25J**	ug/L	1.0	0.060	1		04/24/18 21:51	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/24/18 21:51	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/24/18 21:51	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/24/18 21:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/24/18 21:51	78-93-3	
Carbon disulfide	**0.52J**	ug/L	5.0	0.12	1		04/24/18 21:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/24/18 21:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/24/18 21:51	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/24/18 21:51	75-00-3	
Chloroform	**1.3**	ug/L	1.0	0.14	1		04/24/18 21:51	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/24/18 21:51	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/24/18 21:51	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/24/18 21:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/24/18 21:51	107-06-2	
1,1-Dichloroethene	**1.8**	ug/L	1.0	0.20	1		04/24/18 21:51	75-35-4	
cis-1,2-Dichloroethene	**14.9**	ug/L	1.0	0.080	1		04/24/18 21:51	156-59-2	
trans-1,2-Dichloroethene	**0.31J**	ug/L	1.0	0.20	1		04/24/18 21:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/24/18 21:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/24/18 21:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/24/18 21:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/24/18 21:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/24/18 21:51	591-78-6	
Methylene chloride	**0.38J**	ug/L	1.0	0.15	1		04/24/18 21:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/24/18 21:51	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/24/18 21:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/24/18 21:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/24/18 21:51	127-18-4	
Toluene	**0.36J**	ug/L	1.0	0.17	1		04/24/18 21:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/24/18 21:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/24/18 21:51	79-00-5	
Trichloroethene	**357**	ug/L	5.0	0.85	5		04/27/18 02:45	79-01-6	
Vinyl chloride	**0.40J**	ug/L	1.0	0.13	1		04/24/18 21:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/24/18 21:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/24/18 21:51	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	80-117		1		04/24/18 21:51	17060-07-0	
Toluene-d8 (S)	95	%	80-115		1		04/24/18 21:51	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/24/18 21:51		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268615

Sample: VP-12-201804 **Lab ID: 60268615004** Collected: 04/19/18 11:00 Received: 04/20/18 06:25 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		04/24/18 21:23	67-64-1	
Benzene	**0.13J**	ug/L	1.0	0.060	1		04/24/18 21:23	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/24/18 21:23	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/24/18 21:23	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/24/18 21:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/24/18 21:23	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/24/18 21:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/24/18 21:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/24/18 21:23	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/24/18 21:23	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/24/18 21:23	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/24/18 21:23	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/24/18 21:23	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/24/18 21:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/24/18 21:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/24/18 21:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/24/18 21:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/24/18 21:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/24/18 21:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/24/18 21:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/24/18 21:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/24/18 21:23	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/24/18 21:23	591-78-6	
Methylene chloride	**0.25J**	ug/L	1.0	0.15	1		04/24/18 21:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/24/18 21:23	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/24/18 21:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/24/18 21:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/24/18 21:23	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/24/18 21:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/24/18 21:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/24/18 21:23	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/24/18 21:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/24/18 21:23	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/24/18 21:23	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/24/18 21:23	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-117		1		04/24/18 21:23	17060-07-0	
Toluene-d8 (S)	97	%	80-115		1		04/24/18 21:23	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/24/18 21:23		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268615

Sample: VP-14-201804 **Lab ID: 60268615005** Collected: 04/19/18 11:45 Received: 04/20/18 06:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**4.0J**	ug/L	10.0	1.9	1		04/24/18 21:37	67-64-1	
Benzene	**0.16J**	ug/L	1.0	0.060	1		04/24/18 21:37	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/24/18 21:37	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/24/18 21:37	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/24/18 21:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/24/18 21:37	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/24/18 21:37	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/24/18 21:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/24/18 21:37	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/24/18 21:37	75-00-3	
Chloroform	**0.44J**	ug/L	1.0	0.14	1		04/24/18 21:37	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/24/18 21:37	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/24/18 21:37	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/24/18 21:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/24/18 21:37	107-06-2	
1,1-Dichloroethene	**0.87J**	ug/L	1.0	0.20	1		04/24/18 21:37	75-35-4	
cis-1,2-Dichloroethene	**2.6**	ug/L	1.0	0.080	1		04/24/18 21:37	156-59-2	
trans-1,2-Dichloroethene	**0.23J**	ug/L	1.0	0.20	1		04/24/18 21:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/24/18 21:37	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/24/18 21:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/24/18 21:37	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/24/18 21:37	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/24/18 21:37	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/24/18 21:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/24/18 21:37	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/24/18 21:37	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/24/18 21:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/24/18 21:37	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/24/18 21:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/24/18 21:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/24/18 21:37	79-00-5	
Trichloroethene	**55.8**	ug/L	1.0	0.17	1		04/24/18 21:37	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/24/18 21:37	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/24/18 21:37	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/24/18 21:37	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/24/18 21:37	17060-07-0	
Toluene-d8 (S)	98	%	80-115		1		04/24/18 21:37	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/24/18 21:37		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60268615

Sample: TB-06-201804 **Lab ID: 60268615006** Collected: 04/19/18 09:20 Received: 04/20/18 06:25 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		04/24/18 21:09	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/24/18 21:09	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/24/18 21:09	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/24/18 21:09	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/24/18 21:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/24/18 21:09	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/24/18 21:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/24/18 21:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/24/18 21:09	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/24/18 21:09	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/24/18 21:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/24/18 21:09	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/24/18 21:09	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/24/18 21:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/24/18 21:09	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/24/18 21:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/24/18 21:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/24/18 21:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/24/18 21:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/24/18 21:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/24/18 21:09	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/24/18 21:09	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/24/18 21:09	591-78-6	
Methylene chloride	**0.57J**	ug/L	1.0	0.15	1		04/24/18 21:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/24/18 21:09	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/24/18 21:09	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/24/18 21:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/24/18 21:09	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/24/18 21:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/24/18 21:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/24/18 21:09	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/24/18 21:09	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/24/18 21:09	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/24/18 21:09	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/24/18 21:09	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/24/18 21:09	17060-07-0	
Toluene-d8 (S)	95	%	80-115		1		04/24/18 21:09	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/24/18 21:09		

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268615

QC Batch: 522727 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268615001, 60268615002

METHOD BLANK: 2140289 Matrix: Water
Associated Lab Samples: 60268615001, 60268615002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/23/18 11:22	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/23/18 11:22	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/23/18 11:22	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/23/18 11:22	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/23/18 11:22	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/23/18 11:22	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/23/18 11:22	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/23/18 11:22	
2-Hexanone	ug/L	ND	10.0	1.2	04/23/18 11:22	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/23/18 11:22	
Acetone	ug/L	ND	10.0	1.9	04/23/18 11:22	
Benzene	ug/L	ND	1.0	0.060	04/23/18 11:22	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/23/18 11:22	
Bromoform	ug/L	ND	1.0	0.070	04/23/18 11:22	
Bromomethane	ug/L	ND	5.0	0.16	04/23/18 11:22	
Carbon disulfide	ug/L	0.19J	5.0	0.12	04/23/18 11:22	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/23/18 11:22	
Chlorobenzene	ug/L	ND	1.0	0.21	04/23/18 11:22	
Chloroethane	ug/L	ND	1.0	0.15	04/23/18 11:22	
Chloroform	ug/L	ND	1.0	0.14	04/23/18 11:22	
Chloromethane	ug/L	ND	1.0	0.080	04/23/18 11:22	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/23/18 11:22	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/23/18 11:22	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/23/18 11:22	
Ethylbenzene	ug/L	ND	1.0	0.18	04/23/18 11:22	
Methylene chloride	ug/L	ND	1.0	0.15	04/23/18 11:22	
Styrene	ug/L	ND	1.0	0.12	04/23/18 11:22	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/23/18 11:22	
Toluene	ug/L	ND	1.0	0.17	04/23/18 11:22	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/23/18 11:22	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/23/18 11:22	
Trichloroethene	ug/L	ND	1.0	0.17	04/23/18 11:22	
Vinyl chloride	ug/L	ND	1.0	0.13	04/23/18 11:22	
Xylene (Total)	ug/L	ND	3.0	0.42	04/23/18 11:22	
1,2-Dichloroethane-d4 (S)	%	99	80-117		04/23/18 11:22	
4-Bromofluorobenzene (S)	%	100	80-119		04/23/18 11:22	
Toluene-d8 (S)	%	99	80-115		04/23/18 11:22	

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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.: 60268615

LABORATORY CONTROL SAMPLE: 2140290

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.1	101	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	19.0	95	74-121	
1,1,2-Trichloroethane	ug/L	20	19.5	97	83-119	
1,1-Dichloroethane	ug/L	20	19.8	99	85-128	
1,1-Dichloroethene	ug/L	20	18.3	91	85-123	
1,2-Dichloroethane	ug/L	20	19.6	98	77-120	
1,2-Dichloropropane	ug/L	20	20.4	102	81-126	
2-Butanone (MEK)	ug/L	100	102	102	65-134	
2-Hexanone	ug/L	100	99.5	99	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	103	103	66-139	
Acetone	ug/L	100	95.6	96	62-142	
Benzene	ug/L	20	20.7	103	81-118	
Bromodichloromethane	ug/L	20	19.2	96	85-123	
Bromoform	ug/L	20	20.6	103	83-123	
Bromomethane	ug/L	20	18.1	90	39-149	
Carbon disulfide	ug/L	20	21.1	106	85-124	
Carbon tetrachloride	ug/L	20	20.3	102	85-126	
Chlorobenzene	ug/L	20	19.8	99	87-118	
Chloroethane	ug/L	20	15.4	77	73-134	
Chloroform	ug/L	20	20.0	100	85-119	
Chloromethane	ug/L	20	21.8	109	20-174	
cis-1,2-Dichloroethene	ug/L	20	19.5	98	84-121	
cis-1,3-Dichloropropene	ug/L	20	19.5	97	80-124	
Dibromochloromethane	ug/L	20	18.7	94	83-122	
Ethylbenzene	ug/L	20	20.0	100	80-118	
Methylene chloride	ug/L	20	19.4	97	81-126	
Styrene	ug/L	20	20.1	100	85-120	
Tetrachloroethene	ug/L	20	18.5	92	87-120	
Toluene	ug/L	20	19.8	99	82-118	
trans-1,2-Dichloroethene	ug/L	20	20.2	101	83-121	
trans-1,3-Dichloropropene	ug/L	20	19.6	98	80-122	
Trichloroethene	ug/L	20	20.7	103	82-120	
Vinyl chloride	ug/L	20	21.9	110	74-147	
Xylene (Total)	ug/L	60	59.1	98	81-120	
1,2-Dichloroethane-d4 (S)	%			101	80-117	
4-Bromofluorobenzene (S)	%			101	80-119	
Toluene-d8 (S)	%			98	80-115	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268615

QC Batch: 522958 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268615003, 60268615004, 60268615005, 60268615006

METHOD BLANK: 2140814 Matrix: Water
Associated Lab Samples: 60268615003, 60268615004, 60268615005, 60268615006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/24/18 20:55	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/24/18 20:55	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/24/18 20:55	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/24/18 20:55	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/24/18 20:55	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/24/18 20:55	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/24/18 20:55	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/24/18 20:55	
2-Hexanone	ug/L	ND	10.0	1.2	04/24/18 20:55	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/24/18 20:55	
Acetone	ug/L	ND	10.0	1.9	04/24/18 20:55	
Benzene	ug/L	ND	1.0	0.060	04/24/18 20:55	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/24/18 20:55	
Bromoform	ug/L	ND	1.0	0.070	04/24/18 20:55	
Bromomethane	ug/L	1.1J	5.0	0.16	04/24/18 20:55	
Carbon disulfide	ug/L	ND	5.0	0.12	04/24/18 20:55	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/24/18 20:55	
Chlorobenzene	ug/L	ND	1.0	0.21	04/24/18 20:55	
Chloroethane	ug/L	ND	1.0	0.15	04/24/18 20:55	
Chloroform	ug/L	ND	1.0	0.14	04/24/18 20:55	
Chloromethane	ug/L	ND	1.0	0.080	04/24/18 20:55	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/24/18 20:55	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/24/18 20:55	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/24/18 20:55	
Ethylbenzene	ug/L	ND	1.0	0.18	04/24/18 20:55	
Methylene chloride	ug/L	ND	1.0	0.15	04/24/18 20:55	
Styrene	ug/L	ND	1.0	0.12	04/24/18 20:55	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/24/18 20:55	
Toluene	ug/L	ND	1.0	0.17	04/24/18 20:55	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/24/18 20:55	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/24/18 20:55	
Trichloroethene	ug/L	ND	1.0	0.17	04/24/18 20:55	
Vinyl chloride	ug/L	ND	1.0	0.13	04/24/18 20:55	
Xylene (Total)	ug/L	ND	3.0	0.42	04/24/18 20:55	
1,2-Dichloroethane-d4 (S)	%	96	80-117		04/24/18 20:55	
4-Bromofluorobenzene (S)	%	98	80-119		04/24/18 20:55	
Toluene-d8 (S)	%	97	80-115		04/24/18 20:55	

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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268615

LABORATORY CONTROL SAMPLE: 2140815

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.7	98	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	17.7	88	74-121	
1,1,2-Trichloroethane	ug/L	20	19.9	100	83-119	
1,1-Dichloroethane	ug/L	20	18.8	94	85-128	
1,1-Dichloroethene	ug/L	20	20.6	103	85-123	
1,2-Dichloroethane	ug/L	20	18.3	91	77-120	
1,2-Dichloropropane	ug/L	20	19.9	99	81-126	
2-Butanone (MEK)	ug/L	100	90.7	91	65-134	
2-Hexanone	ug/L	100	93.1	93	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	98.4	98	66-139	
Acetone	ug/L	100	95.9	96	62-142	
Benzene	ug/L	20	20.7	103	81-118	
Bromodichloromethane	ug/L	20	18.3	91	85-123	
Bromoform	ug/L	20	19.1	96	83-123	
Bromomethane	ug/L	20	20.7	103	39-149	
Carbon disulfide	ug/L	20	20.4	102	85-124	
Carbon tetrachloride	ug/L	20	19.3	96	85-126	
Chlorobenzene	ug/L	20	19.7	98	87-118	
Chloroethane	ug/L	20	15.0	75	73-134	
Chloroform	ug/L	20	19.2	96	85-119	
Chloromethane	ug/L	20	15.4	77	20-174	
cis-1,2-Dichloroethene	ug/L	20	19.6	98	84-121	
cis-1,3-Dichloropropene	ug/L	20	19.8	99	80-124	
Dibromochloromethane	ug/L	20	18.7	94	83-122	
Ethylbenzene	ug/L	20	19.2	96	80-118	
Methylene chloride	ug/L	20	19.6	98	81-126	
Styrene	ug/L	20	19.5	97	85-120	
Tetrachloroethene	ug/L	20	19.8	99	87-120	
Toluene	ug/L	20	19.9	99	82-118	
trans-1,2-Dichloroethene	ug/L	20	20.1	101	83-121	
trans-1,3-Dichloropropene	ug/L	20	19.1	96	80-122	
Trichloroethene	ug/L	20	22.4	112	82-120	
Vinyl chloride	ug/L	20	20.4	102	74-147	
Xylene (Total)	ug/L	60	57.4	96	81-120	
1,2-Dichloroethane-d4 (S)	%			89	80-117	
4-Bromofluorobenzene (S)	%			97	80-119	
Toluene-d8 (S)	%			100	80-115	

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60268615

QC Batch: 523326 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60268615003

METHOD BLANK: 2142493 Matrix: Water
Associated Lab Samples: 60268615003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichloroethene	ug/L	ND	1.0	0.17	04/26/18 22:21	
1,2-Dichloroethane-d4 (S)	%	90	80-117		04/26/18 22:21	
4-Bromofluorobenzene (S)	%	98	80-119		04/26/18 22:21	
Toluene-d8 (S)	%	94	80-115		04/26/18 22:21	

LABORATORY CONTROL SAMPLE: 2142494

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/L	20	20.5	102	82-120	
1,2-Dichloroethane-d4 (S)	%			90	80-117	
4-Bromofluorobenzene (S)	%			97	80-119	
Toluene-d8 (S)	%			96	80-115	

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QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60268615

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: 522727

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 522958

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 523326

[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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60268615

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60268615001	**VP-7-201804**	EPA 5030B/8260	522727		
60268615002	**VP-8-201804**	EPA 5030B/8260	522727		
60268615003	**VP-10-201804**	EPA 5030B/8260	522958		
60268615003	**VP-10-201804**	EPA 5030B/8260	523326		
60268615004	**VP-12-201804**	EPA 5030B/8260	522958		
60268615005	**VP-14-201804**	EPA 5030B/8260	522958		
60268615006	**TB-06-201804**	EPA 5030B/8260	522958		

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Sample Condition Upon Receipt

WO# : 60268615

60268615

Client Name: Rumbell

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: 296 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 1.5 **Corr. Factor** +1.3 **Corrected** 2.8

Date and initials of person examining contents: JW 4/20/18

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$_2$SO$_4$, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: (VOA) Micro, O&G, KS TPH, OK-DRO)	☐Yes ☐No ☑N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: 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	
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: 2018.04.20 13:33:41 -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 1

Section A Required Client Information:

Company: ~~Environ~~ Ramboll
Address: ~~7500 College Blvd., Ste. 925 Overland Park, KS 66210~~ 124 W. Capitol Ave. Little Rock, AR 72201
Email To: ~~wstonestreet@environcorp.com~~
Phone: ~~913 563 5026~~ Fax:
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: ~~Wendy Stonestreet~~ 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: Ramboll
Address: 124 W. Capitol Ave
Pace Quote Reference: Little Rock, AR 72201
Pace Project Manager: ~~Colleen Glynn~~ Richard Mann
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	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	8260 VOCs	AM20 GAX Hydrogen	AM 21 GAX Volatile Fatty Acids	AM 20 GAX Methane,Ethane,Ethene	AM 20 GAX Acetylene	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	VP-7-201804					4/19/18	1000		3				3					X							3(DEAH) 01
2	VP-8-201804						1020		2				2												2(DEAH) 02
3	VP-10-201804						0920		3				3												3(DEAH) 03
4	VP-12-201804						1105		3				3												↓ 04
5	VP-14-201804						1145		2				2												2(DEAH) 05
6	TB-06-201804																								
7																									
8																									
9																									
10																									
11																									
12																									

Requested Analysis Filtered (Y/N)

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)
Level IV data package required	Nick Zurweller / Ramboll	4/19/18	1800	[signature] RBCE	4/20/18	0625	2.8	Y	Y	Y
							5.0	Y	Y (for 4/20)	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nick Zurweller
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM/DD/YY): 4/19/18

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

Appendix D

Data Validation Report

LEVEL II DATA VALIDATION REVIEW

1st Semi-Annual Groundwater Monitoring Event 2018

Whirlpool Corporation

Fort Smith, Arkansas

Laboratory Sample Delivery Groups (SDGs): 60268487, 60268532, 60268614, 60268615, and P1802082

Laboratory: PACE Analytical, Lenexa, Kansas; ALS, Simi Valley, CA

Reviewer: Kristin Drucquer

Date Reviewed: May 14, 2018

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 1st 2018 semi-annual groundwater sampling event at the Whirlpool Corporation, Fort Smith, Arkansas Site (the "site") from April 17, 2018 through April 19, 2017.

The analytical data were evaluated for quality assurance and quality control (QA/QC) based on *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (OSWER 9355.0-136, EPA-540-R-2017-002, 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.

Seventy-one (71) groundwater samples, one soil vapor sample, seven blind groundwater field duplicates, five equipment rinsate blanks, and five 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

Pace Analytical Services, LLC (Pace) located in Lenexa, Kansas analyzed all the samples. ALS in Simi Valley analyzed the air sample for VOCs by Method TO-15.

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: 60268487			
MW-196-201804	SA	60268487001	Aqueous
MW-195-201804	SA	60268487002	Aqueous
DUP-02-201804	FD	60268487003	Aqueous
MW-68-201804	SA	60268487004	Aqueous

Field ID	Sample Type	Lab ID	Matrix
TMW-20-201804	SA	60268487005	Aqueous
TMW-29-201804	SA	60268487006	Aqueous
MW-60R-201804	SA	60268487007	Aqueous
MW-61R-201804	SA	60268487008	Aqueous
MW-62R-201804	SA	60268487009	Aqueous
MW-194-201804	SA	60268487010	Aqueous
TMW-11-201804	SA	60268487011	Aqueous
MW-50R-201804	SA	60268487012	Aqueous
MW-176-201804	SA	60268487013	Aqueous
EB-01-201804	EB	60268487014	Aqueous
MW-63R-201804	SA	60268487015	Aqueous
DUP-01-201804	FD	60268487016	Aqueous
MW-40R-201804	SA	60268487017	Aqueous
EB-02-201804	EB	60268487018	Aqueous
TB-01-201804	TB	60268487019	Aqueous
SDG: 60268532			
MW-99-201804	SA	60268532001	Aqueous
MW-184-201804	SA	60268532002	Aqueous
MW-98-201804	SA	60268532003	Aqueous
TWM-24-201804	SA	60268532004	Aqueous
MW-183-201804	SA	60268532005	Aqueous
IW-73-201804	SA	60268532006	Aqueous
IW-77-201804	SA	60268532007	Aqueous
RW-69-201804	SA	60268532008	Aqueous
MW-26-201804	SA	60268532009	Aqueous
MW-187-201804	SA	60268532010	Aqueous
ITMW-20-201804	SA	60268532011	Aqueous
MW-175-201804	SA	60268532012	Aqueous
MW-55R-201804	SA	60268532013	Aqueous
DUP-05-201804	FD	60268532014	Aqueous
MW-46R-201804	SA	60268532015	Aqueous
MW-178-201804	SA	60268532016	Aqueous
TWM-27-201804	SA	60268532017	Aqueous
MW-39R-201804	SA	60268532018	Aqueous
TMW-23-201804	SA	60268532019	Aqueous
TMW-10-201804	SA	60268532020	Aqueous
TMW-22-201804	SA	60268532021	Aqueous
TMW-14-201804	SA	60268532022	Aqueous
DUP-03-201804	FD	60268532023	Aqueous
TMW-12-201804	SA	60268532024	Aqueous
MW-190-201804	SA	60268532025	Aqueous
MW-191-201804	SA	60268532026	Aqueous
MW-192-201804	SA	60268532027	Aqueous
MW-84-201804	SA	60268532028	Aqueous
TMW-21-201804	SA	60268532029	Aqueous
TMW-32-201804	SA	60268532030	Aqueous
EB-03-201804	EB	60268532031	Aqueous
EB-04-201804	EB	60268532032	Aqueous

Field ID	Sample Type	Lab ID	Matrix
TB-02-201804	TB	60268532033	Aqueous
TB-03-201804	TB	60268532034	Aqueous
SDG: 60255559			
MW-97-201804	SA	60268614001	Aqueous
MW-96-201804	SA	60268614002	Aqueous
MW-29-201804	SA	60268614003	Aqueous
MW-185-201804	SA	60268614004	Aqueous
DUP-07-201804	FD	60268614005	Aqueous
MW-189-201804	SA	60268614006	Aqueous
MW-188-201804	SA	60268614007	Aqueous
DUP-04-201804	FD	60268614008	Aqueous
MW-186-201804	SA	60268614009	Aqueous
ITMW-7-201804	SA	60268614010	Aqueous
TMW-19-201804	SA	60268614011	Aqueous
TMW-26-201804	SA	60268614012	Aqueous
MW-86-201804	SA	60268614013	Aqueous
TMW-25-201804	SA	60268614014	Aqueous
ITMW-10-201804	SA	60268614015	Aqueous
ITMW-5-201804	SA	60268614016	Aqueous
ITMW-21-201804	SA	60268614017	Aqueous
TMW-16-201804	SA	60268614018	Aqueous
MW-182-201804	SA	60268614019	Aqueous
DUP-06-201804	FD	60268614020	Aqueous
TMW-21-201804	SA	60268614021	Aqueous
MW-91-201804	SA	60268614022	Aqueous
MW-38-201804	SA	60268614023	Aqueous
MW-95-201804	SA	60268614024	Aqueous
MW-179-201804	SA	60268614025	Aqueous
EB-15-201804	EB	60268614026	Aqueous
MW-93-201804	SA	60268614027	Aqueous
TB-04-201804	TB	60268614028	Aqueous
TB-05-201804	TB	60268614029	Aqueous
SDG: 60268615			
VP-7-201804	SA	60268615001	Aqueous
VP-8-201804	SA	60268615002	Aqueous
VP-10-201804	SA	60268615003	Aqueous
VP-12-201804	SA	60268615004	Aqueous
VP-14-201804	SA	60268615005	Aqueous
TB-08-201804	SA	60268615006	Aqueous
SDG: P1802082			
VP-9-201804	TB	P1802082-001	Soil Vapor

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,
- 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 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: 60268487 –** The laboratory noted that bromomethane and 1,2-dichloroethane were detected in associated method blanks. See Section 4.0 for further discussion. The laboratory indicated that the recovery for chloroethane in the LCS was above QC limits. See Section 7.0 for further discussion. The laboratory indicated that the recoveries for chloroethane and multiple RPDs were outside the laboratory control limits in the MS/MSD samples. See Section 8.0 for further details.
- **SDG 60268532 –** The laboratory noted that bromomethane, chloromethane, and 1,2-dichloroethane were detected in associated method blanks. See Section 4.0 for further discussion. The laboratory indicated that the recovery for chloroethane in the LCS was above QC limits. See Section 7.0 for further discussion. The laboratory indicated that multiple RPDs were outside the laboratory control limits in the MS/MSD samples. See Section 8.0 for further details.
- **SDG 60268614 -** The laboratory noted that acetone, bromomethane, and carbon disulfide were detected in associated method blanks. See Section 4.0 for further discussion. The laboratory indicated that the recovery for carbon disulfide in the LCS was above QC limits. See Section 7.0 for further discussion.

- **SDG 60268615 -** The laboratory noted that carbon disulfide was detected in an associated method blank. See Section 4.0 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/analysed within method specific holding time requirements?

Yes. All samples were prepared and/or analysed within the method specific required holding time of 14 days for hydrochloric (HCl) acid preserved samples. Samples IW-77-201804, MW-84-201804, and MW-86-201804 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 (µg/L)
60268487	2139391	Method	Bromomethane	0.47 J
60268487	2139687	Method	1,2-Dichloroethane	0.21 J
60268487	EB-02-201804	Equipment	1,2-Dichloroethane	0.23 J
60268487	EB-02-201804	Equipment	Methylene Chloride	0.47 J
60268487	TB-01-201804	Trip	Dibromochloromethane	0.22 J
60268487	TB-01-201804	Trip	1,2-Dichloroethane	0.22 J
60268487	TB-01-201804	Trip	Methylene Chloride	0.48J
60268532	2139660	Method	1,2-Dichloroethane	0.24 J
60268532	2139660	Method	Bromomethane	1.4 J
60268532	2139660	Method	Chloromethane	0.12J
60268532	2139687	Method	1,2-Dichloroethane	0.21 J
60268532	2139748	Method	1,2-Dichloroethane	0.24 J
60268532	2139748	Method	Bromomethane	1.5 J
60268532	2139748	Method	Chloromethane	0.15 J
60268532	EB-03-201804	Equipment	1,2-Dichloroethane	0.23 J
60268532	EB-03-201804	Equipment	Methylene Chloride	0.41 J
60268532	EB-04-201804	Equipment	1,2-Dichloroethane	0.25 J
60268532	EB-04-201804	Equipment	Methylene Chloride	0.29 J
60268532	TB-02-201804	Trip	Chloromethane	0.13 J
60268532	TB-02-201804	Trip	Dibromochloromethane	0.22 J
60268532	TB-02-201804	Trip	1,2-Dichloroethane	0.22 J
60268532	TB-02-201804	Trip	Methylene Chloride	0.49 J
60268532	TB-03-201804	Trip	1,2-Dichloroethane	0.21 J
60268532	TB-03-201804	Trip	Methylene Chloride	0.43 J
60268614	2140287	Method	Acetone	2.1 J
60268614	2140289	Method	Carbon Disulfide	0.19 J
60268614	2142612	Method	Bromomethane	0.48 J
60268614	2142614	Method	Bromomethane	0.48 J
60268614	EB-05-201804	Equipment	Acetone	2.4 J
60268614	EB-05-201804	Equipment	Carbon Disulfide	0.13 J
60268614	EB-05-201804	Equipment	Methylene Chloride	0.27 J
60268614	EB-05-201804	Equipment	Trichloroethene	0.24 J

SDG	Blank ID	Blank Type	Analyte	Concentration (µg/L)
60268614	TB-04-201804	Trip	Bromomethane	0.90 J
60268614	TB-04-201804	Trip	Carbon Disulfide	0.21 J
60268614	TB-04-201804	Trip	Methylene Chloride	0.60 J
60268614	TB-05-201804	Trip	Carbon Disulfide	0.13 J
60268614	TB-05-201804	Trip	Methylene Chloride	0.52 J
60268615	2140289	Method	Carbon Disulfide	0.19 J
60268615	TB-06-201804	Trip	Methylene Chloride	0.57 J

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 (5X) the associated blank concentration (10X 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
60268487	MW-195-201804	Bromomethane	U
60268487	DUP-02-201804	Bromomethane	U
60268487	MW-68-201804	Bromomethane	U
60268487	TMW-20-201804	Bromomethane	U
60268487	TMW-29-201804	Bromomethane	U
60268487	MW-60R-201804	Bromomethane	U
60268487	MW-61R-201804	Bromomethane	U
60268487	MW-62R-201804	Bromomethane	U
60268487	MW-194-201804	Bromomethane	U
60268487	TMW-11-201804	Bromomethane	U
60268487	MW-50R-201804	Bromomethane	U
60268487	EB-01-201804	1,2-Dichloroethane	U
60268487	MW-63R-201804	1,2-Dichloroethane	U
60268487	DUP-01-201804	1,2-Dichloroethane	U
60268487	MW-40R-201804	1,2-Dichloroethane	U
60268487	EB-02-201804	1,2-Dichloroethane	U
60268487	TB-01-201804	1,2-Dichloroethane	U
60268532	MW-99-201804	1,2-Dichloroethane	U
60268532	MW-184-201804	1,2-Dichloroethane	U
60268532	MW-98-201804	1,2-Dichloroethane	U
60268532	MW-183-201804	1,2-Dichloroethane	U
60268532	MW-26-201804	Chloromethane	U
60268532	MW-26-201804	1,2-Dichloroethane	U
60268532	MW-187-201804	1,2-Dichloroethane	U
60268532	ITMW-20-201804	1,2-Dichloroethane	U
60268532	MW-55R-201804	1,2-Dichloroethane	U
60268532	DUP-05-201804	1,2-Dichloroethane	U
60268532	MW-178-201804	1,2-Dichloroethane	U
60268532	TMW-27-201804	1,2-Dichloroethane	U
60268532	MW-39R-201804	1,2-Dichloroethane	U
60268532	TMW-14-201804	1,2-Dichloroethane	U
60268532	DUP-03-201804	1,2-Dichloroethane	U
60268532	TMW-12-201804	Chloromethane	U
60268532	MW-190-201804	Bromomethane	U
60268532	MW-190-201804	Chloromethane	U
60268532	MW-190-201804	1,2-Dichloroethane	U

SDG	Field ID	Analyte	Qualification
60268532	MW-191-201804	1,2-Dichloroethane	U
60268532	MW-191-201804	Chloromethane	U
60268532	MW-191-201804	Bromomethane	U
60268532	MW-192-201804	1,2-Dichloroethane	U
60268532	MW-84-201804	Dibromochloromethane	U
60268532	TMW-32-201804	Chloromethane	U
60268532	EB-03-201804	1,2-Dichloroethane	U
60268532	EB-04-201804	1,2-Dichloroethane	U
60268532	TB-02-201804	Chloromethane	U
60268532	TB-02-201804	1,2-Dichloroethane	U
60268532	TB-03-201804	1,2-Dichloroethane	U
60268614	MW-97-201804	Acetone	U
60268614	MW-96-201804	Acetone	U
60268614	MW-29-201804	Acetone	U
60268614	MW-185-201804	Acetone	U
60268614	DUP-07-201804	Acetone	U
60268614	MW-189-201804	Acetone	U
60268614	MW-86-201804	Bromomethane	U
60268614	TMW-16-201804	Methylene Chloride	U
60268614	MW-38-201804	Bromomethane	U
60268614	MW-95-201804	Bromomethane	U
60268614	EB-05-201804	Carbon Disulfide	U
60268614	MW-93-201804	Bromomethane	U
60268614	TB-04-201804	Carbon Disulfide	U
60268614	TB-05-201804	Carbon Disulfide	U
60268615	VP-7-201804	Carbon Disulfide	U

ID = Identification U = Non-detect

5.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes. 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.

6.0 Internal Standards

Were the Internal standard areas within control limits and was the retention time criteria met?

Yes. Internal standards indicate whether GC/MS sensitivity and response were stable during each analysis. The laboratory reported that all criteria were within method requirements.

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 (shown in bold).

SDG	LCS ID	Analyte	LCS (%)	LCS Criteria (Recovery %)
60268487	2139688	Chloroethane	**70**	73-134
60268532	2139661	Chloroethane	**72**	73-134
60268532	2139688	Chloroethane	**70**	73-134
60268532	2139749	Chloroethane	**71**	73-134
60268614	2142613	Carbon Disulfide	**82**	85-124
60268614	2142615	Carbon Disulfide	**82**	85-124

ID = Identification LCS = Laboratory Control Sample RPD = Relative Percent Difference
% = Percent

Results that are qualified due to LCS recoveries are summarized in the table below.

SDG	Field ID	Analyte	Qualification
60268487	MW-176-201804	Chloroethane	J
60268487	EB-01-201804	Chloroethane	UJ
60268487	MW-63R-201804	Chloroethane	UJ
60268487	DUP-01-201804	Chloroethane	UJ
60268487	MW-40R-201804	Chloroethane	UJ
60268487	EB-02-201804	Chloroethane	UJ
60268487	TB-01-201804	Chloroethane	UJ
60268532	MW-99-201804	Chloroethane	UJ
60268532	MW-184-201804	Chloroethane	UJ
60268532	MW-98-201804	Chloroethane	UJ
60268532	TMW-24-201804	Chloroethane	UJ
60268532	MW-183-201804	Chloroethane	UJ
60268532	IW-73-201804	Chloroethane	UJ
60268532	RW-69-201804	Chloroethane	UJ
60268532	MW-26-201804	Chloroethane	UJ
60268532	MW-187-201804	Chloroethane	UJ
60268532	ITMW-20-201804	Chloroethane	UJ
60268532	MW-175-201804	Chloroethane	UJ
60268532	MW-55R-201804	Chloroethane	UJ
60268532	DUP-05-201804	Chloroethane	UJ
60268532	MW-46R-201804	Chloroethane	UJ
60268532	MW-178-201804	Chloroethane	UJ
60268532	TMW-27-201804	Chloroethane	UJ
60268532	MW-39R-201804	Chloroethane	UJ
60268532	TMW-23-201804	Chloroethane	UJ
60268532	TMW-10-201804	Chloroethane	UJ
60268532	TMW-22-201804	Chloroethane	UJ
60268532	TMW-14-201804	Chloroethane	UJ
60268532	DUP-03-201804	Chloroethane	UJ
60268532	TMW-12-201804	Chloroethane	UJ
60268532	MW-190-201804	Chloroethane	UJ
60268532	MW-191-201804	Chloroethane	UJ
60268532	MW-192-201804	Chloroethane	UJ
60268532	TMW-21-201804	Chloroethane	UJ
60268532	TMW-32-201804	Chloroethane	UJ
60268532	EB-03-201804	Chloroethane	UJ
60268532	EB-04-201804	Chloroethane	UJ
60268532	TB-02-201804	Chloroethane	UJ
60268532	TB-03-201804	Chloroethane	UJ

SDG	Field ID	Analyte	Qualification
60268614	MW-86-201804	Carbon Disulfide	J
60268614	MW-38-201804	Carbon Disulfide	UJ
60268614	MW-95-201804	Carbon Disulfide	UJ
60268614	MW-93-201804	Carbon Disulfide	UJ

ID = Identification U = Non-detect

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 (in bold) are summarized in the table below.

SDG	Sample ID	Analyte	MS/MSD Recovery (%)	RPD (%)	MS/MSD Recovery / RPD Criteria (%)
60268487	TMW-11-201804	1,2-Dichloroethene	NA	**15**	14
60268487	TMW-11-201804	Chlorobenzene	NA	**11**	10
60268487	TMW-11-201804	Chloroethane	92 /**187**	**69**	67-153 / 27
60268487	TMW-11-201804	Tetrachloroethene	NA	**16**	15
60268532	ITMW-20-201804	1,1,1-Trichloroethane	NA	**17**	11
60268532	ITMW-20-201804	1,1,2-Trichloroethane	NA	**18**	14
60268532	ITMW-20-201804	1,1-Dichloroethane	NA	**15**	12
60268532	ITMW-20-201804	1,1-Dichloroethene	NA	**21**	14
60268532	ITMW-20-201804	1,2-Dichloropropane	NA	**16**	13
60268532	ITMW-20-201804	2-Hexanone	NA	**19**	15
60268532	ITMW-20-201804	4-Methyl-2-pentanone	NA	**18**	15
60268532	ITMW-20-201804	Bromodichloromethane	NA	**16**	12
60268532	ITMW-20-201804	Bromoform	NA	**15**	14
60268532	ITMW-20-201804	Carbon Disulfide	NA	**15**	14
60268532	ITMW-20-201804	Chlorobenzene	NA	**18**	10
60268532	ITMW-20-201804	Chloroform	NA	**14**	12
60268532	ITMW-20-201804	Dibromochloromethane	NA	**16**	14
60268532	ITMW-20-201804	Tetrachloroethene	NA	**21**	15
60268532	ITMW-20-201804	Trichloroethene	NA	**16**	15
60268532	ITMW-20-201804	cis-1,2-Dichloroethene	NA	**17**	15

60268532	ITMW-20-201804	cis-1,3-Dichloropropene	NA	**17**	11
60268532	ITMW-20-201804	trans-1,2-Dichloroethene	NA	**16**	15
60268532	ITMW-20-201804	trans-1,3-Dichloropropene	NA	**18**	13

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 or high RPD were not qualified; therefore, no data from this data set were qualified as a result of the exceedances. MS/MSD recoveries for non-project samples were not evaluated.

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
60268487	MW-63R-201804	DUP-01-201804
60268487	MW-195-201804	DUP-02-201804
60268532	TMW-14-201804	DUP-03-201804
60268532	MW-55R-201804	DUP-05-201804
60268614	MW-188-201804	DUP-04-201804
60268614	MW-182-201804	DUP-06-201804
60268614	MW-185-201804	DUP-07-201804

ID = Identification

Were field duplicates within evaluation criteria?

Yes. 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 nondetect, 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
60268487	MW-195-201804	2-Butanone	J	5
60268487	MW-195-201804	4-Methyl-2-pentanone	J	5
60268487	MW-195-201804	Bromomethane	U	1
60268487	DUP-02-201804	Bromomethane	U	1
60268487	MW-68-201804	Bromomethane	U	1
60268487	TMW-20-201804	Bromomethane	U	1
60268487	TMW-29-201804	Bromomethane	U	1
60268487	MW-60R-201804	Bromomethane	U	1
60268487	MW-61R-201804	4-Methyl-2-pentanone	J	5
60268487	MW-61R-201804	Bromomethane	U	1
60268487	MW-61R-201804	Carbon Disulfide	J	5
60268487	MW-62R-201804	Bromomethane	U	1
60268487	MW-194-201804	cis-1,2-Dichloroethene	J	5
60268487	MW-194-201804	Bromomethane	U	1
60268487	TMW-11-201804	Bromomethane	U	1
60268487	TMW-11-201804	Vinyl Chloride	J	5
60268487	TMW-11-201804	Trichloroethene	J	5
60268487	TMW-11-201804	trans-1,2-Dichloroethene	J	5
60268487	TMW-11-201804	Toluene	J	5
60268487	MW-50R-201804	Trichloroethene	J	5
60268487	MW-50R-201804	Bromomethane	U	1
60268487	MW-176-201804	2-Butanone	J	5
60268487	MW-176-201804	Benzene	J	5
60268487	MW-176-201804	Bromomethane	J	5
60268487	MW-176-201804	Chloromethane	J	5
60268487	MW-176-201804	Chloroethane	J	4,5
60268487	MW-176-201804	Tetrachloroethene	J	5
60268487	EB-01-201804	Trichloroethene	J	5
60268487	EB-01-201804	Methylene Chloride	J	5
60268487	EB-01-201804	1,2-Dichloroethane	U	1
60268487	EB-01-201804	cis-1,2-Dichloroethene	J	5
60268487	EB-01-201804	Chloroethane	UJ	4
60268487	EB-01-201804	Bromomethane	J	5
60268487	EB-01-201804	Chloromethane	J	5

SDG	Field ID	Analyte	Qualifier	Reason Code
60268487	MW-63R-201804	cis-1,2-Dichloroethene	J	5
60268487	MW-63R-201804	Bromomethane	J	5
60268487	MW-63R-201804	Chloroethane	UJ	4
60268487	MW-63R-201804	1,2-Dichloroethane	U	1
60268487	DUP-01-201804	Chloroethane	UJ	4
60268487	DUP-01-201804	1,2-Dichloroethane	U	1
60268487	DUP-01-201804	Chloromethane	J	5
60268487	DUP-01-201804	Chloroform	J	5
60268487	DUP-01-201804	cis-1,2-Dichloroethene	J	5
60268487	MW-40R-201804	Chloroethane	UJ	4
60268487	MW-40R-201804	1,2-Dichloroethane	U	1
60268487	EB-02-201804	1,2-Dichloroethane	U	1
60268487	EB-02-201804	Methylene Chloride	J	5
60268487	EB-02-201804	Chloroethane	UJ	4
60268487	TB-01-201804	Methylene Chloride	J	5
60268487	TB-01-201804	Dibromochloromethane	J	5
60268487	TB-01-201804	1,2-Dichloroethane	U	1
60268487	TB-01-201804	Chloroethane	UJ	4
60268532	MW-99-201804	cis-1,2-Dichloroethene	J	5
60268532	MW-99-201804	1,2-Dichloroethane	U	1
60268532	MW-99-201804	Bromodichloromethane	J	5
60268532	MW-99-201804	Chloroethane	UJ	4
60268532	MW-184-201804	1,2-Dichloroethane	U	1
60268532	MW-184-201804	Chloroethane	UJ	4
60268532	MW-98-201804	1,2-Dichloroethane	U	1
60268532	MW-98-201804	Chloroethane	UJ	4
60268532	TMW-24-201804	Chloroethane	UJ	4
60268532	TMW-24-201804	Vinyl Chloride	J	5
60268532	TMW-24-201804	Tetrachloroethene	J	5
60268532	MW-183-201804	cis-1,2-Dichloroethene	J	5
60268532	MW-183-201804	1,2-Dichloroethane	U	1
60268532	MW-183-201804	Chloroethane	UJ	4
60268532	IW-73-201804	1,1-Dichloroethene	J	5
60268532	IW-73-201804	Chloroethane	UJ	4
60268532	IW-77-201804	Chloromethane	J	5
60268532	IW-77-201804	Benzene	J	5
60268532	IW-77-201804	Chloroform	J	5
60268532	IW-77-201804	Bromoform	J	5
60268532	IW-77-201804	Acetone	J	5
60268532	IW-77-201804	trans-1,2-Dichloroethene	J	5
60268532	RW-69-201804	Chloroethane	UJ	4
60268532	RW-69-201804	Vinyl Chloride	J	5
60268532	RW-69-201804	1,1-Dichloroethene	J	5
60268532	MW-26-201804	Chloroethane	UJ	4
60268532	MW-26-201804	Chloromethane	U	1
60268532	MW-26-201804	1,2-Dichloroethane	U	1
60268532	MW-187-201804	cis-1,2-Dichloroethene	J	5
60268532	MW-187-201804	1,2-Dichloroethane	U	1
60268532	MW-187-201804	Chloroethane	UJ	4
60268532	ITMW-20-201804	Bromomethane	J	5
60268532	ITMW-20-201804	Chloroethane	UJ	4

SDG	Field ID	Analyte	Qualifier	Reason Code
60268532	ITMW-20-201804	1,2-Dichloroethane	U	1
60268532	MW-175-201804	Chloromethane	J	5
60268532	MW-175-201804	Chloroethane	UJ	4
60268532	MW-175-201804	Vinyl Chloride	J	5
60268532	MW-175-201804	1,1-Dichloroethene	J	5
60268532	MW-55R-201804	1,1-Dichloroethene	J	5
60268532	MW-55R-201804	Chloroethane	UJ	4
60268532	MW-55R-201804	1,2-Dichloroethane	U	1
60268532	MW-55R-201804	Bromomethane	J	5
60268532	MW-55R-201804	cis-1,2-Dichloroethene	J	5
60268532	DUP-05-201804	Vinyl Chloride	J	5
60268532	DUP-05-201804	Chloroethane	UJ	4
60268532	DUP-05-201804	1,1-Dichloroethene	J	5
60268532	DUP-05-201804	1,2-Dichloroethane	U	1
60268532	DUP-05-201804	cis-1,2-Dichloroethene	J	5
60268532	MW-46R-201804	Bromomethane	J	5
60268532	MW-46R-201804	Chloroethane	UJ	4
60268532	MW-46R-201804	Vinyl Chloride	J	5
60268532	MW-46R-201804	Tetrachloroethene	J	5
60268532	MW-46R-201804	trans-1,2-Dichloroethene	J	5
60268532	MW-178-201804	1,2-Dichloroethane	U	1
60268532	MW-178-201804	1,1-Dichloroethene	J	5
60268532	MW-178-201804	Benzene	J	5
60268532	MW-178-201804	Chloroethane	UJ	4
60268532	MW-178-201804	Chloromethane	J	5
60268532	MW-178-201804	Bromomethane	J	5
60268532	TMW-27-201804	1,2-Dichloroethane	U	1
60268532	TMW-27-201804	Chloroethane	UJ	4
60268532	MW-39R-201804	Chloroethane	UJ	4
60268532	MW-39R-201804	1,2-Dichloroethane	U	1
60268532	TMW-23-201804	Chloroethane	UJ	4
60268532	TMW-23-201804	1,1-Dichloroethene	J	5
60268532	TMW-10-201804	Bromomethane	J	5
60268532	TMW-10-201804	Chloroethane	UJ	4
60268532	TMW-10-201804	Vinyl Chloride	J	5
60268532	TMW-22-201804	1,1-Dichloroethene	J	5
60268532	TMW-22-201804	Chloroethane	UJ	4
60268532	TMW-14-201804	Bromomethane	J	5
60268532	TMW-14-201804	1,2-Dichloroethane	U	1
60268532	TMW-14-201804	Chloroethane	UJ	4
60268532	DUP-03-201804	1,2-Dichloroethane	U	1
60268532	DUP-03-201804	Chloroethane	UJ	4
60268532	TMW-12-201804	Chloromethane	U	1
60268532	TMW-12-201804	Chloroethane	UJ	4
60268532	TMW-12-201804	Vinyl Chloride	J	5
60268532	TMW-12-201804	Tetrachloroethene	J	5
60268532	TMW-12-201804	trans-1,2-Dichloroethene	J	5
60268532	MW-190-201804	Bromomethane	U	1
60268532	MW-190-201804	Chloromethane	U	1
60268532	MW-190-201804	Chloroethane	UJ	4
60268532	MW-190-201804	Trichloroethene	J	5

SDG	Field ID	Analyte	Qualifier	Reason Code
60268532	MW-190-201804	1,2-Dichloroethane	U	1
60268532	MW-190-201804	Acetone	J	5
60268532	MW-191-201804	Chloroethane	UJ	4
60268532	MW-191-201804	1,2-Dichloroethane	U	1
60268532	MW-191-201804	Chloromethane	U	1
60268532	MW-191-201804	Bromomethane	U	1
60268532	MW-192-201804	Chloroethane	UJ	4
60268532	MW-192-201804	1,2-Dichloroethane	U	1
60268532	MW-84-201804	Trichloroethene	J	5
60268532	MW-84-201804	Bromomethane	J	5
60268532	MW-84-201804	Chloroform	J	5
60268532	MW-84-201804	Dibromochloromethane	U	3
60268532	MW-84-201804	Acetone	J	5
60268532	TMW-21-201804	Chloroethane	UJ	4
60268532	TMW-21-201804	1,1-Dichloroethene	J	5
60268532	TMW-32-201804	Chloroethane	UJ	4
60268532	TMW-32-201804	Chloromethane	U	1
60268532	TMW-32-201804	Benzene	J	5
60268532	EB-03-201804	Chloroethane	UJ	4
60268532	EB-03-201804	Methylene Chloride	J	5
60268532	EB-03-201804	1,2-Dichloroethane	U	1
60268532	EB-04-201804	1,2-Dichloroethane	U	1
60268532	EB-04-201804	Methylene Chloride	J	5
60268532	EB-04-201804	Chloroethane	UJ	4
60268532	TB-02-201804	Chloromethane	U	1
60268532	TB-02-201804	Chloroethane	UJ	4
60268532	TB-02-201804	Methylene Chloride	J	5
60268532	TB-02-201804	1,2-Dichloroethane	U	1
60268532	TB-02-201804	Dibromochloromethane	J	5
60268532	TB-03-201804	Methylene Chloride	J	5
60268532	TB-03-201804	Chloroethane	UJ	4
60268532	TB-03-201804	1,2-Dichloroethane	U	1
60268614	MW-97-201804	Acetone	U	1
60268614	MW-96-201804	Acetone	U	1
60268614	MW-96-201804	Chloroform	J	5
60268614	MW-29-201804	Acetone	U	1
60268614	MW-185-201804	Acetone	U	1
60268614	DUP-07-201804	Acetone	U	1
60268614	MW-189-201804	Tetrachloroethene	J	5
60268614	MW-189-201804	Vinyl Chloride	J	5
60268614	MW-189-201804	Chloroform	J	5
60268614	MW-189-201804	Acetone	U	1
60268614	MW-188-201804	Trichloroethene	J	5
60268614	DUP-04-201804	Trichloroethene	J	5
60268614	MW-186-201804	1,1-Dichloroethene	J	5
60268614	MW-186-201804	Vinyl Chloride	J	5
60268614	ITMW-7-201804	Vinyl Chloride	J	5
60268614	ITMW-7-201804	Benzene	J	5
60268614	TMW-19-201804	cis-1,2-Dichloroethene	J	5
60268614	TMW-19-201804	Acetone	J	5
60268614	TMW-19-201804	Trichloroethene	J	5

SDG	Field ID	Analyte	Qualifier	Reason Code
60268614	TMW-19-201804	Chloroform	J	5
60268614	TMW-26-201804	1,1-Dichloroethene	J	5
60268614	TMW-26-201804	1,1-Dichloroethane	J	5
60268614	TMW-26-201804	Chloromethane	J	5
60268614	TMW-26-201804	Bromomethane	J	5
60268614	TMW-26-201804	Acetone	J	5
60268614	MW-86-201804	2-Butanone	J	5
60268614	MW-86-201804	Carbon Disulfide	J	4,5
60268614	MW-86-201804	Bromomethane	U	1
60268614	MW-86-201804	Benzene	J	5
60268614	MW-86-201804	Acetone	J	5
60268614	MW-86-201804	Carbon Tetrachloride	J	5
60268614	MW-86-201804	trans-1,2-Dichloroethene	J	5
60268614	TMW-25-201804	1,1-Dichloroethene	J	5
60268614	TMW-25-201804	Vinyl Chloride	J	5
60268614	TMW-25-201804	Benzene	J	5
60268614	TMW-25-201804	Chloroform	J	5
60268614	TMW-25-201804	Acetone	J	5
60268614	TMW-25-201804	Tetrachloroethene	J	5
60268614	ITMW-10-201804	Acetone	J	5
60268614	ITMW-10-201804	Tetrachloroethene	J	5
60268614	ITMW-10-201804	1,1-Dichloroethane	J	5
60268614	ITMW-10-201804	Vinyl Chloride	J	5
60268614	ITMW-5-201804	Chloroform	J	5
60268614	ITMW-5-201804	trans-1,2-Dichloroethene	J	5
60268614	ITMW-5-201804	Acetone	J	5
60268614	ITMW-21-201804	Acetone	J	5
60268614	ITMW-21-201804	cis-1,2-Dichloroethene	J	5
60268614	TMW-16-201804	Acetone	J	5
60268614	TMW-16-201804	Vinyl Chloride	J	5
60268614	TMW-16-201804	Methylene Chloride	U	2,3
60268614	TMW-16-201804	Tetrachloroethene	J	5
60268614	TMW-16-201804	1,1-Dichloroethane	J	5
60268614	TMW-16-201804	Chlorobenzene	J	5
60268614	MW-182-201804	Benzene	J	5
60268614	MW-182-201804	Acetone	J	5
60268614	DUP-06-201804	Acetone	J	5
60268614	DUP-06-201804	Benzene	J	5
60268614	TMW-21-20180419	Vinyl Chloride	J	5
60268614	TMW-21-20180419	Acetone	J	5
60268614	MW-91-201804	Vinyl Chloride	J	5
60268614	MW-91-201804	Chloroform	J	5
60268614	MW-91-201804	Acetone	J	5
60268614	MW-91-201804	trans-1,2-Dichloroethene	J	5
60268614	MW-38-201804	Chloroform	J	5
60268614	MW-38-201804	Benzene	J	5
60268614	MW-38-201804	Bromomethane	U	1
60268614	MW-38-201804	Carbon Disulfide	UJ	4
60268614	MW-38-201804	Tetrachloroethene	J	5
60268614	MW-38-201804	Toluene	J	5

SDG	Field ID	Analyte	Qualifier	Reason Code
60268614	MW-95-201804	Carbon Disulfide	UJ	4
60268614	MW-95-201804	Bromomethane	U	1
60268614	MW-95-201804	Benzene	J	5
60268614	MW-95-201804	1,1-Dichloroethane	J	5
60268614	MW-95-201804	Carbon Tetrachloride	J	5
60268614	MW-95-201804	1,1,1-Trichloroethane	J	5
60268614	MW-95-201804	Bromodichloromethane	J	5
60268614	MW-95-201804	1,1,2,2-Tetrachloroethane	J	5
60268614	MW-179-201804	Acetone	J	5
60268614	MW-179-201804	cis-1,2-Dichloroethene	J	5
60268614	MW-179-201804	1,1-Dichloroethene	J	5
60268614	EB-05-201804	Methylene Chloride	J	5
60268614	EB-05-201804	Trichloroethene	J	5
60268614	EB-05-201804	Acetone	J	5
60268614	EB-05-201804	Carbon Disulfide	U	1
60268614	MW-93-201804	Toluene	J	5
60268614	MW-93-201804	Carbon Tetrachloride	J	5
60268614	MW-93-201804	1,1,2,2-Tetrachloroethane	J	5
60268614	MW-93-201804	1,1-Dichloroethane	J	5
60268614	MW-93-201804	Bromodichloromethane	J	5
60268614	MW-93-201804	Carbon Disulfide	UJ	4
60268614	MW-93-201804	Bromomethane	U	1
60268614	MW-93-201804	1,1,1-Trichloroethane	J	5
60268614	MW-93-201804	Benzene	J	5
60268614	TB-04-201804	Carbon Disulfide	U	1
60268614	TB-04-201804	Methylene Chloride	J	5
60268614	TB-04-201804	Bromomethane	J	5
60268614	TB-05-201804	Methylene Chloride	J	5
60268614	TB-05-201804	Carbon Disulfide	U	1
60268615	VP-7-201804	Carbon Disulfide	U	1
60268615	VP-7-201804	2-Butanone	J	5
60268615	VP-7-201804	4-Methyl-2-pentanone	J	5
60268615	VP-7-201804	Toluene	J	5
60268615	VP-7-201804	Benzene	J	5
60268615	VP-8-201804	4-Methyl-2-pentanone	J	5
60268615	VP-8-201804	Chloromethane	J	5
60268615	VP-8-201804	Vinyl Chloride	J	5
60268615	VP-8-201804	Benzene	J	5
60268615	VP-8-201804	1,2-Dichloroethane	J	5
60268615	VP-8-201804	Toluene	J	5
60268615	VP-8-201804	2-Hexanone	J	5
60268615	VP-10-201804	trans-1,2-Dichloroethene	J	5
60268615	VP-10-201804	Toluene	J	5
60268615	VP-10-201804	Carbon Disulfide	J	5
60268615	VP-10-201804	Methylene Chloride	J	5
60268615	VP-10-201804	Vinyl Chloride	J	5
60268615	VP-10-201804	Benzene	J	5
60268615	VP-12-201804	Benzene	J	5
60268615	VP-12-201804	Methylene Chloride	J	5
60268615	VP-14-201804	Acetone	J	5
60268615	VP-14-201804	trans-1,2-Dichloroethene	J	5

SDG	Field ID	Analyte	Qualifier	Reason Code
60268615	VP-14-201804	Chloroform	J	5
60268615	VP-14-201804	Benzene	J	5
60268615	VP-14-201804	1,1-Dichloroethene	J	5
60268615	TB-06-201804	Methylene Chloride	J	5

Data Validation Qualifier Codes:
U = Non-detect. The compound was analysed 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 (U) due to blank contamination.
2 Samples were qualified as non-detect (U) due to equipment blank contamination.
3 Samples were qualified as non-detect (U) due to trip blank contamination.
4 Samples were qualified as estimated (J) or non-detect (U) due to associated LCS recoveries.
5 Samples were qualified as estimated (J) between the MDL and RL.

LEVEL II DATA VALIDATION REVIEW

Temporary Well Installation April 2018

Whirlpool Corporation

Fort Smith, Arkansas

Laboratory Sample Delivery Groups (SDGs): 60267227, 60267331, 60267451, 60267576, 602676577

Laboratory: PACE Analytical, Lenexa, Kansas; TestAmerica, Nashville, Tennessee

Reviewer: Kristin Drucquer

Date Reviewed: May 3, 2018

This data validation report has been prepared by Ramboll US Corporation (Ramboll) to assess the validity and usability of laboratory analytical data generated from samples collected during the temporary well installation at the Whirlpool Corporation, Fort Smith, Arkansas Site (the "site") from April 2, 2018 through April 5, 2018.

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.

Sixteen (16) groundwater samples, one blind groundwater field duplicate, one equipment rinsate blank, and four trip blanks were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) 8260. Two soil samples were analyzed for total organic carbon (TOC) by USEPA 9060A.

Pace Analytical Services, LLC (Pace) located in Lenexa, Kansas analyzed all the aqueous samples; TestAmerica in Nashville, Tennessee analyzed the soil samples for TOC.

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: 60267227			
MW-186-20180402	SA	60267227001	Aqueous
DUP-01-20180402	FD	60267227002	Aqueous
TMW-30-20180402	SA	60267227003	Aqueous

Field ID	Sample Type	Lab ID	Matrix
TMW-27-20180402	SA	60267227004	Aqueous
TMW-26-20180402	SA	60267227005	Aqueous
TMW-16-20180402	SA	60267227006	Aqueous
EB-01-20180402	EB	60267227007	Aqueous
TB-01-20180402	TB	60267227008	Aqueous
SDG: 60267331			
TMW-32-20180403	SA	60267331001	Aqueous
TMW-33-20180403	SA	60267331002	Aqueous
TMW-31-20180403	SA	60267331003	Aqueous
TB-02-20180403	TB	60267331004	Aqueous
SDG: 60267451			
TB-03-20180404	TB	60267451001	Aqueous
HP-02-20180404	SA	60267451002	Aqueous
HP-03-20180404	SA	60267451003	Aqueous
HP-04-20180404	SA	60267451004	Aqueous
HP-05-20180404	SA	60267451005	Aqueous
HP-06-20180404	SA	60267451006	Aqueous
SDG: 60267576			
TB-03-20180405	TB	60267576001	Aqueous
HP-08-20180405	SA	60267576002	Aqueous
HP-07-20180405	SA	60267576003	Aqueous
TMW-33-SHALLOW-20180405	SA	60267576004	Aqueous
SDG: 60267577			
TMW-32-SL(23-24FT)-040318	SA	60267577001	Solid
TMW-33-SL(23-24FT)-040518	SA	60267577002	Solid

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,
- 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 following laboratory case narratives listed nonconformances encountered during the analyses:

- **SDG: 60267227 –** The laboratory indicated that chloromethane and methylene chloride were detected in a method blank associated with the project samples reported in the SDG. See Section 4.0 for further discussion.
- **SDG 60267331 –** The laboratory indicated that chloromethane and methylene chloride were detected in a method blank associated with the project samples reported in the SDG. See Section 4.0 for further discussion. The laboratory also noted that sample TMW-31-20180403 was diluted due to the presence of high levels of sediment in the sample vials.
- **SDG 60267576** – The laboratory indicated that carbon disulfide and chloromethane were detected in a method blank associated with the project samples reported in the SDG. See Section 4.0 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/analysed within method specific holding time requirements?

Yes. All samples were prepared and/or analysed within the method specific required holding time of 14 days for hydrochloric (HCl) acid preserved samples.

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
60267227	2129143	Method	Chloromethane	0.095 J	µg/L
60267227	2129143	Method	Methylene Chloride	0.57 J	µg/L
60267227	EB-01-20180402	Equipmen	Acetone	5.2 J	µg/L

SDG	Blank ID	Blank Type	Analyte	Concentration	Units
		t			
60267227	TB-01-20180402	Trip	Chloromethane	0.098 J	µg/L
60267227	TB-01-20180402	Trip	Methylene Chloride	0.59 J	µg/L
60267331	2130115	Method	Chloromethane	0.13 J	µg/L
60267331	TB-02-20180403	Trip	Chloromethane	0.19 J	µg/L
60267331	TB-02-20180403	Trip	Methylene Chloride	0.53 J	µg/L
60267576	2131586	Method	Carbon Disulfide	0.23 J	µg/L
60267576	2131586	Method	Chloromethane	0.19 J	µg/L
60267576	TB-03-20180405	Trip	Chloromethane	0.23 J	µg/L
60267576	TB-03-20180405	Trip	Trans-1,3-Dichloropropane	0.13 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 (5X) the associated blank concentration (10X 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	Concentration (µg/L)	Qualification
60267227	MW-186-20180402	Chloromethane	0.094 J	**U**
60267227	TMW-30-20180402	Chloromethane	0.12 J	**U**
60267227	TMW-26-20180402	Chloromethane	0.33 J	**U**
60267227	TMW-16-20180402	Methylene Chloride	0.83 J	**U**
60267227	TB-01-20180402	Chloromethane	0.098 J	**U**
60267227	TB-01-20180402	Methylene Chloride	0.59 J	**U**
60267331	TMW-33-20180403	Methylene Chloride	0.28 J	**U**
60267331	TMW-31-20180403	Methylene Chloride	2.7 J	**U**
60267331	TB-02-20180403	Chloromethane	0.19 J	**U**
60267331	TB-02-20180403	Methylene Chloride	0.53 J	**U**
60267576	TB-03-20180405	Chloromethane	0.23 J	**U**
60267576	HP-08-20180405	Carbon Disulfide	0.17 J	**U**
60267576	HP-07-20180405	Carbon Disulfide	0.32J	**U**
60267576	HP-07-20180405	Chloromethane	0.37 J	**U**
60267576	TMW-33-SHALLOW-20180405	Carbon Disulfide	0.17 J	**U**
60267576	TMW-33-SHALLOW-20180405	Chloromethane	0.19 J	**U**

ID = Identification U = Non-detect

5.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes. 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.

6.0 Internal Standards

Were the Internal standard areas within control limits and was the retention time criteria met?

Yes. Internal standards indicate whether GC/MS sensitivity and response were stable during each analysis. The laboratory reported that all criteria were within method requirements.

7.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

Yes. The LCS provides information on the accuracy of the analytical method and on the laboratory performance. LCS recoveries were within the laboratory acceptance limits.

8.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples reported as part of these SDGs?

No. MS/MSD samples were not included with the analyses reported for the SDGs included in this data set.

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
60267227	MW-186-20180402	DUP-01-20180402

ID = Identification

Were field duplicates within evaluation criteria?

Yes. 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 nondetect, were undiluted results also reported?

No. One sample, TMW-31-20180403, was diluted five times because the sample vials contained a large amount of sediment. Non-detected results were reported for this sample with elevated reporting limits.

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
60267227	MW-186-20180402	Chloromethane	U	1
60267227	MW-186-20180402	Vinyl Chloride	J	4
60267227	MW-186-20180402	1,1-Dichloroethene	J	4
60267227	DUP-01-20180402	Vinyl Chloride	J	4
60267227	DUP-01-20180402	1,1-Dichloroethene	J	4
60267227	TMW-30-20180402	Chloromethane	U	1
60267227	TMW-30-20180402	cis-1,2-Dichloroethene	J	4
60267227	TMW-27-20180402	Acetone	U	2
60267227	TMW-27-20180402	Carbon Disulfide	J	4
60267227	TMW-26-20180402	Chloromethane	U	1
60267227	TMW-26-20180402	cis-1,2-Dichloroethene	J	4
60267227	TMW-26-20180402	Bromomethane	J	4
60267227	TMW-26-20180402	1,1-Dichloroethane	J	4
60267227	TMW-16-20180402	Vinyl Chloride	J	4
60267227	TMW-16-20180402	Tetrachloroethene	J	4
60267227	TMW-16-20180402	Chlorobenzene	J	4
60267227	TMW-16-20180402	Methylene Chloride	U	1
60267227	EB-01-20180402	Acetone	J	4
60267227	TB-01-20180402	Chloromethane	U	1
60267227	TB-01-20180402	Methylene Chloride	U	1
60267331	TMW-32-20180403	Acetone	J	4
60267331	TMW-33-20180403	Chloroform	J	4
60267331	TMW-33-20180403	Vinyl Chloride	J	4
60267331	TMW-33-20180403	Methylene Chloride	U	3
60267331	TMW-33-20180403	Toluene	J	4
60267331	TMW-33-20180403	Benzene	J	4
60267331	TMW-33-20180403	1,1-Dichloroethene	J	4
60267331	TMW-33-20180403	Acetone	J	4
60267331	TMW-31-20180403	Methylene Chloride	U	3

SDG	Field ID	Analyte	Qualifier	Reason Code
60267331	TB-02-20180403	Chloromethane	U	1
60267331	TB-02-20180403	Methylene Chloride	J	4
60267451	TB-03-20180404	Methylene Chloride	J	4
60267451	TB-03-20180404	Chloromethane	J	4
60267451	HP-02-20180404	Carbon Disulfide	J	4
60267451	HP-02-20180404	Vinyl Chloride	J	4
60267451	HP-02-20180404	Chloromethane	J	4
60267451	HP-02-20180404	2-Butanone	J	4
60267451	HP-02-20180404	Chloroform	J	4
60267451	HP-02-20180404	Acetone	J	4
60267451	HP-02-20180404	trans-1,2-Dichloroethene	J	4
60267451	HP-02-20180404	Toluene	J	4
60267451	HP-03-20180404	Carbon Disulfide	J	4
60267451	HP-03-20180404	Benzene	J	4
60267451	HP-03-20180404	Bromomethane	J	4
60267451	HP-03-20180404	Chloromethane	J	4
60267451	HP-03-20180404	Methylene Chloride	J	4
60267451	HP-03-20180404	1,1-Dichloroethane	J	4
60267451	HP-03-20180404	1,1-Dichloroethene	J	4
60267451	HP-03-20180404	2-Butanone	J	4
60267451	HP-03-20180404	Vinyl Chloride	J	4
60267451	HP-03-20180404	Tetrachloroethene	J	4
60267451	HP-03-20180404	Toluene	J	4
60267451	HP-03-20180404	Chloroform	J	4
60267451	HP-03-20180404	Acetone	J	4
60267451	HP-03-20180404	Chlorobenzene	J	4
60267451	HP-04-20180404	Benzene	J	4
60267451	HP-04-20180404	Chloroethane	J	4
60267451	HP-04-20180404	1,1-Dichloroethane	J	4
60267451	HP-04-20180404	1,1-Dichloroethene	J	4
60267451	HP-04-20180404	Carbon Disulfide	J	4
60267451	HP-04-20180404	Acetone	J	4
60267451	HP-05-20180404	Toluene	J	4
60267451	HP-05-20180404	1,2-Dichloroethane	J	4
60267451	HP-05-20180404	1,1-Dichloroethene	J	4
60267451	HP-05-20180404	Acetone	J	4
60267451	HP-06-20180404	1,2-Dichloroethane	J	4
60267451	HP-06-20180404	Toluene	J	4
60267451	HP-06-20180404	Chloromethane	J	4
60267576	TB-03-20180405	Methylene Chloride	J	4
60267576	TB-03-20180405	Chloromethane	U	1

SDG	Field ID	Analyte	Qualifier	Reason Code
60267576	TB-03-20180405	trans-1,3-Dichloropropene	J	4
60267576	TB-03-20180405	1,3-Dichloropropene (total)	J	4
60267576	HP-08-20180405	Acetone	J	4
60267576	HP-08-20180405	cis-1,2-Dichloroethene	J	4
60267576	HP-08-20180405	Carbon Disulfide	U	1
60267576	HP-08-20180405	Trichloroethene	J	4
60267576	HP-07-20180405	Chloromethane	U	1
60267576	HP-07-20180405	Acetone	J	4
60267576	HP-07-20180405	Carbon Disulfide	U	1
60267576	HP-07-20180405	Vinyl Chloride	J	4
60267576	HP-07-20180405	Toluene	J	4
60267576	HP-07-20180405	1,1-Dichloroethene	J	4
60267576	HP-07-20180405	1,1-Dichloroethane	J	4
60267576	TMW-33-SHALLOW-20180405	Chloroform	J	4
60267576	TMW-33-SHALLOW-20180405	Chloromethane	U	1
60267576	TMW-33-SHALLOW-20180405	Vinyl Chloride	J	4
60267576	TMW-33-SHALLOW-20180405	Acetone	J	4
60267576	TMW-33-SHALLOW-20180405	1,1-Dichloroethene	J	4
60267576	TMW-33-SHALLOW-20180405	Carbon Disulfide	U	1
60267576	TMW-33-SHALLOW-20180405	1,2-Dichloroethane	J	4
60267576	TMW-33-SHALLOW-20180405	Chlorobenzene	J	4
60267576	TMW-33-SHALLOW-20180405	Toluene	J	4

Data Validation Qualifier Codes:
U = Non-detect. The compound was analysed 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 (U) at reporting limit due to method blank contamination.
2 Samples were qualified as non-detect (U) at reporting limit due to equipment blank contamination.
3 Samples were qualified as non-detect (U) at reporting limit due to trip blank contamination.
4 Samples were qualified as estimated (J) between the MDL and RL.

Appendix 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**
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

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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
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**
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.

RAMBOLL

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

RAMBOLL

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)
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

RAMBOLL

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)
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
April 2018 - 5 to 100 µg/L	222,380	3.7[1]	0.4	330,012	2,468,488	9,343,228	5	100	0.0	0.9	0.0	0.2
April 2018 - 100 to 1,000 µg/L	249,941	3.7[1]	0.4	370,913	2,774,429	10,501,215	100	1,000	1.1	10.5	0.2	1.9
April 2018 - > 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 2018 Subtotal	472,321								1.1	11.4	0.2	2.1
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

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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)
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
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

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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)
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
April 2018 - 5 to 100 ug/l	484,216	8.3[1]	0.4	1,609,533	12,039,309	45,568,785	5	100	0.2	4.6	0.0	0.8
April 2018 - 100 to 1,000 ug/l	486,883	8.3[1]	0.4	1,618,398	12,105,614	45,819,749	100	1,000	4.6	45.8	0.8	8.3
April 2018 - 1,000 to 10,000 ug/l	250,959	8.3[1]	0.4	834,187	6,239,719	23,617,338	1,000	1,500	23.6	35.4	4.3	6.4
April 2018 - > 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
April 2018 Subtotal	1,251,332								56.0	196.0	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

RAMBOLL

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)
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

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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)
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
April 2018 - 5 to 100 ug/l	161,368	4.4[1]	0.4	284,653	2,129,204	8,059,037	5	100	0.0	0.8	0.0	0.1
April 2018 - 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
April 2018 - > 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
April 2018 Subtotal	246,885								0.5	5.1	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

Appendix F

2018 Revised Action Plan





APPENDIX F
Revised Action Plan
Whirlpool Facility
Fort Smith, Arkansas

Prepared for:
Whirlpool Corporation

Prepared by:
Ramboll US Corporation

Date:
June 2018

Project Number:
1690007739

RAMBOLL

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1 Introduction

Ramboll US Corporation (Ramboll), 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." This revised action plan (1) summarizes the investigation completed in April 2018 at the southwest and east property boundaries of the former Whirlpool property in accordance with the January 2018 Revised Action Plan (2017 Annual Report dated January 2018, Appendix F); (2) proposes supplemental investigation on the B&M Oil property located west of the former Whirlpool property; and (3) summarizes proposed remedial actions (a Work Plan for In-Situ Chemical Reduction comprising the proposed remedial actions was submitted to ADEQ on May 11, 2018, and ADEQ provided comments on this Work Plan on June 18, 2018). ADEQ acknowledged the proposed investigation in the January 2018 Revised Action Plan in the March 1, 2018, comment letter[1]. The results of the April 2018 investigation are summarized in Section 2.0 of this report.

Whirlpool continues to be committed to fully investigating plume boundary conditions in accordance with the 2016 Revised Groundwater Monitoring Plan and performing supplemental remedies as appropriate to address plume boundary conditions. The April 2018 investigation did not identify any complete exposure pathways; therefore, the previous conclusion that no unacceptable risks exist to human health or the environment remains valid for the former Whirlpool property.

[1] ADEQ issued comments on the January 2018 Action Plan on March 1, 2018. Responses to ADEQ's comments were issued on March 20, 2018. ADEQ acknowledged receipt of Whirlpool's response in a letter dated April 20, 2018.

2 Data Summary

The subject investigation was completed between April 2 and 6, 2018, prior to the semi-annual groundwater monitoring event conducted between April 16 and 20, 2018. The investigation focused along the southwest property boundary down-gradient of TMW-26 and along the east property boundary bordering the reconstructed Jenny Lind Road and down-gradient of MW-185. The data collected during the investigation is summarized in the following sections.

Prior to initiating drilling activities, 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. In addition, required flagging services were arranged with the Arkansas Missouri Railroad for work on the Arkansas Missouri Railroad spur located immediately west of the former Whirlpool property.

A Geoprobe 7722DT direct push drilling rig was used to complete drilling activities. This drill rig is capable of drilling with hollow stem augers and completion of soil probes using direct push technology (DPT). The soil cuttings generated from the well installation and soil sampling activities 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.

2.1 Southern Plume Investigation West of TMW-26

Supplemental investigation was completed west of TMW-26 to:

- Assess southwest property boundary conditions down-gradient of TMW-26; and
- Evaluate trichloroethylene (TCE) concentrations in this area to assess appropriate reagent dosing for supplemental remediation along the property boundary.

The previous investigation completed in October 2017 (results of the investigation were summarized in the January 2018 Revised Action Plan) sufficiently delineated the extent of groundwater impact to the north and south near the southwest property boundary, but the extent of impact was not fully delineated at the property boundary or offsite to the west/southwest. The April 2018 supplemental investigation was performed to further delineate TCE concentrations at the southwest property boundary and along the Arkansas Missouri Railroad spur immediately west of the property boundary. This investigation identified groundwater impacts offsite on the Arkansas Missouri Railroad spur west of the southwest property boundary, but did not fully delineate the extent of groundwater impact further to the west of the former Whirlpool property and the Arkansas Missouri Railroad spur.

The investigation at the southwest property boundary down-gradient of TMW-26 consisted of installation of groundwater monitoring well TMW-32 on the former Whirlpool property and seven hydropunch soil probes for collection of groundwater samples (hydropunch locations TMW-31 and TMW-33 on the former Whirlpool property and HP-02, HP-03, HP-04, HP-07 and HP-08 on the Arkansas Missouri Railroad spur) (see Figure 2). TMW-32 was installed using hollow stem augers and continuous soil sampling was conducted to observe the stratigraphic profile. Soil cores were screened with a PID. In addition, continuous soil sampling was conducted for the

soil probe completed adjacent to hydropunch location TMW-33 to assess the stratigraphic profile. The boring for TMW-32 and the soil probe for TMW-33 were logged by a Ramboll geologist for USCS classification. The temporary monitoring well was completed as a permanent monitoring well (construction details are summarized below). The hydropunch soil probes were advanced using DPT until refusal. At soil probe refusal, drilling rods were pulled up to expose the hydropunch 4 foot long stainless steel screen (positioned with the base of the well screen at the total depth of the soil probe). Groundwater in the hydropunch well screen and drill rods was purged and sampled using a peristaltic pump and dedicated tubing. After groundwater sampling was completed, the soil probes for the hydropunch locations were properly abandoned using bentonite cement grout placed using a tremie tube. Temporary monitoring well and hydropunch locations are depicted on Figure 2.

Temporary monitoring well TMW-32 was installed to total depth targeting the top of the shale at the base of the Basal Transmissive Zone at a depth of 26.5 feet below ground surface (bgs). TMW-32 was 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 2 feet of annular seal consisting of hydrated bentonite chips above the top of the sand pack. The remainder of the annular space was grouted with a bentonite/cement grout mixture. The well was completed with an expandable, locking well cap and covered with a steel cover flush with the ground surface. A well construction log is provided in Appendix A. TMW-32 was developed immediately after installation, the water level was recorded and a groundwater sample was collected using low flow sampling techniques (TMW-32 was sampled again on April 18 during the April 2018 groundwater monitoring event). Purging was performed while monitoring pH, conductivity, dissolved oxygen (DO), oxidation reduction potential (ORP) and turbidity. After stabilization of these parameters to within 10%, 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). The groundwater laboratory results from the April 2018 investigation event are provided in Table 1. Laboratory reports are provided in Appendix C.

At hydropunch locations, groundwater in the hydropunch well screen and drill rods was immediately purged and sampled after visual indication that turbidity had decreased in the purge water. Groundwater samples from hydropunch locations were collected and submitted to Pace Analytical for analysis for VOCs (EPA Method 8260) with a same day laboratory turnaround time (Table 1). Initial laboratory results from TMW-32 and select hydropunch groundwater samples provided timely VOC groundwater data to assess and adjust the locations of subsequent hydropunch soil probes as the investigation proceeded.

Groundwater samples at hydropunch location TMW-33 were collected at two different depth intervals to assess potential variation in groundwater TCE concentrations. One groundwater sample was collected from 15-19 feet bgs and one groundwater sample was collected at 21-25 feet bgs. The sample intervals were selected based on observation of two zones of wet soils separated by a moist portion of the Basal Transmissive Zone.

Results

The well log for TMW-32 and a boring log for hydropunch location TMW-33 are included in Appendix A. The observed USCS classifications for TMW-32 and TMW-33 (noting hydropunch location TMW-33 was abandoned after groundwater sampling) were generally consistent with the field classifications from previous investigations in the vicinity; clayey silt and/or silty clay over clayey sand and/or sandy clay underlain by clayey gravel with sand (Basal Transmissive Zone), over a thin layer of dry clayey silt underlain by hard laminated shale (bedrock). Generally, three to four feet of saturated soils were encountered in the Basal Transmissive Zone similar to the subsurface conditions previously encountered in the vicinity. At hydropunch location TMW-33 the sandy clay layer exhibited less clay and higher moisture content than the sandy clay layer observed at other boring or soil probe locations in the vicinity.

The potentiometric surface map for April 2018 for the south plume area continues to indicate a localized hydraulic divide in the potentiometric surface gradient (Figure 1A). 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 borings completed for TMW-32 and hydropunch location TMW-33 (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, TMW-27, TMW-32 and TMW-33. 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.

During the April 2018 investigation, the TCE concentration in groundwater in the newly installed TMW-32 was 65.8 micrograms per liter (µg/L) (the TCE concentration at TMW-32 increased to 101 µg/L during the April 2018 groundwater monitoring event). TCE concentrations in hydropunch groundwater samples at the southwest property boundary were below detection limits at hydropunch location TMW-31 (less than 0.85 µg/L) and 55.8 µg/L at hydropunch location TMW-33, and the TCE concentrations in hydropunch locations on the Arkansas Missouri Railroad spur were 63.4 µg/L at HP-02, 244 µg/L at HP-03, 6.6 µg/L at HP-04, 4.6 µg/L at HP-07 and an estimated of concentration of 0.3 µg/L at HP-08. In addition, the TCE concentration for the shallow groundwater sample collected at hydropunch location TMW-33 was 156 µg/L. Existing wells TMW-16, TMW-26, TMW-27, TMW-30 and MW-186 were sampled during the April 2018 investigation with TCE concentrations of 985 µg/L, 35.4 µg/L, below detection limits (less than 0.17 µg/L), 1.5 µg/L and 13.1 µg/L, respectively (Table 1). The TCE concentrations in TMW-16, TMW-26, TMW-27 and MW-186 during the April 2018 groundwater monitoring event (TMW-30 was not sampled during the April 2018 groundwater monitoring event) were 1,030 µg/L, 28.3 µg/L, less than 0.17 µg/L and 14.2 µg/L, respectively.

Monitoring wells MW-182, TMW-25, TMW-16, TMW-26 and hydropunch locations TMW-33 and HP-03 were generally installed in a linear fashion in the general direction of groundwater flow near the south plume boundary. However, the TCE concentrations do not exhibit a linear trend

in these wells. TCE concentrations are higher in TMW-25, TMW-16, TMW-33-Shallow (15-19 feet interval) and HP-03 compared with up-gradient wells MW-182 and TMW-26, which is inconsistent with typical plume migration. This observed inconsistency in the TCE concentration particularly at TMW-16 and HP-03 is anticipated to be due to the shale bedrock surface having greater influence on the migration of TCE in groundwater in this area. In addition, the higher TCE concentration detected in shallower groundwater at hydropunch location TMW-33-Shallow compared to deeper groundwater sampled collected at this location suggests that the sandy layer directly above the Basal Transmissive Zone and overall thickness of the saturation zone has some influence on TCE migration (the sandy layer above the Basal Transmissive Zone is occasionally detected at locations throughout the site).

As required in the November 2015 Remedial Action Decision Document (RADD), ADEQ and the adjacent affected property owners (Arkansas Missouri Railroad and B&M Oil) have been notified of the offsite groundwater impacts in correspondence dated May 4, 2018 (provided as Appendix D). At this time, negotiations for access to the B&M Oil property are being conducted.

2.2 Southern Plume Investigation East of MW-185

Supplemental investigation was completed in the vicinity of MW-185 to:

- Assess southeast property boundary TCE concentrations down-gradient of MW-185 at the property boundary; and,
- To assess up-gradient TCE concentrations in groundwater for reagent dosing for the proposed in-situ chemical reduction (ISCR) treatment along the property boundary.

The investigation at the southeast property boundary along Jenny Lind Road included collection of groundwater samples from two hydropunch well screens consisting of HP-05 up-gradient of MW-185 and HP-06 down-gradient of MW-185. The properties east of Jenny Lind Road are commercial/industrial, or are undeveloped but zoned for commercial/industrial use. Hydropunch soil probes were advanced using DPT and were properly abandoned after sampling was completed by grouting with bentonite/cement grout placed with a tremie tube. Hydropunch locations at the southeast property boundary are depicted on Figure 3.

Results

The potentiometric surface map for April 2018 for the south plume area continues to indicate a relatively flat gradient to the east in the area of MW-185 with a slight northeast component (Figure 1A). The shale topography is also relatively flat in this area with an easterly slope. TCE concentrations from west to east with the groundwater gradient were 10.9 µg/L at HP-05, 12 µg/L at MW-185 (duplicate sample TCE concentration was 11.1 µg/L) (groundwater samples at MW-185 were collected on April 19 during the April 2018 groundwater monitoring event) and 7.4 µg/L at HP-06 located near the approximate east property boundary. For reference, the TCE concentration in MW-185 during the October 2017 monitoring event was 12.7 µg/L. The TCE concentrations in groundwater range from 7.4 µg/L to 12 µg/L which only marginally exceed the RAL.

2.3 Total Organic Carbon and Magnetic Susceptibility

Ramboll collected soil samples for total organic carbon (TOC) and magnetic susceptibility analysis from the borings for TMW-32 and TMW-33 (soil probe adjacent to hydropunch TMW-33) during the April 2018 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 (mg/kg)	Mag Susceptibility	
			Result (m^3/kg)	Plus or Minus
TMW-32	23-24	ND	7.8E-08	4.3E-09
TMW-33	23-24	ND	7.9E-08	3.7E-09

Notes:
mg/kg: Milligrams per kilograms; m^3/kg: Cubic meters per kilograms; ND: Non-detect.

TOC soil results were comparable with the results from previous sampling efforts indicating low organic carbon concentrations in the Basal Transmissive Zone.

Magnetic susceptibility is an estimate of the amount of magnetite in a soil sample available to react abiotically with chlorinated compounds such as TCE. The USEPA Biological Pathway Identification Criteria (BioPIC) screening tool 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 (the BioPIC tool plot has been presented in previous Action Plans and in the Monitoring Well Installation Letter Report dated November 11, 2016). The degradation rate constant calculated for the south plume for the Whirlpool site is -0.15 yr^{-1} based upon the regression analysis of groundwater data from the south plume presented in the Two Year Technical Review Report dated January 2016. The BioPIC tool plot for a degradation rate constant of -0.15 yr^{-1} indicates that mass magnetic susceptibility can help explain the apparent in situ rate of TCE degradation if the magnetic susceptibility results range from 3E-08 m^3 kg^{-1} to 1E-06 m^3 kg^{-1}. The magnetic susceptibility values for soil collected at TMW-32 and TMW-33 locations at the Whirlpool Fort Smith site fall within this range suggesting “the mass magnetic susceptibility can explain the apparent in situ rate of TCE degradation” (ESTCP Project ER-201129). These results are comparable to the range of magnetic susceptibility values for soil samples collected during previous investigations in September 2016, April 2017 and October 2017. Further discussion regarding abiotic degradation is presented in the 2018 Semi-Annual Report.

3 Revised Action Plan

Based on the results of the additional investigation and monitoring performed in April 2018, the Revised Action Plan consists of:

- Additional investigation (offsite) at the southwest portion of the south plume (B&M Oil property);
- Supplemental remedial actions at the north plume boundary; and
- Supplemental remedial actions at the southwest and southeast property boundaries.

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 2018. This investigation identified groundwater impacts offsite on the Arkansas Missouri Railroad spur down-gradient of TMW-32. The investigation completed in April 2018 sufficiently delineated the extent of groundwater impact to the north and south just beyond the west property boundary, but the extent of impact is not fully delineated offsite to the west/southwest.

Additional offsite hydropunch soil probes and monitoring well(s) are proposed to be performed on the B&M Oil property west of the former Whirlpool property to delineate the extent of groundwater impact. Figure 4 depicts the proposed location of one monitoring well at the northeast corner of the B&M Oil main building and four initial hydropunch soil probes for collection of groundwater samples near the center of the property. The monitoring well and hydropunch soil probes will be completed to total depths targeting the top of the shale at the base of the Basal Transmissive Zone. The groundwater samples will be analyzed using same day laboratory turnaround to facilitate placement of two additional monitoring wells on the B&M Oil property during this mobilization (a total of three monitoring wells are proposed). If the extent of TCE groundwater impact is characterized at concentrations less than 1 µg/L on the B&M Oil property by the four initial hydropunch locations; then further investigation will not be performed and two monitoring wells will be installed along the central portion of the B&M Oil property to facilitate future groundwater monitoring. If groundwater TCE concentrations are not delineated to concentrations of approximately 1 µg/L or less, then additional hydropunch soil probes will be performed to delineate the extent of groundwater impact. Potential hydropunch “step-out” locations are depicted on Figure 4.

A direct push drilling rig capable of using hollow stem augers or a sonic drilling rig will be used to install the groundwater monitoring wells to a total depth targeting the top of the shale. Each borehole will be logged by a Ramboll geologist. Soil samples will be collected at each of the three boring locations for the analysis of TOC and magnetic susceptibility in accordance with previous Action Plans. The monitoring wells will be constructed with 5 to 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 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 slightly lower than grade to

facilitate installation of a flush-mount well surface protector. The wells will be surveyed for elevation and location following installation.

The hydropunch soil probes will be advanced using DPT until refusal. At soil probe refusal, drilling rods will be pulled up to expose the hydropunch 4 foot long stainless steel screen (positioned with the base of the well screen at the total depth of the soil probe). Groundwater in the hydropunch well screen and drill rods will be purged and sampled using a peristaltic pump and dedicated tubing. A groundwater sample will be collected after the turbidity in the purge water decreases. After groundwater sampling is completed, the soil probes for the hydropunch locations will be properly abandoned using bentonite cement grout placed using a tremie tube.

Groundwater samples will be collected and analyzed for specific VOCs consisting of TCE, cis-1,2-dichloroethene (DCE) and vinyl chloride via USEPA Method 8260. The specific VOC parameters were limited due to the well-established groundwater conditions on the former Whirlpool site and the specific data objectives to delineate the extent of groundwater impact from the former Whirlpool site. Proposed soil and groundwater samples will be analyzed by Pace Analytical.

The results of the additional investigation at the southwest property boundary from April 2018 indicate TCE impacted groundwater is possibly present under the B&M Oil main building. Based on confirmation of groundwater impacts during the additional investigation outlined above, sub-slab vapor samples will be collected to assess potential sub-slab vapors which could potentially impact indoor air quality. Up to three sub-slab vapor sample ports will be installed through the concrete floor of the B&M Oil main building. Sub-slab vapor samples will be collected from each sample port in certified Summa® cannisters and submitted to Pace Analytical for analysis for TCE; cis-1,2-DCE and vinyl chloride.

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 be containerized for disposal.

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 an ISCR remedy similar to the remedy previously conducted in the vicinity of MW-61R in October 2015. The ISCR remedial activities in the vicinity of MW-61R have successfully reduced TCE concentrations and precluded plume expansion in that area. The ISCR technology implemented 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
- Vicinity of MW-61R (including TMW-10 and TMW-11).

The Work Plan for In-situ Chemical Reduction (Work Plan) to implement the above supplemental ISCR remedies was submitted to ADEQ on May 10, 2018, for review and approval. ADEQ provided comments on the Work Plan on June 18, 2018. An Underground Injection Control (UIC) Program submittal will be prepared to supplement the original (UIC) Class V Well Inventory Requirements submitted February 26, 2014 for ADEQ review and approval. The proposed supplemental ISCR remedies are intended to be implemented in a manner similar to the ISCR effort performed in the vicinity of MW-61R.

As requested in the ADEQ comments on the Work Plan, MW-185 near the southeast plume boundary will be retained and a second monitoring well will be installed at the east edge of the parking area.

3.3 Schedule

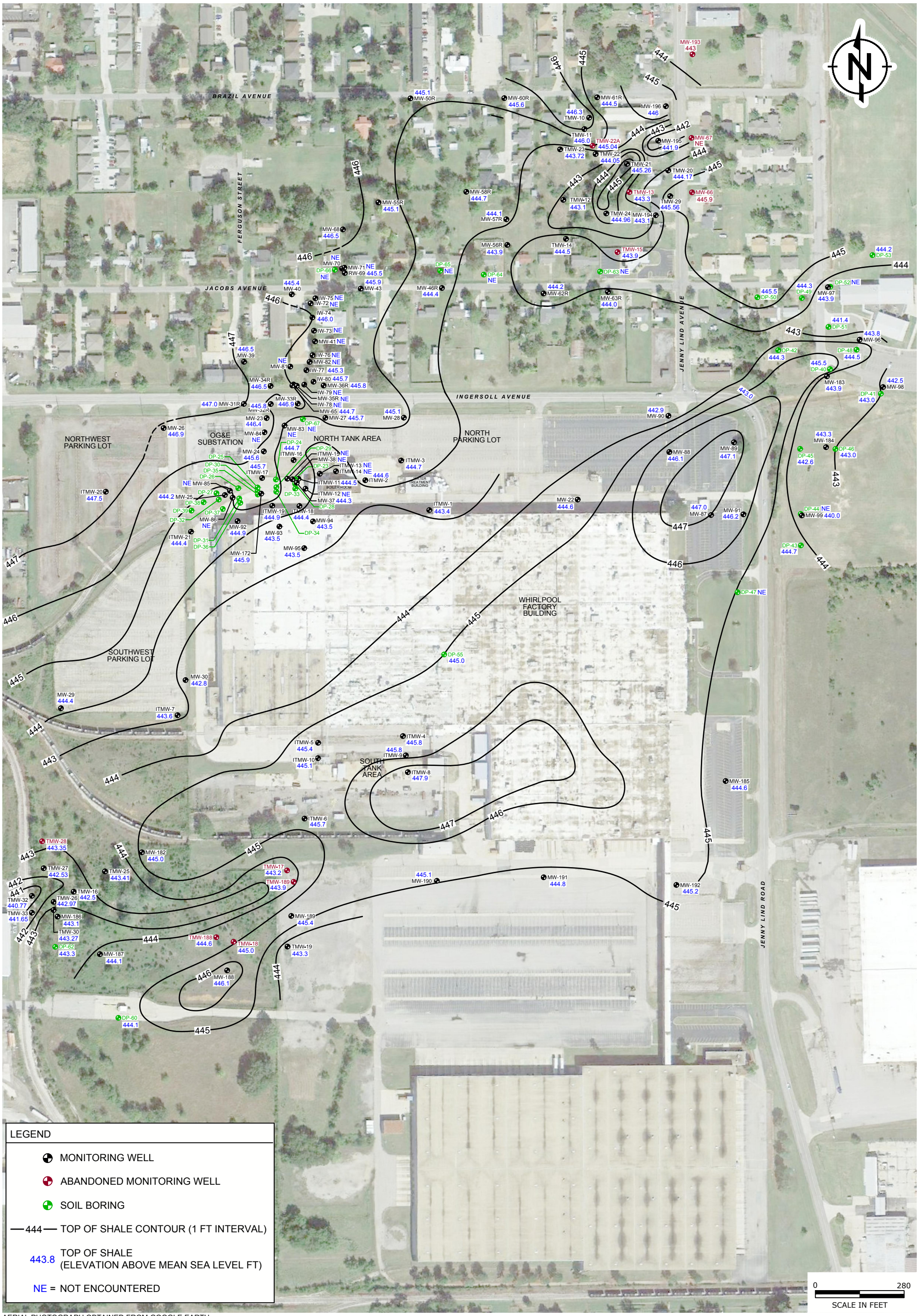
We anticipate comments from ADEQ on this Revised Action Plan will be addressed to facilitate implementation of the investigation and supplemental ISCR remedy phases of this Revised Action Plan beginning in late July 2018 (currently planned for the week of July 23, 2018 dependent upon B&M Oil property access approval, which Whirlpool initiated in May 2018). This will facilitate sequential performance of the proposed investigation followed by the performance of the supplemental ISCR remedy in August 2018 and the 90 day post monitoring event during the fall annual groundwater monitoring event scheduled for November 2018. The data from the proposed investigation and fall annual monitoring event are anticipated by mid-December 2018 (assuming monitoring is completed by mid-November 2018).

UIC permit correspondence will be submitted to ADEQ after submittal of responses to ADEQ's comments on the Work Plan. Ramboll anticipates UIC permit approval within 30 days of submittal. The supplemental ISCR remedies are anticipated to begin in August 2018. This schedule is favorable to facilitate a 90 day monitoring event during the November 2018 Annual Groundwater Monitoring event to assess the effectiveness of the supplemental ISCR remedies.

An addendum to this Revised Action Plan detailing proposed supplemental investigation will be submitted to ADEQ for review and approval if additional investigation west beyond the B&M Oil property is necessary. The addendum to the Revised Action Plan, if necessary, will be submitted within 60 days of the receipt of the data from the November 2018 Annual Groundwater Monitoring event.

Figures

L:\Loop Project Files_CAD\1690007742_Whirlpool_SW Temporary Well_PHII\01_Top of Competent Shale.dwg



AERIAL PHOTOGRAPH OBTAINED FROM GOOGLE EARTH.

RAMBOLL

DRAFTED BY: CKL | DATE: 4/11/18

TOP OF COMPETENT SHALE

WHIRLPOOL FACILITY
FORT SMITH, ARKANSAS

FIGURE
1

1690007742

FILE: L:\Loop Project Files\Whirlpool Fort Smith\2018 Semi Annual M&R\mxd\2018 Semi-Annual Potentiometric Surface Map_20180430.mxd

0 150 300 450 600

Feet

1 inch = 300 feet

Notes
- Water levels measured April 17th, 2018
- Water levels in ft

MW-60R 454.55
MW-61R 452.17
MW-50R 452.97
TMW-10 453.51
MW-196 453.37
TMW-11 453.61
MW-195 456.01
TMW-23 455.31
TMW-22 457.63
TMW-21 457.62
TMW-20 456.25
MW-55R 462.52
TMW-12 459.66
TMW-29 452.30
MW-68 462.92
MW-58R 462.21
MW-57R 461.04
MW-194 457.24
MW-70 462.85
MW-56R 460.22
TMW-24 458.14
MW-71 462.84
MW-46R 462.53
TMW-14 459.24
MW-40R 462.76
RW-69 462.47
MW-63R 458.22
IW-74 462.67
IW-75 462.79
MW-97 450.73
IW-73 462.78
IW-72 462.54
MW-41R 462.62
MW-62R 458.22
IW-76 462.58
MW-81 462.75
MW-82 462.77
MW-96 451.12
MW-39R 462.84
IW-115 462.48
IW-77 462.77
MW-183 450.76
MW-98 450.77
MW-65R 462.73
IW-80 462.65
MW-34R 462.88
MW-36R 462.63
MW-35R 462.65
IW-79 462.78
MW-90 458.76
MW-26 463.57
MW-23 462.83
MW-27 462.75
MW-28 462.39
MW-89 456.47
MW-84 462.65
IW-78 462.76
MW-88 457.39
MW-184 455.82
MW-24 462.82
MW-83 462.69
ITMW-3 461.13
ITMW-17 462.59
ITMW-14 462.27
ITMW-20 463.40
ITMW-2 462.00
MW-85 462.67
ITMW-1 460.26
MW-87 457.53
MW-99 456.71
MW-25 462.85
ITMW-13 462.41
MW-86 462.59
MW-91 456.92
ITMW-21 463.17
ITMW-16 462.73
ITMW-11 462.74
MW-92 462.71
ITMW-12 462.45
MW-172 462.66
MW-37 462.74
ITMW-19 462.52
MW-38 462.74
MW-93 462.51
MW-94 462.23
ITMW-18 462.38
MW-30 462.41
ITMW-15 462.80
MW-29 463.34
MW-95 462.31
ITMW-7 461.64
ITMW-4 459.50
ITMW-5 459.53
ITMW-9 459.36
ITMW-10 459.53
MW-185 458.96
ITMW-6 459.51
TMW-27 456.68
MW-182 459.35
TMW-25 457.35
TMW-32 456.21
TMW-16 456.88
MW-190 459.40
MW-191 459.36
MW-192 459.23
TMW-26 456.39
TMW-30 456.03
MW-189 459.49
MW-186 456.42
TMW-19 459.36
MW-187 457.81
MW-188 459.29

Brazil Ave
Ferguson St
Ingersoll Ave
Boys Club Ln
Jerry Lind Rd
Jacobs Ave
Ingersoll Ave (Prop

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

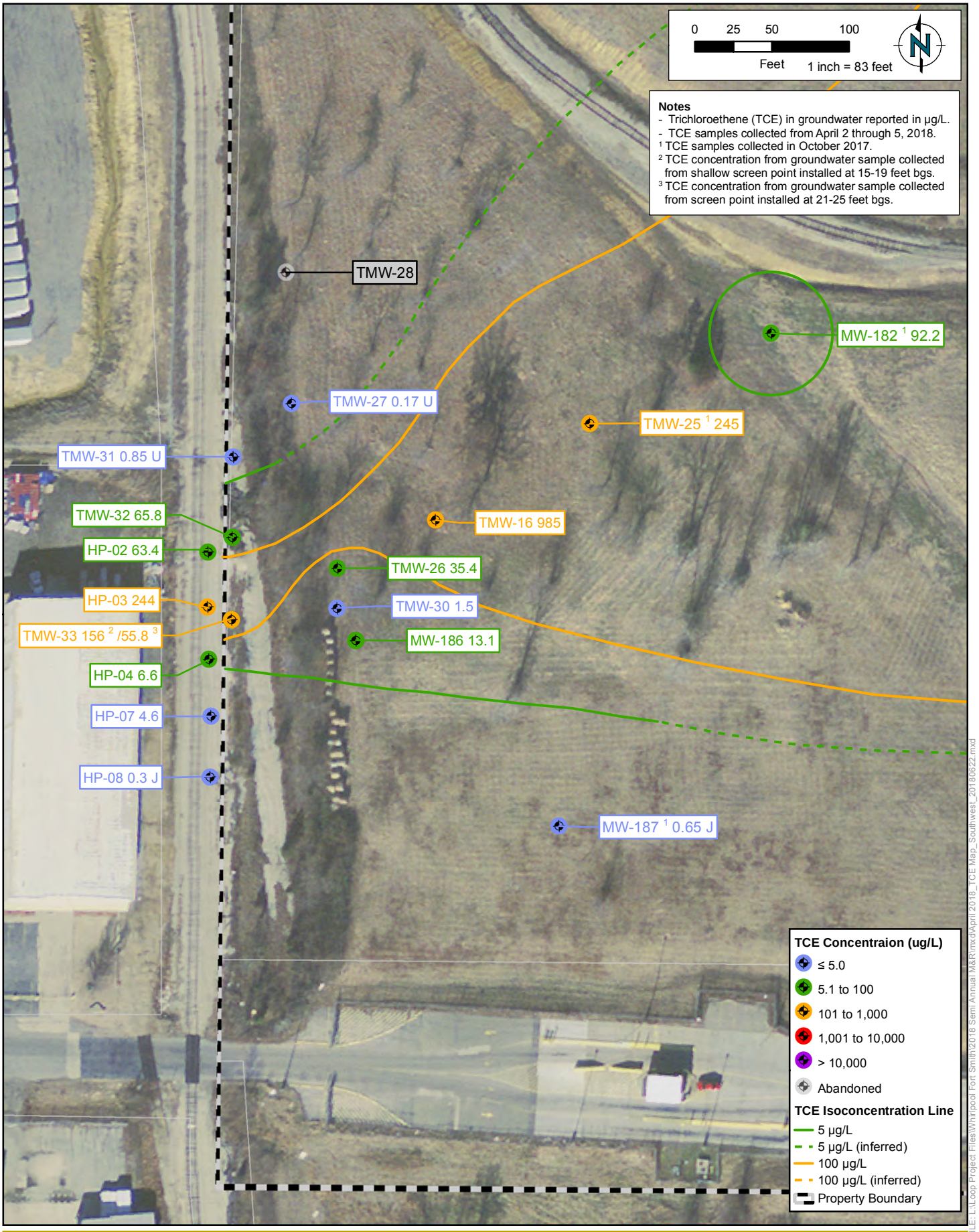
RAMBOLL

2018 SEMI-ANNUAL SAMPLING POTENTIOMETRIC SURFACE

Whirlpool Facility - Fort Smith, Arkansas

Figure 1A

DRAFTED BY: FK/WZ | DATE: 04/30/2018 | PROJECT: 1690007739



FILE: L:\Loop Project Files\Whirlpool Fort Smith\2018 Semi Annual M&R\mxd\April 2018_TCE Map_Southwest_20180622.mxd

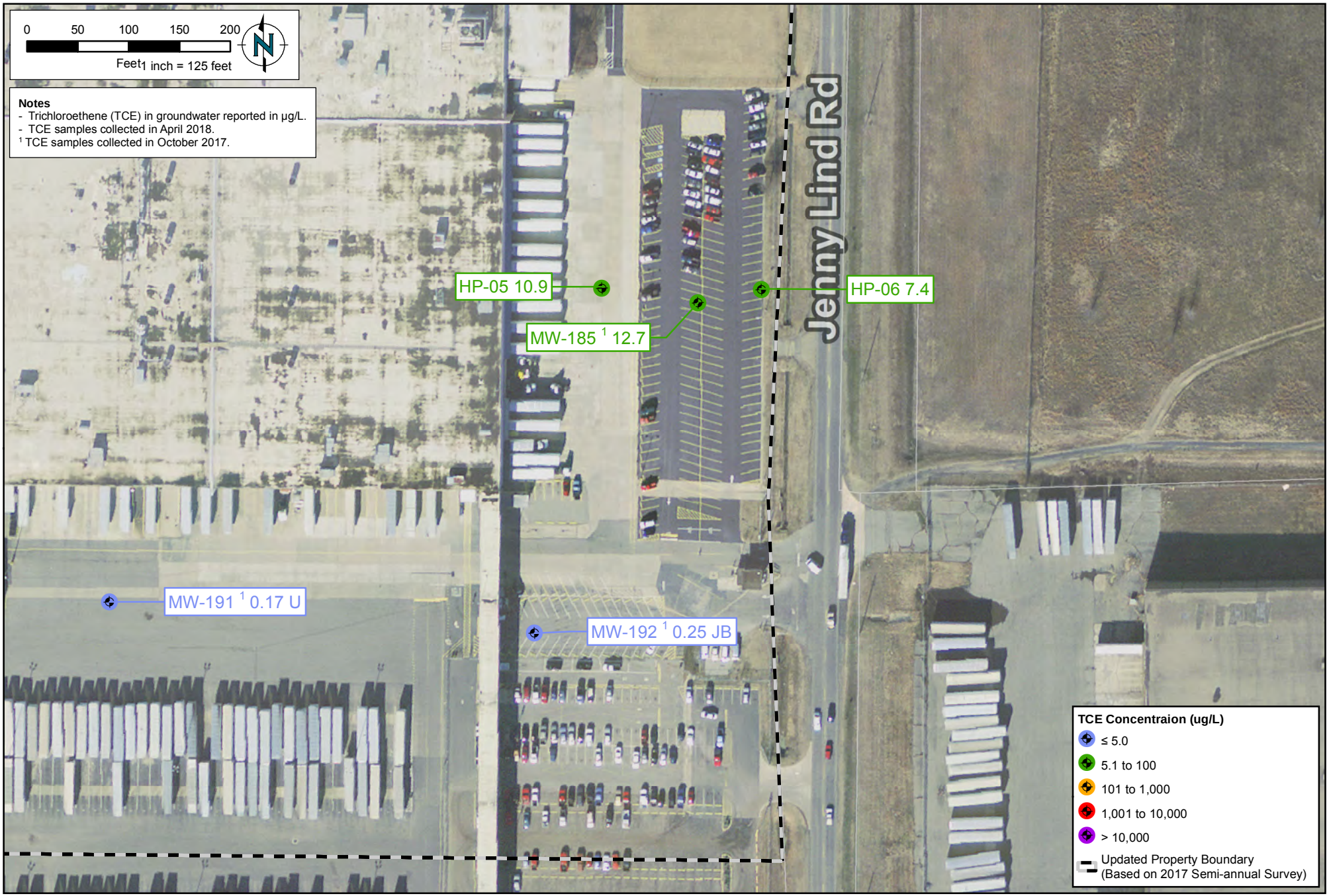
RAMBOLL

APRIL 2018 TCE CONCENTRATION MAP
SOUTH PLUME

Whirlpool Facility - Fort Smith, Arkansas

Figure 2

DRAFTED BY: FK | DATE: 06/22/2018 | PROJECT: 1690007739



RAMBOLL

DRAFTED BY: FK | DATE: 04/10/2018

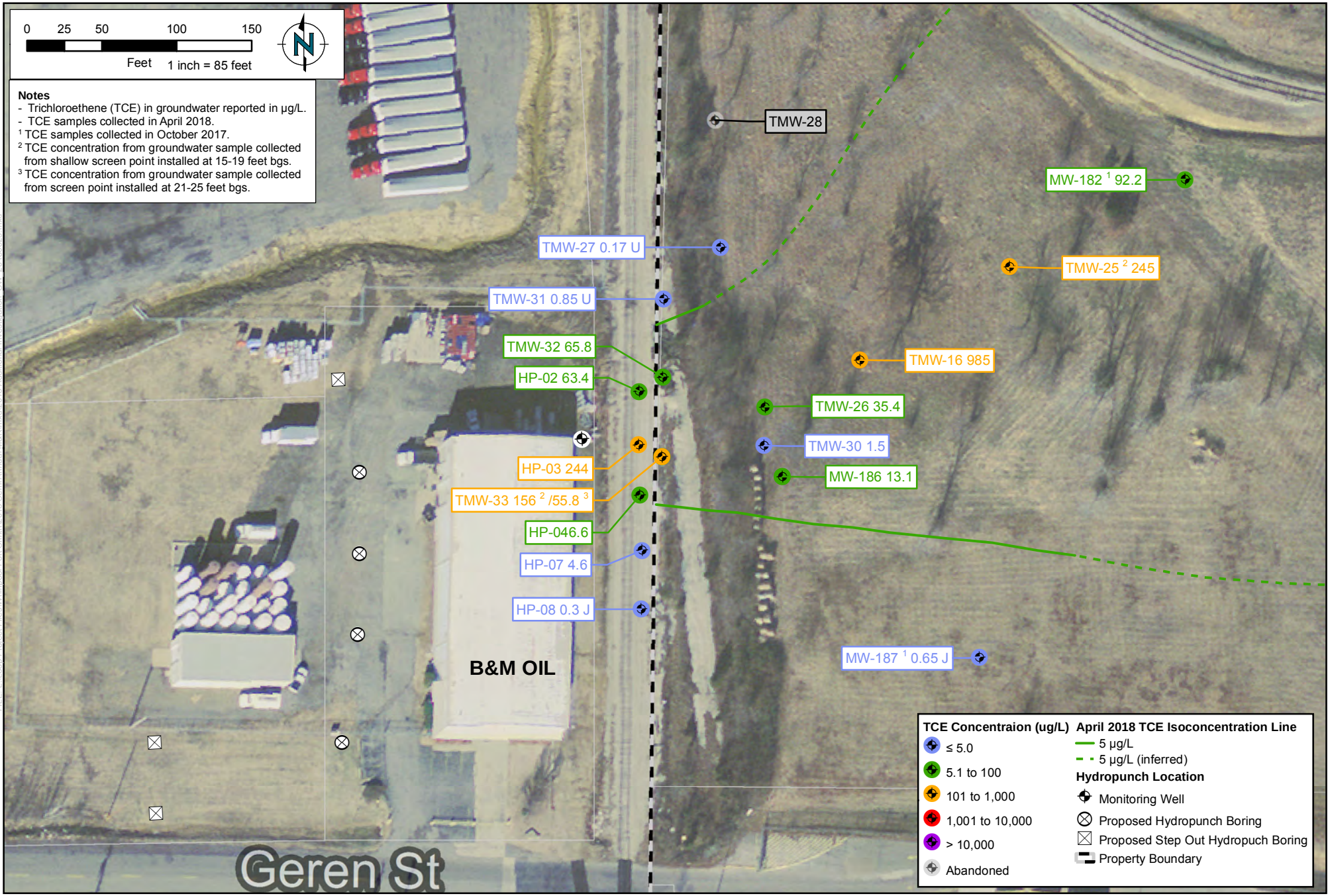
APRIL 2018 TCE CONCENTRATION MAP
SOUTHEASTERN PLUME

Whirlpool Facility - Fort Smith, Arkansas

Figure 3

PROJECT: 1690007742

FILE: L:\Loop Project Files\Whirlpool Fort Smith\Temp Well Installation, M&R\GIS\mxd\2018_GW_TCE Map_Southeast_20180410.mxd



FILE: L:\Loop Project Files\Whirlpool Fort Smith\2018 Semi Annual M&R\mxd\2018 Additional Investigation_SW_20180629.mxd

RAMBOLL

DRAFTED BY: FK | DATE: 06/29/2018

ADDITIONAL INVESTIGATION SOUTHWEST

Whirlpool Facility - Fort Smith, Arkansas

Figure 4

PROJECT: 1690007739

Tables

TABLE 1
INITIAL RESULTS TEMPORARY MONITORING WELLS
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	HP-02	HP-03	HP-04	HP-05	HP-06	HP-07	HP-08
Field Sample ID		HP-02-20180404	HP-03-20180404	HP-04-20180404	HP-05-20180404	HP-06-20180404	HP-07-20180405	HP-08-20180405
Sample Date		4/4/2018	4/4/2018	4/4/2018	4/4/2018	4/4/2018	4/5/2018	4/5/2018
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Screen Interval (ft bgs)		22-26	21-25	20-24	24.5-28.5	22-26	19-23	20-23.5
Volatile Organic Compounds								
Acetone	12000	4.6 J (1.9)	6.1 J (1.9)	6.2 J (1.9)	3.8 J (1.9)	U (1.9)	2.3 J (1.9)	4.5 J (1.9)
Benzene	5	U (0.060)	0.15 J (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)
Bromoform	80	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)	U (0.16)	U (0.16)	U (0.16)
2-Butanone	4900	6.5 J (0.59)	5.1 J (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)
Carbon Disulfide	720	0.15 J (0.12)	0.14 J (0.12)	0.50 J (0.12)	U (0.12)	U (0.12)	0.32 J (0.12)	0.17 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)
Chlorobenzene	100	U (0.21)	0.65 J (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)	0.69 J (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)
Chloroform	80	0.33 J (0.14)	0.57 J (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.14)
Chloromethane	190	0.25 J (0.08)	0.12 J (0.08)	U (0.08)	U (0.08)	0.16 J (0.08)	0.37 J (0.08)	U (0.08)
Dibromochloromethane	80	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)	0.18 J (0.050)	0.67 J (0.050)	U (0.050)	U (0.050)	0.70 J (0.050)	U (0.050)
1,2-Dichloroethane	5	U (0.12)	U (0.12)	1.1 (0.12)	0.68 J (0.12)	0.58 J (0.12)	U (0.12)	U (0.12)
1,1-Dichloroethene	7	U (0.20)	0.42 J (0.20)	0.21 J (0.20)	0.54 J (0.20)	U (0.20)	0.46 J (0.20)	U (0.20)
cis-1,2-Dichloroethene	70	5.9 (0.080)	7.9 (0.080)	2.2 (0.080)	5.8 (0.080)	2.7 (0.080)	3.2 (0.080)	0.34 J (0.080)
trans-1,2-Dichloroethene	100	0.28 J (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)
Methylene Chloride	5	U (0.15)	0.37 J (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)
Tetrachloroethene	5	U (0.10)	0.15 J (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.10)
Toluene	1000	0.34 J (0.17)	0.30 J (0.17)	1.6 (0.17)	0.48 J (0.17)	0.55 J (0.17)	0.22 J (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)
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)
Trichloroethene	5	**63.4 (0.17)**	**244 (0.85)**	**6.6 (0.17)**	**10.9 (0.17)**	**7.4 (0.17)**	4.6 (0.17)	0.30 J (0.17)
Vinyl Chloride	2	0.16 J (0.13)	0.29 J (0.13)	U (0.13)	U (0.13)	U (0.13)	0.14 J (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

bgs - below ground surface

ft - feet

RAMBOLL

TABLE 1
INITIAL RESULTS TEMPORARY MONITORING WELLS
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	MW-186	TMW-16	TMW-26	TMW-27	TMW-30	TMW-31	TMW-32
Field Sample ID		MW-186-20180402	TMW-16-20180402	TMW-26-20180402	TMW-27-20180402	TMW-30-20180402	TMW-31-20180403	TMW-32-20180403
Sample Date		4/2/2018	4/2/2018	4/2/2018	4/2/2018	4/2/2018	4/3/2018	4/3/2018
Sample Method		Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Screen Interval (ft bgs)		18-28	18-28	18-28	16-26	18.5-28.5	20-24	16.5-26.5
Volatile Organic Compounds								
Acetone	12000	U (1.9)	U (1.9)	U (1.9)	3.9 J (1.9)	U (1.9)	U (9.4)	4.2 J (1.9)
Benzene	5	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.060)	U (0.3)	U (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.19)	U (0.95)	U (0.19)
Bromoform	80	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.070)	U (0.35)	U (0.070)
Bromomethane	7	U (0.16)	U (0.16)	0.48 J (0.16)	U (0.16)	U (0.16)	U (0.80)	U (0.16)
2-Butanone	4900	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (0.59)	U (3.0)	U (0.59)
Carbon Disulfide	720	U (0.12)	U (0.12)	U (0.12)	0.14 J (0.12)	U (0.12)	U (0.60)	U (0.12)
Carbon Tetrachloride	5	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.18)	U (0.90)	U (0.18)
Chlorobenzene	100	U (0.21)	0.22 J (0.21)	U (0.21)	U (0.21)	U (0.21)	U (1.0)	2.3 (0.21)
Chloroethane	12000	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.15)	U (0.75)	U (0.15)
Chloroform	80	U (0.14)	1.6 (0.14)	U (0.14)	U (0.14)	U (0.14)	U (0.70)	U (0.14)
Chloromethane	190	0.094 J (0.08)	U (0.08)	0.33 J (0.08)	U (0.08)	0.12 J (0.08)	U (0.40)	U (0.08)
Dibromochloromethane	80	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (0.21)	U (1.0)	U (0.21)
1,1-Dichloroethane	2.4	1.1 (0.050)	U (0.050)	0.22 J (0.050)	U (0.050)	U (0.050)	U (0.25)	U (0.050)
1,2-Dichloroethane	5	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.12)	U (0.60)	U (0.12)
1,1-Dichloroethene	7	0.54 J (0.20)	1.3 (0.20)	U (0.20)	U (0.20)	U (0.20)	U (1.0)	U (0.20)
cis-1,2-Dichloroethene	70	4.2 (0.080)	11.5 (0.080)	0.98 J (0.080)	U (0.080)	0.49 J (0.080)	U (0.40)	3.3 (0.080)
trans-1,2-Dichloroethene	100	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (1.0)	U (0.20)
4-Methyl-2-pentanone	1000	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (0.42)	U (2.1)	U (0.42)
Methylene Chloride	5	U (0.15)	0.83 J (0.15)	U (0.15)	U (0.15)	U (0.15)	2.7 J (0.75)	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 (0.75)	U (0.15)
Tetrachloroethene	5	U (0.10)	0.40 J (0.10)	U (0.10)	U (0.10)	U (0.10)	U (0.50)	U (0.10)
Toluene	1000	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.17)	U (0.85)	U (0.17)
1,1,1-Trichloroethane	200	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.11)	U (0.55)	U (0.11)
1,1,2-Trichloroethane	5	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (0.20)	U (1.0)	U (0.20)
Trichloroethene	5	**13.1 (0.17)**	**985 (3.4)**	**35.4 (0.17)**	U (0.17)	1.5 (0.17)	U (0.85)	**65.8 (0.17)**
Vinyl Chloride	2	0.22 J (0.13)	0.78 J (0.13)	U (0.13)	U (0.13)	U (0.13)	U (0.65)	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

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µg/L = Micrograms per Liter

bgs - below ground surface

ft - feet

RAMBOLL

TABLE 1
INITIAL RESULTS TEMPORARY MONITORING WELLS
Whirlpool Facility - Fort Smith, Arkansas

Location	Remedial Action Levels per ADEQ RADD Issued Dec 2013	TMW-33	TMW-33-Shallow
Field Sample ID		TMW-33-20180403	TMW-33-Shallow-20180405
Sample Date		4/3/2018	4/5/2018
Sample Method		Low Flow	Low Flow
Screen Interval (ft bgs)		21-25	15-19
Volatile Organic Compounds			
Acetone	12000	4.8 J (1.9)	2.9 J (1.9)
Benzene	5	0.23 J (0.060)	U (0.060)
Bromodichloromethane	80	U (0.19)	U (0.19)
Bromoform	80	U (0.070)	U (0.070)
Bromomethane	7	U (0.16)	U (0.16)
2-Butanone	4900	U (0.59)	U (0.59)
Carbon Disulfide	720	U (0.12)	0.17 J (0.12)
Carbon Tetrachloride	5	U (0.18)	U (0.18)
Chlorobenzene	100	U (0.21)	0.45 J (0.21)
Chloroethane	12000	U (0.15)	U (0.15)
Chloroform	80	0.29 J (0.14)	0.34 J (0.14)
Chloromethane	190	U (0.08)	0.19 J (0.08)
Dibromochloromethane	80	U (0.21)	U (0.21)
1,1-Dichloroethane	2.4	U (0.050)	U (0.050)
1,2-Dichloroethane	5	U (0.12)	0.15 J (0.12)
1,1-Dichloroethene	7	0.26 J (0.20)	0.60 J (0.20)
cis-1,2-Dichloroethene	70	2.3 (0.080)	3.0 (0.080)
trans-1,2-Dichloroethene	100	U (0.20)	U (0.20)
4-Methyl-2-pentanone	1000	U (0.42)	U (0.42)
Methylene Chloride	5	0.28 J (0.15)	U (0.15)
1,1,2,2-Tetrachloroethane	0.066	U (0.15)	U (0.15)
Tetrachloroethene	5	U (0.10)	U (0.10)
Toluene	1000	0.29 J (0.17)	0.27 J (0.17)
1,1,1-Trichloroethane	200	U (0.11)	U (0.11)
1,1,2-Trichloroethane	5	U (0.20)	U (0.20)
Trichloroethene	5	**55.8 (0.17)**	**156 (0.17)**
Vinyl Chloride	2	0.17 J (0.13)	0.26 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

bgs - below ground surface

ft - feet

RAMBOLL

Appendix A

Temporary Monitoring Well Boring Logs

RAMBOLL

1807 Park 270 Drive Suite 450, St. Louis, MO 63146

Site ID: TMW-32	Date(s): **4/3/2018**
Location: **Fort Smith, Arkansas**	
Logged By: **J. Pavlowsky**	Checked By: **N. Zurweller, RG**
Contractor: **McCray Drilling, LLC**	Purpose: **Temporary Monitoring Well**
Drilling Method: **Hollow Stem Auger/Direct Push**	GS Elevation: **467.07 ft amsl** / TOC Elevation: **466.90 ft amsl**
Sampling Method: **Direct Push**	North: **367786.67** / East: **590047.76**
Well Construction:	Borehole Dia.: **8.25 inches** / Total Depth: **26.5 feet**
Project Number: **1690007742**	
Project Name: **Whirlpool Corporation**	
Remarks: **TOC elevation based on field measurements made from known survey point.**	

Well Construction:

Blank Casing:	Sch. 40 PVC 2 Inch	0 FT to 16.5 FT
Screen:	Sch. 40 2 Inch 0.010 PVC	16.5 FT to 26.5 FT
Annular Fill:	Cement Grout	0 FT to 12.5 FT
	Bentonite	12.5 FT to 14.5 FT
	Sand	14.5 FT to 26.5 FT

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample No.	PID (ppm)	USCS Code	Material Description
				9.4		Topsoil
465		2		12.8	CL	Silty Clay, brown, with sand, trace black nodules, plastic, soft, moist
	5	3		19.8		Silty Clay, brownish gray, with orange mottling, with black nodules, plastic, soft, moist
460				15.4		Silty Clay, light brown, with gray mottling, plastic, very soft, cohesive, moist
	10	4		15.8		Silty Clay, orange, with gray mottling, trace black nodules, slightly plastic, stiff, slightly moist
455				18.8		
		4		19.9		
	15			22.6	SC	Clayey Sand, gray, with orange, very fine, slightly plastic, soft, cohesive, moist
450		4		25.8		
				20.2	CL	Sandy Clay, orange, with gray mottling, very fine, plastic, stiff, moist
	20			17.1	GC	Clayey Gravel, orange brown, with sand, fine to coarse, gravel, fine to coarse, subrounded to subangular, crumbles, moist
445		4	TMW-32-SL(23-24FT)-040318	19.4	SW	Gravelly Sand, dark orange, trace clay, sand, medium to coarse, gravel, fine to coarse, subrounded to subangular, wet
	25	2.5		16.5		Gravelly Sand as above, with increasing gravel
				8.4	CL	Silty Clay (weathered shale), very stiff, laminated, dry
440						Shale, dark gray, hard, laminated, dry

Water Level ▼

Well Construction — Flush Mount

1 pipe, in bentonite/cement (volclay/enviroplug)

1 pipe, in bentonite pellets

1 pipe, in filter sand

1 pipe, slotted

▼ Static groundwater

Report: WELL_LOG_REV_MKE; File: WHIRLPOOL_LOGS (JH_EDITS).GPJ; 4/24/18

RAMBOLL

1807 Park 270 Drive Suite 450, St. Louis, MO 63146

Site ID:	TMW-33	Date(s):	**4/5/2018**
Location:	**Fort Smith, Arkansas**		
Logged By:	**J. Pavlowsky**		
Consulting Firm:	**Ramboll**	Checked By:	**N. Zurweller, RG**
Contractor:	**McCray Drilling, LLC**	Purpose:	**Screen Point Sampler**
Drilling Method:	**Hollow Stem Auger/Direct Push**	Datum: **NAVD88**	Elevation: **466.45 ft amsl**
Sampling Method:	**Direct Push**	North: **367733.45**	East: **590044.20**
Remarks:	**Geoprobe SP-16 used to collect groundwater samples at two intervals: 15 to 19 feet and 21 to 25 feet**	Borehole Dia.: **2.25 inches**	Total Depth: **25.0 feet**
		Project Number:	**1690007742**
		Project Name:	**Whirlpool Corporation**

Elevation (ft)	Depth (ft)	Recovery (feet)	Sample ID.	PID (ppm)	USCS Code	Material Description
465		1		2.5	ML	Sandy Silt, light brown, with gray, with sand, fine, soft, crumbles, slightly moist
	5			4.7	CL	Gravelly Clay, blackish brown and orange, gravel, fine to coarse, rounded to subangular, stiff, moist
460		4		6.2	CL	Silty Clay, orange, with gray mottling, with black nodules, plastic, stiff, slightly moist
	10	4		5.1		
455		4		1.8		
	15			5.8		Silty Clay, orange, with gray mottling and banding, with sand, very fine, trace black nodules, soft, moist, wet in sandy bands
450		4		6.4	SP	Sand, gray, trace clay, very fine, soft, slightly cohesive, wet
	20			8.3		Sand, gray, with clay, very fine, plastic, cohesive, moist, increasing silty clay with depth
445		4	TMW-33-SL (23-24 FT)-082917	5.5	GC	Sandy Gravel, orange brown, with clay, sand, fine to coarse, gravel, fine to coarse, crumbles, moist
				8.5	SP	Sand, orange tan, with gravel, trace clay, soft, wet
	25	1		6.7	GC	Sandy Gravel, orange brown, with clay, sand, fine to coarse, gravel, fine to coarse, wet
440				6.4		Shale, dark gray, hard, laminated, dry

Report: SOIL_LOG_REV_1_MKE2; File: WHIRLPOOL_LOGS (JH_EDITS).GPJ; 6/25/18

Appendix B

Figure 2A
2017 Semi-Annual Sampling TCE Isoconcentration Map Northern and Northeastern Plumes

Figure 2B
2017 Semi-Annual Sampling TCE Isoconcentration Map Southern Plume



RAMBOLL

DRAFTED BY: FK/WZ | DATE: 05/29/2018

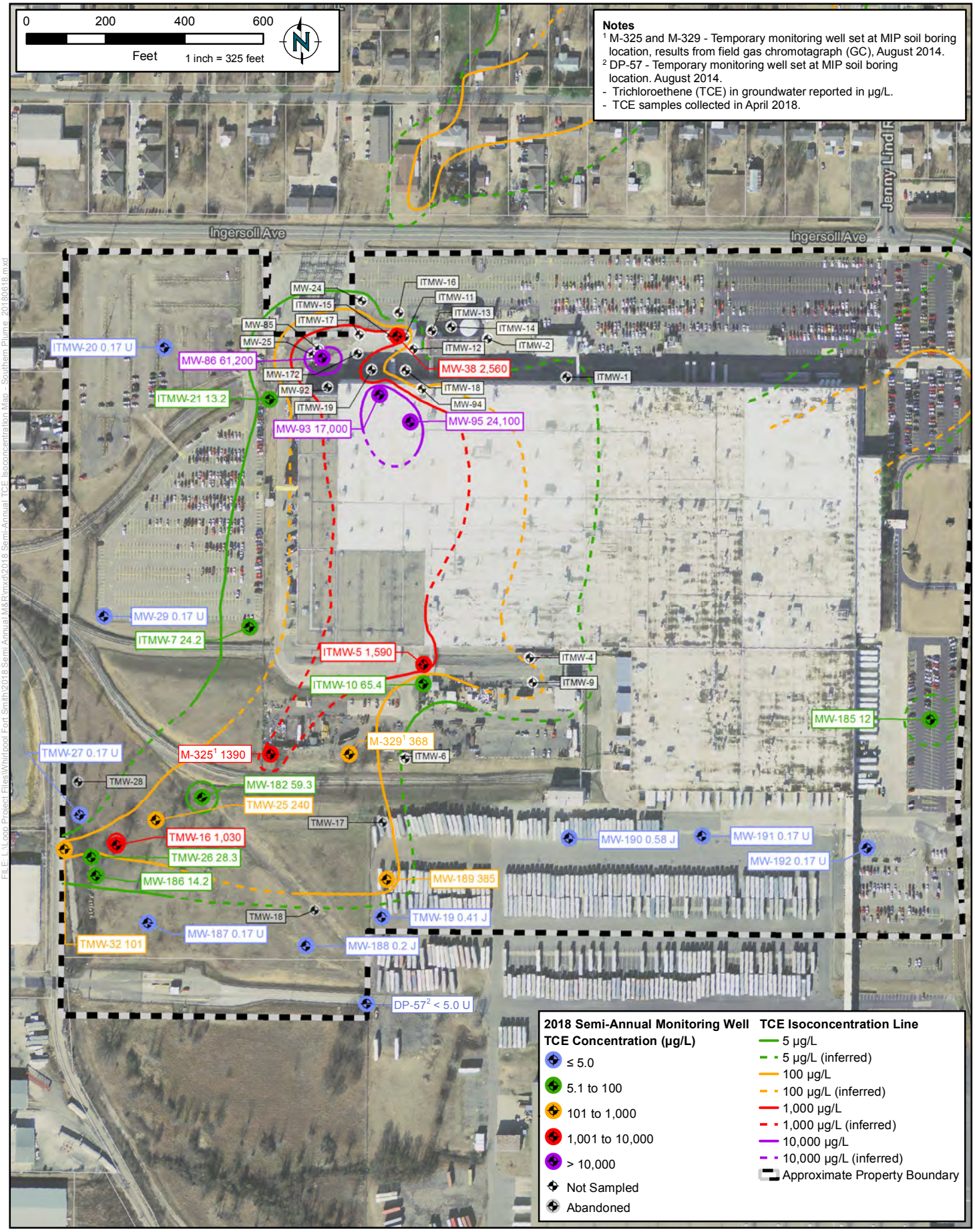
2018 SEMI-ANNUAL TCE ISOCONCENTRATION MAP NORTHERN AND NORTHEASTERN PLUMES

Whirlpool Facility - Fort Smith, Arkansas

Figure 2A

PROJECT: 1690007739

FILE: \\environcorp.int\dfs-shares\NCSA\Chicago Loop\Loop Data (L)\Loop Project Files\Whirlpool Fort Smith\2018 Semi Annual M&R\mxd\2018 Semi-Annual TCE Isoconcentration Map - N and NE Plume_20180530.mxd



RAMBOLL

DRAFTED BY: FK/WZ | DATE: 06/18/2018

2018 SEMI-ANNUAL TCE ISOCONCENTRATION MAP SOUTHERN PLUME

Whirlpool Facility - Fort Smith, Arkansas

Figure 2B

PROJECT: 1690007739

Appendix C

Laboratory Analytical Reports

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

SITE LOGIC Report

Abiotic Potential

Contact: Nick Zurweller

Phone: 314-590-2977

Address: Ramboll Environ - St. Louis, MO
1807 Park 270 Drive, Suite 450
St. Louis, MO 63146

Email: nzurweller@ramboll.com

MI Identifier: 016PD

Report Date: 4-10-2018

Project Name:

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-32-SL(23-24FT)-040318	TMW-33-SL(23-24FT)-040518
Date Sampled	04/03/2018	04/05/2018
Magnetic Susceptibility Analysis		
Magnetic Susceptibility (m3/kg)	7.8E-8 ± 4.3E-9	7.9E-8 ± 3.7E-9

* 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.

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

April 19, 2018

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

RE: Project: FORT SMITH, AR
Pace Project No.: 60267577

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on April 06, 2018. 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: Kristen Drucquer, Ramboll
Tamara House-Knight, Ramboll Environ
M. Wilson

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

SAMPLE SUMMARY

Project: FORT SMITH, AR
Pace Project No.: 60267577

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60267577001	**TMW-32-SL(23-24FT)-040318**	Solid	04/03/18 11:15	04/06/18 06:30
60267577002	**TMW-33-SL(23-24FT)-040318**	Solid	04/03/18 11:15	04/06/18 06:30

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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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Pace Analytical®
www.pacelabs.com

Sample Condition Upon Receipt

WO# : 60267577

60267577

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: 166 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 4.6 **Corr. Factor** +0.2 **Corrected** 4.8

Date and initials of person examining contents: CJ 4/6/18

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: 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	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: 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	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State: AR	☐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.

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:	Standard

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. Capital Avenue
Pace Quote Reference:	Little Rock, AR 72201
Pace Project Manager:	Richard Mannz
Pace Profile #:	7444

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	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Analysis Test: TOC 9060A	CO2 Calc (Alkalinity +pH)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TMW-32-SL(23-24FT)-040318	SL	G			4/3/18	1115		1	X								X	X			WEKW 60567577 001
2	TMW-33-SL(23-24FT)-040518	SL	G			4/5/18	1115		1	X								X	X			002
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

Requested Analysis Filtered (Y/N)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Level IV data package required	Ramboll	4/5/18	1800	PACE	4/6/18	0830	4.8	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nick Zurmeller

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 4/5/18

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.

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: 490-149734-1
Client Project/Site: Fort Smith, AR

For:
Pace Analytical Services, LLC
9608 Loiret Boulevard
Lenexa, Kansas 66219

Attn: Richard Mannz

Roxanne Cisneros

Authorized for release by:
4/19/2018 10:42:21 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary 3
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QC Association 9
Chronicle 10
Method Summary 11
Certification Summary 12
Chain of Custody 13

Sample Summary

Client: Pace Analytical Services, LLC
Project/Site: Fort Smith, AR

TestAmerica Job ID: 490-149734-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-149734-1	TMW-32-SL(23-24FT)-040318	Solid	04/03/18 11:15	04/10/18 09:20
490-149734-2	TMW-33-SL(23-24FT)-040318	Solid	04/03/18 11:15	04/10/18 09:20

Case Narrative

Client: Pace Analytical Services, LLC
Project/Site: Fort Smith, AR

TestAmerica Job ID: 490-149734-1

Job ID: 490-149734-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-149734-1

Comments
No additional comments.

Receipt
The samples were received on 4/10/2018 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.6º C.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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: Fort Smith, AR

TestAmerica Job ID: 490-149734-1

Client Sample ID: TMW-32-SL(23-24FT)-040318
Date Collected: 04/03/18 11:15
Date Received: 04/10/18 09:20

Lab Sample ID: 490-149734-1
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1000	600	mg/Kg			04/18/18 09:34	1

Client: Pace Analytical Services, LLC
Project/Site: Fort Smith, AR

TestAmerica Job ID: 490-149734-1

Client Sample ID: TMW-33-SL(23-24FT)-040318
Date Collected: 04/03/18 11:15
Date Received: 04/10/18 09:20

Lab Sample ID: 490-149734-2
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1000	600	mg/Kg			04/18/18 09:34	1

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 490-508517/3
Matrix: Solid
Analysis Batch: 508517

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			04/16/18 09:38	1

Lab Sample ID: LCS 490-508517/2
Matrix: Solid
Analysis Batch: 508517

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	31520		mg/Kg		105	80 - 120		

Lab Sample ID: 500-142986-A-27 DU
Matrix: Solid
Analysis Batch: 508517

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	50500			51100		mg/Kg				1	20

QC Association Summary

Client: Pace Analytical Services, LLC
Project/Site: Fort Smith, AR

TestAmerica Job ID: 490-149734-1

General Chemistry

Analysis Batch: 508517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-149734-1	TMW-32-SL(23-24FT)-040318	Total/NA	Solid	9060A	
490-149734-2	TMW-33-SL(23-24FT)-040318	Total/NA	Solid	9060A	
MB 490-508517/3	Method Blank	Total/NA	Solid	9060A	
LCS 490-508517/2	Lab Control Sample	Total/NA	Solid	9060A	
500-142986-A-27 DU	Duplicate	Total/NA	Solid	9060A	

Lab Chronicle

Client: Pace Analytical Services, LLC
Project/Site: Fort Smith, AR

TestAmerica Job ID: 490-149734-1

Client Sample ID: TMW-32-SL(23-24FT)-040318

Lab Sample ID: 490-149734-1

Date Collected: 04/03/18 11:15

Matrix: Solid

Date Received: 04/10/18 09:20

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			508517	04/18/18 09:34	CLJ	TAL NSH

Client Sample ID: TMW-33-SL(23-24FT)-040318

Lab Sample ID: 490-149734-2

Date Collected: 04/03/18 11:15

Matrix: Solid

Date Received: 04/10/18 09:20

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			508517	04/18/18 09:34	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: Fort Smith, AR

TestAmerica Job ID: 490-149734-1

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: Fort Smith, AR

TestAmerica Job ID: 490-149734-1

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	10-31-18

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

COOLER RECEIPT FORM

490-149734 Chain of Custody

Cooler Received/Opened On 4/10/2018 @ 0920

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 0840 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID _____160406069_____ pH Strip Lot_____ Chlorine Strip Lot_____

2. Temperature of rep. sample or temp blank when opened: 2.6 *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: 1 (Front)

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) 2.2

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 # NA

I certify that I unloaded the cooler and answered questions 7-14 (intial) EA

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) EA

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) EA

I certify that I attached a label with the unique LIMS number to each container (intial) EA

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: 60267577 **Workorder Name:** FORT SMITH, AR **Results Requested By:** 4/20/2018

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 State of Sample Origin:	Test America Nashville 2960 Foster Creighton Drive Nashville, TN 37204 (615)726-0177 Attention: Sample receiving PM: Roxanne Cisneros	P.O._____

Requested Analysis

Loc: 490
149734

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	TOC 9060A	LAB USE ONLY
1	TMW-32-SL(23-24FT)-040318	4/3/2018 11:15	60267577001	Solid		X	
2	TMW-33-SL(23-24FT)-040318	4/3/2018 11:15	60267577002	Solid		X	
3							
4							
5							

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	E Brockett / Pasi	4/9/18 1629	[signature] TA-NAS	4-10-18 920	2.6
2					
3					

Cooler Temperature on Receipt ____ °C | Custody Seal Y or N | Received on Ice Y or N | Samples Intact Y or N

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

April 03, 2018

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

RE: Project: FORT SMITH, AR
Pace Project No.: 60267227

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on April 03, 2018. 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: Kristen Drucquer, Ramboll
Tamara House-Knight, Ramboll Environ
M. Wilson

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CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60267227

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.: 60267227

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60267227001	**MW-186-20180402**	Water	04/02/18 13:20	04/03/18 06:05
60267227002	**DUP-01-20180402**	Water	04/02/18 13:20	04/03/18 06:05
60267227003	**TMW-30-20180402**	Water	04/02/18 14:50	04/03/18 06:05
60267227004	**TMW-27-20180402**	Water	04/02/18 13:15	04/03/18 06:05
60267227005	**TMW-26-20180402**	Water	04/02/18 14:25	04/03/18 06:05
60267227006	**TMW-16-20180402**	Water	04/02/18 16:45	04/03/18 06:05
60267227007	**EB-01-20180402**	Water	04/02/18 17:30	04/03/18 06:05
60267227008	**TB-01-20180402**	Water	04/02/18 13:15	04/03/18 06:05

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60267227

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60267227001	**MW-186-20180402**	EPA 5030B/8260	PGH	38	PASI-K
60267227002	**DUP-01-20180402**	EPA 5030B/8260	PGH	38	PASI-K
60267227003	**TMW-30-20180402**	EPA 5030B/8260	PGH	38	PASI-K
60267227004	**TMW-27-20180402**	EPA 5030B/8260	PGH	38	PASI-K
60267227005	**TMW-26-20180402**	EPA 5030B/8260	PGH	38	PASI-K
60267227006	**TMW-16-20180402**	EPA 5030B/8260	PGH	38	PASI-K
60267227007	**EB-01-20180402**	EPA 5030B/8260	PGH	38	PASI-K
60267227008	**TB-01-20180402**	EPA 5030B/8260	PGH	38	PASI-K

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60267227

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 03, 2018

General Information:
8 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: 520221

B: Analyte was detected in the associated method blank.

- BLANK for HBN 520221 [MSV/8844 (Lab ID: 2129143)
  - Chloromethane
  - Methylene chloride

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: 520221

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, AR
Pace Project No.: 60267227

Sample: MW-186-20180402 **Lab ID: 60267227001** Collected: 04/02/18 13:20 Received: 04/03/18 06:05 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		04/03/18 11:26	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/03/18 11:26	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/03/18 11:26	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/03/18 11:26	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/03/18 11:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/03/18 11:26	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/03/18 11:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/03/18 11:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/03/18 11:26	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/03/18 11:26	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/03/18 11:26	67-66-3	
Chloromethane	**0.094J**	ug/L	1.0	0.080	1		04/03/18 11:26	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/03/18 11:26	124-48-1	
1,1-Dichloroethane	**1.1**	ug/L	1.0	0.050	1		04/03/18 11:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/03/18 11:26	107-06-2	
1,1-Dichloroethene	**0.54J**	ug/L	1.0	0.20	1		04/03/18 11:26	75-35-4	
cis-1,2-Dichloroethene	**4.2**	ug/L	1.0	0.080	1		04/03/18 11:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 11:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/03/18 11:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/03/18 11:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/03/18 11:26	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/03/18 11:26	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/03/18 11:26	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/03/18 11:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/03/18 11:26	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/03/18 11:26	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/03/18 11:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/03/18 11:26	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/03/18 11:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/03/18 11:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/03/18 11:26	79-00-5	
Trichloroethene	**13.1**	ug/L	1.0	0.17	1		04/03/18 11:26	79-01-6	
Vinyl chloride	**0.22J**	ug/L	1.0	0.13	1		04/03/18 11:26	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/03/18 11:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-119		1		04/03/18 11:26	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	80-117		1		04/03/18 11:26	17060-07-0	
Toluene-d8 (S)	96	%	80-115		1		04/03/18 11:26	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/03/18 11:26		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267227

Sample: DUP-01-20180402 **Lab ID: 60267227002** Collected: 04/02/18 13:20 Received: 04/03/18 06:05 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		04/03/18 12:08	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/03/18 12:08	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/03/18 12:08	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/03/18 12:08	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/03/18 12:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/03/18 12:08	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/03/18 12:08	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/03/18 12:08	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/03/18 12:08	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/03/18 12:08	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/03/18 12:08	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/03/18 12:08	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/03/18 12:08	124-48-1	
1,1-Dichloroethane	**1.2**	ug/L	1.0	0.050	1		04/03/18 12:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/03/18 12:08	107-06-2	
1,1-Dichloroethene	**0.52J**	ug/L	1.0	0.20	1		04/03/18 12:08	75-35-4	
cis-1,2-Dichloroethene	**4.7**	ug/L	1.0	0.080	1		04/03/18 12:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 12:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/03/18 12:08	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/03/18 12:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/03/18 12:08	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/03/18 12:08	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/03/18 12:08	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/03/18 12:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/03/18 12:08	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/03/18 12:08	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/03/18 12:08	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/03/18 12:08	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/03/18 12:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/03/18 12:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/03/18 12:08	79-00-5	
Trichloroethene	**12.9**	ug/L	1.0	0.17	1		04/03/18 12:08	79-01-6	
Vinyl chloride	**0.21J**	ug/L	1.0	0.13	1		04/03/18 12:08	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/03/18 12:08	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/03/18 12:08	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	80-117		1		04/03/18 12:08	17060-07-0	
Toluene-d8 (S)	103	%	80-115		1		04/03/18 12:08	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/03/18 12:08		

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267227

Sample: TMW-30-20180402 **Lab ID: 60267227003** Collected: 04/02/18 14:50 Received: 04/03/18 06:05 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		04/03/18 11:40	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/03/18 11:40	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/03/18 11:40	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/03/18 11:40	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/03/18 11:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/03/18 11:40	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/03/18 11:40	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/03/18 11:40	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/03/18 11:40	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/03/18 11:40	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/03/18 11:40	67-66-3	
Chloromethane	**0.12J**	ug/L	1.0	0.080	1		04/03/18 11:40	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/03/18 11:40	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/03/18 11:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/03/18 11:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 11:40	75-35-4	
cis-1,2-Dichloroethene	**0.49J**	ug/L	1.0	0.080	1		04/03/18 11:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 11:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/03/18 11:40	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/03/18 11:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/03/18 11:40	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/03/18 11:40	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/03/18 11:40	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/03/18 11:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/03/18 11:40	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/03/18 11:40	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/03/18 11:40	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/03/18 11:40	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/03/18 11:40	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/03/18 11:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/03/18 11:40	79-00-5	
Trichloroethene	**1.5**	ug/L	1.0	0.17	1		04/03/18 11:40	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/03/18 11:40	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/03/18 11:40	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-119		1		04/03/18 11:40	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/03/18 11:40	17060-07-0	
Toluene-d8 (S)	97	%	80-115		1		04/03/18 11:40	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/03/18 11:40		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267227

Sample: TMW-27-20180402 **Lab ID: 60267227004** Collected: 04/02/18 13:15 Received: 04/03/18 06:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**3.9J**	ug/L	10.0	1.9	1		04/03/18 11:54	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/03/18 11:54	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/03/18 11:54	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/03/18 11:54	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/03/18 11:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/03/18 11:54	78-93-3	
Carbon disulfide	**0.14J**	ug/L	5.0	0.12	1		04/03/18 11:54	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/03/18 11:54	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/03/18 11:54	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/03/18 11:54	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/03/18 11:54	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/03/18 11:54	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/03/18 11:54	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/03/18 11:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/03/18 11:54	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 11:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/03/18 11:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 11:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/03/18 11:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/03/18 11:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/03/18 11:54	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/03/18 11:54	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/03/18 11:54	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/03/18 11:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/03/18 11:54	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/03/18 11:54	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/03/18 11:54	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/03/18 11:54	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/03/18 11:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/03/18 11:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/03/18 11:54	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/03/18 11:54	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/03/18 11:54	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/03/18 11:54	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	80-119		1		04/03/18 11:54	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	80-117		1		04/03/18 11:54	17060-07-0	
Toluene-d8 (S)	95	%	80-115		1		04/03/18 11:54	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/03/18 11:54		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267227

Sample: TMW-26-20180402 **Lab ID: 60267227005** Collected: 04/02/18 14:25 Received: 04/03/18 06:05 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		04/03/18 12:22	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/03/18 12:22	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/03/18 12:22	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/03/18 12:22	75-25-2	
Bromomethane	**0.48J**	ug/L	5.0	0.16	1		04/03/18 12:22	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/03/18 12:22	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/03/18 12:22	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/03/18 12:22	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/03/18 12:22	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/03/18 12:22	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/03/18 12:22	67-66-3	
Chloromethane	**0.33J**	ug/L	1.0	0.080	1		04/03/18 12:22	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/03/18 12:22	124-48-1	
1,1-Dichloroethane	**0.22J**	ug/L	1.0	0.050	1		04/03/18 12:22	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/03/18 12:22	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 12:22	75-35-4	
cis-1,2-Dichloroethene	**0.98J**	ug/L	1.0	0.080	1		04/03/18 12:22	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 12:22	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/03/18 12:22	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/03/18 12:22	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/03/18 12:22	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/03/18 12:22	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/03/18 12:22	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/03/18 12:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/03/18 12:22	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/03/18 12:22	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/03/18 12:22	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/03/18 12:22	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/03/18 12:22	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/03/18 12:22	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/03/18 12:22	79-00-5	
Trichloroethene	**35.4**	ug/L	1.0	0.17	1		04/03/18 12:22	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/03/18 12:22	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/03/18 12:22	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/03/18 12:22	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	80-117		1		04/03/18 12:22	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/03/18 12:22	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/03/18 12:22		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267227

Sample: TMW-16-20180402 **Lab ID: 60267227006** Collected: 04/02/18 16:45 Received: 04/03/18 06:05 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		04/03/18 12:36	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/03/18 12:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/03/18 12:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/03/18 12:36	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/03/18 12:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/03/18 12:36	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/03/18 12:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/03/18 12:36	56-23-5	
Chlorobenzene	**0.22J**	ug/L	1.0	0.21	1		04/03/18 12:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/03/18 12:36	75-00-3	
Chloroform	**1.6**	ug/L	1.0	0.14	1		04/03/18 12:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/03/18 12:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/03/18 12:36	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/03/18 12:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/03/18 12:36	107-06-2	
1,1-Dichloroethene	**1.3**	ug/L	1.0	0.20	1		04/03/18 12:36	75-35-4	
cis-1,2-Dichloroethene	**11.5**	ug/L	1.0	0.080	1		04/03/18 12:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 12:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/03/18 12:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/03/18 12:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/03/18 12:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/03/18 12:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/03/18 12:36	591-78-6	
Methylene chloride	**0.83J**	ug/L	1.0	0.15	1		04/03/18 12:36	75-09-2	B
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/03/18 12:36	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/03/18 12:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/03/18 12:36	79-34-5	
Tetrachloroethene	**0.40J**	ug/L	1.0	0.10	1		04/03/18 12:36	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/03/18 12:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/03/18 12:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/03/18 12:36	79-00-5	
Trichloroethene	**985**	ug/L	20.0	3.4	20		04/03/18 13:31	79-01-6	
Vinyl chloride	**0.78J**	ug/L	1.0	0.13	1		04/03/18 12:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/03/18 12:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/03/18 12:36	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-117		1		04/03/18 12:36	17060-07-0	
Toluene-d8 (S)	94	%	80-115		1		04/03/18 12:36	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/03/18 12:36		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267227

Sample: EB-01-20180402 **Lab ID: 60267227007** Collected: 04/02/18 17:30 Received: 04/03/18 06:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**5.2J**	ug/L	10.0	1.9	1		04/03/18 11:12	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/03/18 11:12	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/03/18 11:12	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/03/18 11:12	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/03/18 11:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/03/18 11:12	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/03/18 11:12	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/03/18 11:12	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/03/18 11:12	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/03/18 11:12	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/03/18 11:12	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/03/18 11:12	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/03/18 11:12	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/03/18 11:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/03/18 11:12	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 11:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/03/18 11:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 11:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/03/18 11:12	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/03/18 11:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/03/18 11:12	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/03/18 11:12	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/03/18 11:12	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/03/18 11:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/03/18 11:12	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/03/18 11:12	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/03/18 11:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/03/18 11:12	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/03/18 11:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/03/18 11:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/03/18 11:12	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/03/18 11:12	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/03/18 11:12	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/03/18 11:12	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/03/18 11:12	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-117		1		04/03/18 11:12	17060-07-0	
Toluene-d8 (S)	99	%	80-115		1		04/03/18 11:12	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/03/18 11:12		

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267227

Sample: TB-01-20180402 **Lab ID: 60267227008** Collected: 04/02/18 13:15 Received: 04/03/18 06:05 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		04/03/18 10:59	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/03/18 10:59	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/03/18 10:59	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/03/18 10:59	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/03/18 10:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/03/18 10:59	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/03/18 10:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/03/18 10:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/03/18 10:59	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/03/18 10:59	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/03/18 10:59	67-66-3	
Chloromethane	**0.098J**	ug/L	1.0	0.080	1		04/03/18 10:59	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/03/18 10:59	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/03/18 10:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/03/18 10:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 10:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/03/18 10:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/03/18 10:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/03/18 10:59	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/03/18 10:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/03/18 10:59	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/03/18 10:59	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/03/18 10:59	591-78-6	
Methylene chloride	**0.59J**	ug/L	1.0	0.15	1		04/03/18 10:59	75-09-2	B
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/03/18 10:59	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/03/18 10:59	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/03/18 10:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/03/18 10:59	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/03/18 10:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/03/18 10:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/03/18 10:59	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/03/18 10:59	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/03/18 10:59	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/03/18 10:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-119		1		04/03/18 10:59	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	80-117		1		04/03/18 10:59	17060-07-0	
Toluene-d8 (S)	101	%	80-115		1		04/03/18 10:59	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/03/18 10:59		

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60267227

QC Batch: 520221 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60267227001, 60267227002, 60267227003, 60267227004, 60267227005, 60267227006, 60267227007, 60267227008

METHOD BLANK: 2129143 Matrix: Water
Associated Lab Samples: 60267227001, 60267227002, 60267227003, 60267227004, 60267227005, 60267227006, 60267227007, 60267227008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/03/18 10:45	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/03/18 10:45	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/03/18 10:45	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/03/18 10:45	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/03/18 10:45	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/03/18 10:45	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/03/18 10:45	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/03/18 10:45	
2-Hexanone	ug/L	ND	10.0	1.2	04/03/18 10:45	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/03/18 10:45	
Acetone	ug/L	ND	10.0	1.9	04/03/18 10:45	
Benzene	ug/L	ND	1.0	0.060	04/03/18 10:45	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/03/18 10:45	
Bromoform	ug/L	ND	1.0	0.070	04/03/18 10:45	
Bromomethane	ug/L	ND	5.0	0.16	04/03/18 10:45	
Carbon disulfide	ug/L	ND	5.0	0.12	04/03/18 10:45	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/03/18 10:45	
Chlorobenzene	ug/L	ND	1.0	0.21	04/03/18 10:45	
Chloroethane	ug/L	ND	1.0	0.15	04/03/18 10:45	
Chloroform	ug/L	ND	1.0	0.14	04/03/18 10:45	
Chloromethane	ug/L	0.095J	1.0	0.080	04/03/18 10:45	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/03/18 10:45	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/03/18 10:45	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/03/18 10:45	
Ethylbenzene	ug/L	ND	1.0	0.18	04/03/18 10:45	
Methylene chloride	ug/L	0.57J	1.0	0.15	04/03/18 10:45	
Styrene	ug/L	ND	1.0	0.12	04/03/18 10:45	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/03/18 10:45	
Toluene	ug/L	ND	1.0	0.17	04/03/18 10:45	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/03/18 10:45	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/03/18 10:45	
Trichloroethene	ug/L	ND	1.0	0.17	04/03/18 10:45	
Vinyl chloride	ug/L	ND	1.0	0.13	04/03/18 10:45	
Xylene (Total)	ug/L	ND	3.0	0.42	04/03/18 10:45	
1,2-Dichloroethane-d4 (S)	%	104	80-117		04/03/18 10:45	
4-Bromofluorobenzene (S)	%	95	80-119		04/03/18 10:45	
Toluene-d8 (S)	%	96	80-115		04/03/18 10:45	

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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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60267227

LABORATORY CONTROL SAMPLE: 2129144

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.3	101	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	19.8	99	74-121	
1,1,2-Trichloroethane	ug/L	20	21.0	105	83-119	
1,1-Dichloroethane	ug/L	20	20.0	100	85-128	
1,1-Dichloroethene	ug/L	20	20.6	103	85-123	
1,2-Dichloroethane	ug/L	20	21.8	109	77-120	
1,2-Dichloropropane	ug/L	20	21.5	107	81-126	
2-Butanone (MEK)	ug/L	100	106	106	65-134	
2-Hexanone	ug/L	100	111	111	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	111	111	66-139	
Acetone	ug/L	100	122	122	62-142	
Benzene	ug/L	20	20.0	100	81-118	
Bromodichloromethane	ug/L	20	20.6	103	85-123	
Bromoform	ug/L	20	21.1	106	83-123	
Bromomethane	ug/L	20	18.9	95	39-149	
Carbon disulfide	ug/L	20	20.2	101	85-124	
Carbon tetrachloride	ug/L	20	20.4	102	85-126	
Chlorobenzene	ug/L	20	20.8	104	87-118	
Chloroethane	ug/L	20	15.6	78	73-134	
Chloroform	ug/L	20	21.3	107	85-119	
Chloromethane	ug/L	20	19.4	97	20-174	
cis-1,2-Dichloroethene	ug/L	20	19.5	98	84-121	
cis-1,3-Dichloropropene	ug/L	20	20.9	105	80-124	
Dibromochloromethane	ug/L	20	20.1	101	83-122	
Ethylbenzene	ug/L	20	20.2	101	80-118	
Methylene chloride	ug/L	20	20.8	104	81-126	
Styrene	ug/L	20	21.0	105	85-120	
Tetrachloroethene	ug/L	20	19.9	99	87-120	
Toluene	ug/L	20	19.9	100	82-118	
trans-1,2-Dichloroethene	ug/L	20	19.9	99	83-121	
trans-1,3-Dichloropropene	ug/L	20	21.0	105	80-122	
Trichloroethene	ug/L	20	20.7	104	82-120	
Vinyl chloride	ug/L	20	19.9	99	74-147	
Xylene (Total)	ug/L	60	60.3	100	81-120	
1,2-Dichloroethane-d4 (S)	%			106	80-117	
4-Bromofluorobenzene (S)	%			95	80-119	
Toluene-d8 (S)	%			98	80-115	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60267227

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: 520221

[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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60267227

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60267227001	**MW-186-20180402**	EPA 5030B/8260	520221		
60267227002	**DUP-01-20180402**	EPA 5030B/8260	520221		
60267227003	**TMW-30-20180402**	EPA 5030B/8260	520221		
60267227004	**TMW-27-20180402**	EPA 5030B/8260	520221		
60267227005	**TMW-26-20180402**	EPA 5030B/8260	520221		
60267227006	**TMW-16-20180402**	EPA 5030B/8260	520221		
60267227007	**EB-01-20180402**	EPA 5030B/8260	520221		
60267227008	**TB-01-20180402**	EPA 5030B/8260	520221		

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Sample Condition Upon Receipt

WO# : 60267227

60267227

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: 266 **Type of Ice:** ~~Wet~~ Blue None

Cooler Temperature (°C): **As-read** 2.4 **Corr. Factor** +0.2 **Corrected** 2.6

Date and initials of person examining contents: 4/3/18

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	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: 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	
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
Address:	7500 College Blvd., Ste. 925
	Overland Park, KS 66210
Email To:	THouseKnight@ramboll.com
Phone: 913-553-5926	Fax:
Requested Due Date/TAT:	same day ~~24 hr TAT~~

Section B — Required Project Information:

Report To:	Tamara House-Knight
Copy To:	nzurweller@ramboll.com; mwilson@ramboll.com
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:	Richard Mannz
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 GRAB/COMPOSITE START DATE	COLLECTED GRAB/COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test: 8260 VOCs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~MW~~-18e-20180402	WT	G	4-2-18	1320				3				X				X		60267227
2	~~MW~~ DUP-01-20180402				1320				3				X				X		3(X,AH)
3	MW-30-20180402				1450				3				X				X		
4	MW-27-20180402				1315				3				X				X		
5	MW-26-20180402				1425				3				X				X		
6	MW-11e-20180402				1645				3				X				X		
7	EB-01-20180402				1730				3				X				X		
8	TB-01-20180402								2				X				X		2(X,AH)
9																			
10																			
11																			
12																			

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)
same day TAT	Jo Pavlowsky/Ramboll	4/2/18	6:00pm	/PACE	04/03/18	0605	2.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Johanna Pavlowsky

SIGNATURE of SAMPLER: Johanna Pavlowsky DATE Signed (MM/DD/YY): 04/02/18

*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

April 04, 2018

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

RE: Project: FORT SMITH, AR
Pace Project No.: 60267331

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on April 04, 2018. 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: Kristen Drucquer, Ramboll
Tamara House-Knight, Ramboll Environ
M. Wilson

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CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60267331

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.: 60267331

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60267331001	**TMW-32-20180403**	Water	04/03/18 16:45	04/04/18 06:30
60267331002	**TMW-33-20180403**	Water	04/03/18 16:10	04/04/18 06:30
60267331003	**TMW-31-20180403**	Water	04/03/18 17:20	04/04/18 06:30
60267331004	**TB-02-20180403**	Water	04/03/18 17:50	04/04/18 06:30

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60267331

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60267331001	**TMW-32-20180403**	EPA 5030B/8260	PGH	38	PASI-K
60267331002	**TMW-33-20180403**	EPA 5030B/8260	PGH	38	PASI-K
60267331003	**TMW-31-20180403**	EPA 5030B/8260	PGH	38	PASI-K
60267331004	**TB-02-20180403**	EPA 5030B/8260	PGH	38	PASI-K

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60267331

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 04, 2018

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.

QC Batch: 520438

B: Analyte was detected in the associated method blank.
- BLANK for HBN 520438 [MSV/8848 (Lab ID: 2130115)
  - Chloromethane

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: 520438

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

Additional Comments:

Analyte Comments:

QC Batch: 520438

1e: Sample was diluted due to the presence of high levels of sediment in the vials.
- TMW-31-20180403 (Lab ID: 60267331003)
  - 4-Bromofluorobenzene (S)

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60267331

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 04, 2018

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.: 60267331

Sample: TMW-32-20180403 **Lab ID: 60267331001** Collected: 04/03/18 16:45 Received: 04/04/18 06:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**4.2J**	ug/L	10.0	1.9	1		04/04/18 11:38	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/04/18 11:38	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/04/18 11:38	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/04/18 11:38	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/04/18 11:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/04/18 11:38	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/04/18 11:38	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/04/18 11:38	56-23-5	
Chlorobenzene	**2.3**	ug/L	1.0	0.21	1		04/04/18 11:38	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/04/18 11:38	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/04/18 11:38	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/04/18 11:38	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/04/18 11:38	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/04/18 11:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/04/18 11:38	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/04/18 11:38	75-35-4	
cis-1,2-Dichloroethene	**3.3**	ug/L	1.0	0.080	1		04/04/18 11:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/04/18 11:38	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/04/18 11:38	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/04/18 11:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/04/18 11:38	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/04/18 11:38	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/04/18 11:38	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/04/18 11:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/04/18 11:38	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/04/18 11:38	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/04/18 11:38	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/04/18 11:38	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/04/18 11:38	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/04/18 11:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/04/18 11:38	79-00-5	
Trichloroethene	**65.8**	ug/L	1.0	0.17	1		04/04/18 11:38	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/04/18 11:38	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/04/18 11:38	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/04/18 11:38	460-00-4	
1,2-Dichloroethane-d4 (S)	114	%	80-117		1		04/04/18 11:38	17060-07-0	
Toluene-d8 (S)	94	%	80-115		1		04/04/18 11:38	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/04/18 11:38		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267331

Sample: TMW-33-20180403 **Lab ID: 60267331002** Collected: 04/03/18 16:10 Received: 04/04/18 06:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**4.8J**	ug/L	10.0	1.9	1		04/04/18 11:52	67-64-1	
Benzene	**0.23J**	ug/L	1.0	0.060	1		04/04/18 11:52	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/04/18 11:52	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/04/18 11:52	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/04/18 11:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/04/18 11:52	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/04/18 11:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/04/18 11:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/04/18 11:52	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/04/18 11:52	75-00-3	
Chloroform	**0.29J**	ug/L	1.0	0.14	1		04/04/18 11:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/04/18 11:52	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/04/18 11:52	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/04/18 11:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/04/18 11:52	107-06-2	
1,1-Dichloroethene	**0.26J**	ug/L	1.0	0.20	1		04/04/18 11:52	75-35-4	
cis-1,2-Dichloroethene	**2.3**	ug/L	1.0	0.080	1		04/04/18 11:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/04/18 11:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/04/18 11:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/04/18 11:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/04/18 11:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/04/18 11:52	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/04/18 11:52	591-78-6	
Methylene chloride	**0.28J**	ug/L	1.0	0.15	1		04/04/18 11:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/04/18 11:52	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/04/18 11:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/04/18 11:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/04/18 11:52	127-18-4	
Toluene	**0.29J**	ug/L	1.0	0.17	1		04/04/18 11:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/04/18 11:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/04/18 11:52	79-00-5	
Trichloroethene	**55.8**	ug/L	1.0	0.17	1		04/04/18 11:52	79-01-6	
Vinyl chloride	**0.17J**	ug/L	1.0	0.13	1		04/04/18 11:52	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/04/18 11:52	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-119		1		04/04/18 11:52	460-00-4	
1,2-Dichloroethane-d4 (S)	114	%	80-117		1		04/04/18 11:52	17060-07-0	
Toluene-d8 (S)	98	%	80-115		1		04/04/18 11:52	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/04/18 11:52		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267331

Sample: TMW-31-20180403 **Lab ID: 60267331003** Collected: 04/03/18 17:20 Received: 04/04/18 06:30 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	50.0	9.4	5		04/04/18 12:06	67-64-1	
Benzene	ND	ug/L	5.0	0.30	5		04/04/18 12:06	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	0.95	5		04/04/18 12:06	75-27-4	
Bromoform	ND	ug/L	5.0	0.35	5		04/04/18 12:06	75-25-2	
Bromomethane	ND	ug/L	25.0	0.80	5		04/04/18 12:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0	3.0	5		04/04/18 12:06	78-93-3	
Carbon disulfide	ND	ug/L	25.0	0.60	5		04/04/18 12:06	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	0.90	5		04/04/18 12:06	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1.0	5		04/04/18 12:06	108-90-7	
Chloroethane	ND	ug/L	5.0	0.75	5		04/04/18 12:06	75-00-3	
Chloroform	ND	ug/L	5.0	0.70	5		04/04/18 12:06	67-66-3	
Chloromethane	ND	ug/L	5.0	0.40	5		04/04/18 12:06	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1.0	5		04/04/18 12:06	124-48-1	
1,1-Dichloroethane	ND	ug/L	5.0	0.25	5		04/04/18 12:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	0.60	5		04/04/18 12:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1.0	5		04/04/18 12:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.40	5		04/04/18 12:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1.0	5		04/04/18 12:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	0.80	5		04/04/18 12:06	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	0.70	5		04/04/18 12:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	0.60	5		04/04/18 12:06	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	0.90	5		04/04/18 12:06	100-41-4	
2-Hexanone	ND	ug/L	50.0	6.0	5		04/04/18 12:06	591-78-6	
Methylene chloride	**2.7J**	ug/L	5.0	0.75	5		04/04/18 12:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	2.1	5		04/04/18 12:06	108-10-1	
Styrene	ND	ug/L	5.0	0.60	5		04/04/18 12:06	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	0.75	5		04/04/18 12:06	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	0.50	5		04/04/18 12:06	127-18-4	
Toluene	ND	ug/L	5.0	0.85	5		04/04/18 12:06	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	0.55	5		04/04/18 12:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1.0	5		04/04/18 12:06	79-00-5	
Trichloroethene	ND	ug/L	5.0	0.85	5		04/04/18 12:06	79-01-6	
Vinyl chloride	ND	ug/L	5.0	0.65	5		04/04/18 12:06	75-01-4	
Xylene (Total)	ND	ug/L	15.0	2.1	5		04/04/18 12:06	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	80-119		5		04/04/18 12:06	460-00-4	1e
1,2-Dichloroethane-d4 (S)	107	%	80-117		5		04/04/18 12:06	17060-07-0	
Toluene-d8 (S)	95	%	80-115		5		04/04/18 12:06	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	5		04/04/18 12:06		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267331

Sample: TB-02-20180403 **Lab ID: 60267331004** Collected: 04/03/18 17:50 Received: 04/04/18 06:30 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		04/04/18 11:24	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/04/18 11:24	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/04/18 11:24	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/04/18 11:24	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/04/18 11:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/04/18 11:24	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/04/18 11:24	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/04/18 11:24	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/04/18 11:24	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/04/18 11:24	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/04/18 11:24	67-66-3	
Chloromethane	**0.19J**	ug/L	1.0	0.080	1		04/04/18 11:24	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/04/18 11:24	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/04/18 11:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/04/18 11:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/04/18 11:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/04/18 11:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/04/18 11:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/04/18 11:24	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/04/18 11:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/04/18 11:24	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/04/18 11:24	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/04/18 11:24	591-78-6	
Methylene chloride	**0.53J**	ug/L	1.0	0.15	1		04/04/18 11:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/04/18 11:24	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/04/18 11:24	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/04/18 11:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/04/18 11:24	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/04/18 11:24	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/04/18 11:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/04/18 11:24	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/04/18 11:24	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/04/18 11:24	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/04/18 11:24	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/04/18 11:24	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	80-117		1		04/04/18 11:24	17060-07-0	
Toluene-d8 (S)	97	%	80-115		1		04/04/18 11:24	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/04/18 11:24		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60267331

QC Batch: 520438 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60267331001, 60267331002, 60267331003, 60267331004

METHOD BLANK: 2130115 Matrix: Water
Associated Lab Samples: 60267331001, 60267331002, 60267331003, 60267331004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/04/18 10:57	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/04/18 10:57	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/04/18 10:57	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/04/18 10:57	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/04/18 10:57	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/04/18 10:57	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/04/18 10:57	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/04/18 10:57	
2-Hexanone	ug/L	ND	10.0	1.2	04/04/18 10:57	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/04/18 10:57	
Acetone	ug/L	ND	10.0	1.9	04/04/18 10:57	
Benzene	ug/L	ND	1.0	0.060	04/04/18 10:57	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/04/18 10:57	
Bromoform	ug/L	ND	1.0	0.070	04/04/18 10:57	
Bromomethane	ug/L	ND	5.0	0.16	04/04/18 10:57	
Carbon disulfide	ug/L	ND	5.0	0.12	04/04/18 10:57	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/04/18 10:57	
Chlorobenzene	ug/L	ND	1.0	0.21	04/04/18 10:57	
Chloroethane	ug/L	ND	1.0	0.15	04/04/18 10:57	
Chloroform	ug/L	ND	1.0	0.14	04/04/18 10:57	
Chloromethane	ug/L	0.13J	1.0	0.080	04/04/18 10:57	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/04/18 10:57	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/04/18 10:57	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/04/18 10:57	
Ethylbenzene	ug/L	ND	1.0	0.18	04/04/18 10:57	
Methylene chloride	ug/L	ND	1.0	0.15	04/04/18 10:57	
Styrene	ug/L	ND	1.0	0.12	04/04/18 10:57	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/04/18 10:57	
Toluene	ug/L	ND	1.0	0.17	04/04/18 10:57	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/04/18 10:57	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/04/18 10:57	
Trichloroethene	ug/L	ND	1.0	0.17	04/04/18 10:57	
Vinyl chloride	ug/L	ND	1.0	0.13	04/04/18 10:57	
Xylene (Total)	ug/L	ND	3.0	0.42	04/04/18 10:57	
1,2-Dichloroethane-d4 (S)	%	108	80-117		04/04/18 10:57	
4-Bromofluorobenzene (S)	%	92	80-119		04/04/18 10:57	
Toluene-d8 (S)	%	93	80-115		04/04/18 10:57	

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

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QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60267331

LABORATORY CONTROL SAMPLE: 2130116

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.3	107	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	16.1	81	74-121	
1,1,2-Trichloroethane	ug/L	20	17.6	88	83-119	
1,1-Dichloroethane	ug/L	20	19.2	96	85-128	
1,1-Dichloroethene	ug/L	20	22.4	112	85-123	
1,2-Dichloroethane	ug/L	20	22.1	110	77-120	
1,2-Dichloropropane	ug/L	20	19.8	99	81-126	
2-Butanone (MEK)	ug/L	100	107	107	65-134	
2-Hexanone	ug/L	100	95.2	95	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	105	105	66-139	
Acetone	ug/L	100	123	123	62-142	
Benzene	ug/L	20	19.5	98	81-118	
Bromodichloromethane	ug/L	20	20.8	104	85-123	
Bromoform	ug/L	20	19.2	96	83-123	
Bromomethane	ug/L	20	23.6	118	39-149	
Carbon disulfide	ug/L	20	20.4	102	85-124	
Carbon tetrachloride	ug/L	20	22.1	111	85-126	
Chlorobenzene	ug/L	20	19.9	99	87-118	
Chloroethane	ug/L	20	18.2	91	73-134	
Chloroform	ug/L	20	21.7	109	85-119	
Chloromethane	ug/L	20	19.7	98	20-174	
cis-1,2-Dichloroethene	ug/L	20	18.9	94	84-121	
cis-1,3-Dichloropropene	ug/L	20	20.7	104	80-124	
Dibromochloromethane	ug/L	20	20.2	101	83-122	
Ethylbenzene	ug/L	20	19.0	95	80-118	
Methylene chloride	ug/L	20	21.4	107	81-126	
Styrene	ug/L	20	19.5	98	85-120	
Tetrachloroethene	ug/L	20	20.0	100	87-120	
Toluene	ug/L	20	18.4	92	82-118	
trans-1,2-Dichloroethene	ug/L	20	20.4	102	83-121	
trans-1,3-Dichloropropene	ug/L	20	18.8	94	80-122	
Trichloroethene	ug/L	20	21.5	107	82-120	
Vinyl chloride	ug/L	20	22.7	114	74-147	
Xylene (Total)	ug/L	60	56.6	94	81-120	
1,2-Dichloroethane-d4 (S)	%			113	80-117	
4-Bromofluorobenzene (S)	%			92	80-119	
Toluene-d8 (S)	%			94	80-115	

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.

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QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60267331

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: 520438

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1e Sample was diluted due to the presence of high levels of sediment in the vials.

B Analyte was detected in the associated method blank.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60267331

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60267331001	**TMW-32-20180403**	EPA 5030B/8260	520438		
60267331002	**TMW-33-20180403**	EPA 5030B/8260	520438		
60267331003	**TMW-31-20180403**	EPA 5030B/8260	520438		
60267331004	**TB-02-20180403**	EPA 5030B/8260	520438		

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Sample Condition Upon Receipt

WO# : 60267331

60267331

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: 266 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 3.1 **Corr. Factor** +0.2 **Corrected** 3.3

Date and initials of person examining contents: 4/4/18

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	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: 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	
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: | of

Section A Required Client Information:

Company:	Ramboll
Address:	7500 College Blvd., Ste. 925
	Overland Park, KS 66210
Email To:	thouseknight@ramboll
Phone: 913-553-5926	Fax:
Requested Due Date/TAT:	same day TAT

Section B Required Project Information:

Report To:	Tamara House-Knight
Copy To:	mwilson@ramboll.com
	nzerweller@ramboll.com
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:	Richard Mannz
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	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Analysis Test: 8260 VOCs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TMW-32-20180403	WT	G			4-3-18	1645	-	3				X					X			36067331 01
2	TMW-33-20180403	WT	G			4-3-18	1610	-	3				X					X			02
3	TMW-31-20180403	WT	G			4-3-18	1720	-	3				X					X			03
4	TB-02-20180403	WT	G			4-3-18	1750	-	2				X					X			36067331 04
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

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)
same day TAT!!	JoPawlowsky/Ramboll	4-3-18	1600	PACE	4/4/18	0630	3.3	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Johanna Pawlowsky

SIGNATURE of SAMPLER: Jo Pawlowsky DATE Signed (MM/DD/YY): 04/03/18

*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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April 05, 2018

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

RE: Project: FORT SMITH, AR
Pace Project No.: 60267451

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on April 05, 2018. 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: Kristen Drucquer, Ramboll
Tamara House-Knight, Ramboll Environ
M. Wilson

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CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60267451

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.: 60267451

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60267451001	**TB-03-20180404**	Water	04/04/18 17:30	04/05/18 06:30
60267451002	**HP-02-20180404**	Water	04/04/18 15:05	04/05/18 06:30
60267451003	**HP-03-20180404**	Water	04/04/18 16:10	04/05/18 06:30
60267451004	**HP-04-20180404**	Water	04/04/18 16:50	04/05/18 06:30
60267451005	**HP-05-20180404**	Water	04/04/18 10:55	04/05/18 06:30
60267451006	**HP-06-20180404**	Water	04/04/18 10:00	04/05/18 06:30

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60267451

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60267451001	**TB-03-20180404**	EPA 5030B/8260	PGH	38	PASI-K
60267451002	**HP-02-20180404**	EPA 5030B/8260	PGH	38	PASI-K
60267451003	**HP-03-20180404**	EPA 5030B/8260	PGH	38	PASI-K
60267451004	**HP-04-20180404**	EPA 5030B/8260	PGH	38	PASI-K
60267451005	**HP-05-20180404**	EPA 5030B/8260	PGH	38	PASI-K
60267451006	**HP-06-20180404**	EPA 5030B/8260	PGH	38	PASI-K

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60267451

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 05, 2018

General Information:
6 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: 520582

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, AR
Pace Project No.: 60267451

Sample: TB-03-20180404 **Lab ID: 60267451001** Collected: 04/04/18 17:30 Received: 04/05/18 06:30 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		04/05/18 12:36	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/05/18 12:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/05/18 12:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/05/18 12:36	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/05/18 12:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/05/18 12:36	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/05/18 12:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/05/18 12:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/05/18 12:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/05/18 12:36	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/05/18 12:36	67-66-3	
Chloromethane	**0.20J**	ug/L	1.0	0.080	1		04/05/18 12:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/05/18 12:36	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/05/18 12:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/05/18 12:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/05/18 12:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/05/18 12:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/05/18 12:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/05/18 12:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/05/18 12:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/05/18 12:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/05/18 12:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/05/18 12:36	591-78-6	
Methylene chloride	**0.34J**	ug/L	1.0	0.15	1		04/05/18 12:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/05/18 12:36	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/05/18 12:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/05/18 12:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/05/18 12:36	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/05/18 12:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/05/18 12:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/05/18 12:36	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/05/18 12:36	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/05/18 12:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/05/18 12:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/05/18 12:36	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	80-117		1		04/05/18 12:36	17060-07-0	
Toluene-d8 (S)	92	%	80-115		1		04/05/18 12:36	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/05/18 12:36		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267451

Sample: HP-02-20180404 **Lab ID: 60267451002** Collected: 04/04/18 15:05 Received: 04/05/18 06:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**4.6J**	ug/L	10.0	1.9	1		04/05/18 12:51	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/05/18 12:51	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/05/18 12:51	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/05/18 12:51	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/05/18 12:51	74-83-9	
2-Butanone (MEK)	**6.5J**	ug/L	10.0	0.59	1		04/05/18 12:51	78-93-3	
Carbon disulfide	**0.15J**	ug/L	5.0	0.12	1		04/05/18 12:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/05/18 12:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/05/18 12:51	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/05/18 12:51	75-00-3	
Chloroform	**0.33J**	ug/L	1.0	0.14	1		04/05/18 12:51	67-66-3	
Chloromethane	**0.25J**	ug/L	1.0	0.080	1		04/05/18 12:51	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/05/18 12:51	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/05/18 12:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/05/18 12:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/05/18 12:51	75-35-4	
cis-1,2-Dichloroethene	**5.9**	ug/L	1.0	0.080	1		04/05/18 12:51	156-59-2	
trans-1,2-Dichloroethene	**0.28J**	ug/L	1.0	0.20	1		04/05/18 12:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/05/18 12:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/05/18 12:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/05/18 12:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/05/18 12:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/05/18 12:51	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/05/18 12:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/05/18 12:51	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/05/18 12:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/05/18 12:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/05/18 12:51	127-18-4	
Toluene	**0.34J**	ug/L	1.0	0.17	1		04/05/18 12:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/05/18 12:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/05/18 12:51	79-00-5	
Trichloroethene	**63.4**	ug/L	1.0	0.17	1		04/05/18 12:51	79-01-6	
Vinyl chloride	**0.16J**	ug/L	1.0	0.13	1		04/05/18 12:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/05/18 12:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-119		1		04/05/18 12:51	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/05/18 12:51	17060-07-0	
Toluene-d8 (S)	96	%	80-115		1		04/05/18 12:51	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/05/18 12:51		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267451

Sample: HP-03-20180404 **Lab ID: 60267451003** Collected: 04/04/18 16:10 Received: 04/05/18 06:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**6.1J**	ug/L	10.0	1.9	1		04/05/18 13:05	67-64-1	
Benzene	**0.15J**	ug/L	1.0	0.060	1		04/05/18 13:05	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/05/18 13:05	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/05/18 13:05	75-25-2	
Bromomethane	**0.53J**	ug/L	5.0	0.16	1		04/05/18 13:05	74-83-9	
2-Butanone (MEK)	**5.1J**	ug/L	10.0	0.59	1		04/05/18 13:05	78-93-3	
Carbon disulfide	**0.14J**	ug/L	5.0	0.12	1		04/05/18 13:05	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/05/18 13:05	56-23-5	
Chlorobenzene	**0.65J**	ug/L	1.0	0.21	1		04/05/18 13:05	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/05/18 13:05	75-00-3	
Chloroform	**0.57J**	ug/L	1.0	0.14	1		04/05/18 13:05	67-66-3	
Chloromethane	**0.12J**	ug/L	1.0	0.080	1		04/05/18 13:05	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/05/18 13:05	124-48-1	
1,1-Dichloroethane	**0.18J**	ug/L	1.0	0.050	1		04/05/18 13:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/05/18 13:05	107-06-2	
1,1-Dichloroethene	**0.42J**	ug/L	1.0	0.20	1		04/05/18 13:05	75-35-4	
cis-1,2-Dichloroethene	**7.9**	ug/L	1.0	0.080	1		04/05/18 13:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/05/18 13:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/05/18 13:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/05/18 13:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/05/18 13:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/05/18 13:05	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/05/18 13:05	591-78-6	
Methylene chloride	**0.37J**	ug/L	1.0	0.15	1		04/05/18 13:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/05/18 13:05	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/05/18 13:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/05/18 13:05	79-34-5	
Tetrachloroethene	**0.15J**	ug/L	1.0	0.10	1		04/05/18 13:05	127-18-4	
Toluene	**0.30J**	ug/L	1.0	0.17	1		04/05/18 13:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/05/18 13:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/05/18 13:05	79-00-5	
Trichloroethene	**244**	ug/L	5.0	0.85	5		04/05/18 14:01	79-01-6	
Vinyl chloride	**0.29J**	ug/L	1.0	0.13	1		04/05/18 13:05	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/05/18 13:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/05/18 13:05	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/05/18 13:05	17060-07-0	
Toluene-d8 (S)	94	%	80-115		1		04/05/18 13:05	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/05/18 13:05		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267451

Sample: HP-04-20180404 **Lab ID: 60267451004** Collected: 04/04/18 16:50 Received: 04/05/18 06:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**6.2J**	ug/L	10.0	1.9	1		04/05/18 13:19	67-64-1	
Benzene	**0.11J**	ug/L	1.0	0.060	1		04/05/18 13:19	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/05/18 13:19	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/05/18 13:19	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/05/18 13:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/05/18 13:19	78-93-3	
Carbon disulfide	**0.50J**	ug/L	5.0	0.12	1		04/05/18 13:19	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/05/18 13:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/05/18 13:19	108-90-7	
Chloroethane	**0.69J**	ug/L	1.0	0.15	1		04/05/18 13:19	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/05/18 13:19	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/05/18 13:19	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/05/18 13:19	124-48-1	
1,1-Dichloroethane	**0.67J**	ug/L	1.0	0.050	1		04/05/18 13:19	75-34-3	
1,2-Dichloroethane	**1.1**	ug/L	1.0	0.12	1		04/05/18 13:19	107-06-2	
1,1-Dichloroethene	**0.21J**	ug/L	1.0	0.20	1		04/05/18 13:19	75-35-4	
cis-1,2-Dichloroethene	**2.2**	ug/L	1.0	0.080	1		04/05/18 13:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/05/18 13:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/05/18 13:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/05/18 13:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/05/18 13:19	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/05/18 13:19	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/05/18 13:19	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/05/18 13:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/05/18 13:19	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/05/18 13:19	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/05/18 13:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/05/18 13:19	127-18-4	
Toluene	**1.6**	ug/L	1.0	0.17	1		04/05/18 13:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/05/18 13:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/05/18 13:19	79-00-5	
Trichloroethene	**6.6**	ug/L	1.0	0.17	1		04/05/18 13:19	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/05/18 13:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/05/18 13:19	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-119		1		04/05/18 13:19	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	80-117		1		04/05/18 13:19	17060-07-0	
Toluene-d8 (S)	96	%	80-115		1		04/05/18 13:19	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/05/18 13:19		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267451

Sample: HP-05-20180404 **Lab ID: 60267451005** Collected: 04/04/18 10:55 Received: 04/05/18 06:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**3.8J**	ug/L	10.0	1.9	1		04/05/18 13:33	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/05/18 13:33	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/05/18 13:33	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/05/18 13:33	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/05/18 13:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/05/18 13:33	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/05/18 13:33	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/05/18 13:33	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/05/18 13:33	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/05/18 13:33	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/05/18 13:33	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/05/18 13:33	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/05/18 13:33	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/05/18 13:33	75-34-3	
1,2-Dichloroethane	**0.68J**	ug/L	1.0	0.12	1		04/05/18 13:33	107-06-2	
1,1-Dichloroethene	**0.54J**	ug/L	1.0	0.20	1		04/05/18 13:33	75-35-4	
cis-1,2-Dichloroethene	**5.8**	ug/L	1.0	0.080	1		04/05/18 13:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/05/18 13:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/05/18 13:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/05/18 13:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/05/18 13:33	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/05/18 13:33	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/05/18 13:33	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/05/18 13:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/05/18 13:33	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/05/18 13:33	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/05/18 13:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/05/18 13:33	127-18-4	
Toluene	**0.48J**	ug/L	1.0	0.17	1		04/05/18 13:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/05/18 13:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/05/18 13:33	79-00-5	
Trichloroethene	**10.9**	ug/L	1.0	0.17	1		04/05/18 13:33	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/05/18 13:33	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/05/18 13:33	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/05/18 13:33	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	80-117		1		04/05/18 13:33	17060-07-0	
Toluene-d8 (S)	89	%	80-115		1		04/05/18 13:33	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/05/18 13:33		

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267451

Sample: HP-06-20180404 **Lab ID: 60267451006** Collected: 04/04/18 10:00 Received: 04/05/18 06:30 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		04/05/18 13:47	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/05/18 13:47	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/05/18 13:47	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/05/18 13:47	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/05/18 13:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/05/18 13:47	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/05/18 13:47	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/05/18 13:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/05/18 13:47	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/05/18 13:47	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/05/18 13:47	67-66-3	
Chloromethane	**0.16J**	ug/L	1.0	0.080	1		04/05/18 13:47	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/05/18 13:47	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/05/18 13:47	75-34-3	
1,2-Dichloroethane	**0.58J**	ug/L	1.0	0.12	1		04/05/18 13:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/05/18 13:47	75-35-4	
cis-1,2-Dichloroethene	**2.7**	ug/L	1.0	0.080	1		04/05/18 13:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/05/18 13:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/05/18 13:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/05/18 13:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/05/18 13:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/05/18 13:47	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/05/18 13:47	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/05/18 13:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/05/18 13:47	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/05/18 13:47	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/05/18 13:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/05/18 13:47	127-18-4	
Toluene	**0.55J**	ug/L	1.0	0.17	1		04/05/18 13:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/05/18 13:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/05/18 13:47	79-00-5	
Trichloroethene	**7.4**	ug/L	1.0	0.17	1		04/05/18 13:47	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/05/18 13:47	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/05/18 13:47	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/05/18 13:47	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/05/18 13:47	17060-07-0	
Toluene-d8 (S)	105	%	80-115		1		04/05/18 13:47	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/05/18 13:47		

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60267451

QC Batch: 520582 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60267451001, 60267451002, 60267451003, 60267451004, 60267451005, 60267451006

METHOD BLANK: 2130773 Matrix: Water
Associated Lab Samples: 60267451001, 60267451002, 60267451003, 60267451004, 60267451005, 60267451006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/05/18 12:22	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/05/18 12:22	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/05/18 12:22	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/05/18 12:22	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/05/18 12:22	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/05/18 12:22	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/05/18 12:22	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/05/18 12:22	
2-Hexanone	ug/L	ND	10.0	1.2	04/05/18 12:22	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/05/18 12:22	
Acetone	ug/L	ND	10.0	1.9	04/05/18 12:22	
Benzene	ug/L	ND	1.0	0.060	04/05/18 12:22	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/05/18 12:22	
Bromoform	ug/L	ND	1.0	0.070	04/05/18 12:22	
Bromomethane	ug/L	ND	5.0	0.16	04/05/18 12:22	
Carbon disulfide	ug/L	ND	5.0	0.12	04/05/18 12:22	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/05/18 12:22	
Chlorobenzene	ug/L	ND	1.0	0.21	04/05/18 12:22	
Chloroethane	ug/L	ND	1.0	0.15	04/05/18 12:22	
Chloroform	ug/L	ND	1.0	0.14	04/05/18 12:22	
Chloromethane	ug/L	ND	1.0	0.080	04/05/18 12:22	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/05/18 12:22	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/05/18 12:22	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/05/18 12:22	
Ethylbenzene	ug/L	ND	1.0	0.18	04/05/18 12:22	
Methylene chloride	ug/L	ND	1.0	0.15	04/05/18 12:22	
Styrene	ug/L	ND	1.0	0.12	04/05/18 12:22	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/05/18 12:22	
Toluene	ug/L	ND	1.0	0.17	04/05/18 12:22	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/05/18 12:22	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/05/18 12:22	
Trichloroethene	ug/L	ND	1.0	0.17	04/05/18 12:22	
Vinyl chloride	ug/L	ND	1.0	0.13	04/05/18 12:22	
Xylene (Total)	ug/L	ND	3.0	0.42	04/05/18 12:22	
1,2-Dichloroethane-d4 (S)	%	104	80-117		04/05/18 12:22	
4-Bromofluorobenzene (S)	%	99	80-119		04/05/18 12:22	
Toluene-d8 (S)	%	98	80-115		04/05/18 12:22	

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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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60267451

LABORATORY CONTROL SAMPLE: 2130774

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.8	104	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	18.5	92	74-121	
1,1,2-Trichloroethane	ug/L	20	18.9	95	83-119	
1,1-Dichloroethane	ug/L	20	20.5	102	85-128	
1,1-Dichloroethene	ug/L	20	22.4	112	85-123	
1,2-Dichloroethane	ug/L	20	22.8	114	77-120	
1,2-Dichloropropane	ug/L	20	23.7	118	81-126	
2-Butanone (MEK)	ug/L	100	122	122	65-134	
2-Hexanone	ug/L	100	101	101	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	121	121	66-139	
Acetone	ug/L	100	126	126	62-142	
Benzene	ug/L	20	20.8	104	81-118	
Bromodichloromethane	ug/L	20	21.7	109	85-123	
Bromoform	ug/L	20	18.9	94	83-123	
Bromomethane	ug/L	20	18.6	93	39-149	
Carbon disulfide	ug/L	20	21.5	108	85-124	
Carbon tetrachloride	ug/L	20	21.4	107	85-126	
Chlorobenzene	ug/L	20	19.8	99	87-118	
Chloroethane	ug/L	20	16.9	84	73-134	
Chloroform	ug/L	20	21.4	107	85-119	
Chloromethane	ug/L	20	17.7	89	20-174	
cis-1,2-Dichloroethene	ug/L	20	19.7	98	84-121	
cis-1,3-Dichloropropene	ug/L	20	22.6	113	80-124	
Dibromochloromethane	ug/L	20	18.5	92	83-122	
Ethylbenzene	ug/L	20	19.6	98	80-118	
Methylene chloride	ug/L	20	21.2	106	81-126	
Styrene	ug/L	20	19.9	100	85-120	
Tetrachloroethene	ug/L	20	19.0	95	87-120	
Toluene	ug/L	20	19.2	96	82-118	
trans-1,2-Dichloroethene	ug/L	20	20.8	104	83-121	
trans-1,3-Dichloropropene	ug/L	20	20.1	101	80-122	
Trichloroethene	ug/L	20	21.1	106	82-120	
Vinyl chloride	ug/L	20	22.3	112	74-147	
Xylene (Total)	ug/L	60	59.4	99	81-120	
1,2-Dichloroethane-d4 (S)	%			104	80-117	
4-Bromofluorobenzene (S)	%			97	80-119	
Toluene-d8 (S)	%			95	80-115	

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.

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QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60267451

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: 520582

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60267451

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60267451001	**TB-03-20180404**	EPA 5030B/8260	520582		
60267451002	**HP-02-20180404**	EPA 5030B/8260	520582		
60267451003	**HP-03-20180404**	EPA 5030B/8260	520582		
60267451004	**HP-04-20180404**	EPA 5030B/8260	520582		
60267451005	**HP-05-20180404**	EPA 5030B/8260	520582		
60267451006	**HP-06-20180404**	EPA 5030B/8260	520582		

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Sample Condition Upon Receipt

WO# : 60267451

60267451

Client Name: 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: T-2604 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 2.2 **Corr. Factor** +0.2 **Corrected** 2.4

Date and initials of person examining contents: ~~4/4/18~~ RE 4/5/18 RM

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~~ 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	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks:		
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	
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:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Ramboll	Report To:	Tamara House-Knight	Attention:	Tamara House-Knight
Address:	7500 College Blvd., Ste. 925	Copy To:	mwilson@ramboll.com	Company Name:	Environ
	Overland Park, KS 66210		nzurweller@ramboll.com	Address:	124 W. Capitol Avenue
Email To:	thouseknight@ramboll.com	Purchase Order No.:	NA	Pace Quote Reference:	Little Rock, AR 72201
Phone: 913-553-5926	Fax:	Project Name:	Fort Smith, AR	Pace Project Manager:	Richard Mannz
Requested Due Date/TAT:	same day	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 Grab ~~COMPOSITE~~ START/END DATE	TIME	COMPOSITE END/GRAB DATE	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 VOCs		Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60267451
1	TB-03-20180404	WT	G	4-4-18	1730				2				X						X	2 DGAH (TB)		001
2	HP-02-20180404	WT	G		1505				3				X						X	3 DGAH		002
3	HP-03-20180404	WT	G		1610				3				X						X			003
4	HP-04-20180404	WT	G		1650				3				X						X			004
5	HP-05-20180404	WT	G		1055				3				X						X			005
6	HP-06-20180404	WT	G		1000				3				X						X			006
7																						
8																						
9																						
10																						
11																						
12																						

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)
same day TAT	Jo Pavlowsky / Ramboll	4/4/18	1800	[signature] Cathy pas1	4/5/18 ~~4/4/18~~ 4/5/18	AR 0630	2.4	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Johanna Pavlowsky

SIGNATURE of SAMPLER: Jo Pavlowsky

DATE Signed (MM/DD/YY): 04/04/2018

*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.
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April 06, 2018

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

RE: Project: FORT SMITH, AR
Pace Project No.: 60267576

Dear Nick Zurweller:
Enclosed are the analytical results for sample(s) received by the laboratory on April 06, 2018. 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: Kristen Drucquer, Ramboll
Tamara House-Knight, Ramboll Environ
M. Wilson

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CERTIFICATIONS

Project: FORT SMITH, AR
Pace Project No.: 60267576

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.: 60267576

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60267576001	**TB-03-20180405**	Water	04/05/18 08:20	04/06/18 06:30
60267576002	**HP-08-20180405**	Water	04/05/18 08:20	04/06/18 06:30
60267576003	**HP-07-20180405**	Water	04/05/18 09:30	04/06/18 06:30
60267576004	**TMW-33-SHALLOW-20180405**	Water	04/05/18 12:30	04/06/18 06:30

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SAMPLE ANALYTE COUNT

Project: FORT SMITH, AR
Pace Project No.: 60267576

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60267576001	**TB-03-20180405**	EPA 5030B/8260	PGH	38	PASI-K
60267576002	**HP-08-20180405**	EPA 5030B/8260	PGH	38	PASI-K
60267576003	**HP-07-20180405**	EPA 5030B/8260	PGH	38	PASI-K
60267576004	**TMW-33-SHALLOW-20180405**	EPA 5030B/8260	PGH	38	PASI-K

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PROJECT NARRATIVE

Project: FORT SMITH, AR
Pace Project No.: 60267576

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Ramboll Environ_AR
Date: April 06, 2018

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.

QC Batch: 520784

B: Analyte was detected in the associated method blank.

- BLANK for HBN 520784 [MSV/8853 (Lab ID: 2131586)
  - Carbon disulfide
  - Chloromethane

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: 520784

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, AR
Pace Project No.: 60267576

Sample: TB-03-20180405 **Lab ID: 60267576001** Collected: 04/05/18 08:20 Received: 04/06/18 06:30 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		04/06/18 13:51	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/06/18 13:51	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/06/18 13:51	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/06/18 13:51	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/06/18 13:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/06/18 13:51	78-93-3	
Carbon disulfide	ND	ug/L	5.0	0.12	1		04/06/18 13:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/06/18 13:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/06/18 13:51	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/06/18 13:51	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/06/18 13:51	67-66-3	
Chloromethane	**0.23J**	ug/L	1.0	0.080	1		04/06/18 13:51	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/06/18 13:51	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/06/18 13:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/06/18 13:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/06/18 13:51	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		04/06/18 13:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/06/18 13:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/06/18 13:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/06/18 13:51	10061-01-5	
trans-1,3-Dichloropropene	**0.13J**	ug/L	1.0	0.12	1		04/06/18 13:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/06/18 13:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/06/18 13:51	591-78-6	
Methylene chloride	**0.39J**	ug/L	1.0	0.15	1		04/06/18 13:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/06/18 13:51	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/06/18 13:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/06/18 13:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/06/18 13:51	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/06/18 13:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/06/18 13:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/06/18 13:51	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		04/06/18 13:51	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/06/18 13:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/06/18 13:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	80-119		1		04/06/18 13:51	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-117		1		04/06/18 13:51	17060-07-0	
Toluene-d8 (S)	95	%	80-115		1		04/06/18 13:51	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/06/18 13:51		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267576

Sample: HP-08-20180405 **Lab ID: 60267576002** Collected: 04/05/18 08:20 Received: 04/06/18 06:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**4.5J**	ug/L	10.0	1.9	1		04/06/18 14:05	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/06/18 14:05	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/06/18 14:05	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/06/18 14:05	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/06/18 14:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/06/18 14:05	78-93-3	
Carbon disulfide	**0.17J**	ug/L	5.0	0.12	1		04/06/18 14:05	75-15-0	B
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/06/18 14:05	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/06/18 14:05	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/06/18 14:05	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/06/18 14:05	67-66-3	
Chloromethane	ND	ug/L	1.0	0.080	1		04/06/18 14:05	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/06/18 14:05	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/06/18 14:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/06/18 14:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/06/18 14:05	75-35-4	
cis-1,2-Dichloroethene	**0.34J**	ug/L	1.0	0.080	1		04/06/18 14:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/06/18 14:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/06/18 14:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/06/18 14:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/06/18 14:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/06/18 14:05	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/06/18 14:05	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/06/18 14:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/06/18 14:05	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/06/18 14:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/06/18 14:05	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/06/18 14:05	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		04/06/18 14:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/06/18 14:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/06/18 14:05	79-00-5	
Trichloroethene	**0.30J**	ug/L	1.0	0.17	1		04/06/18 14:05	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		04/06/18 14:05	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/06/18 14:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-119		1		04/06/18 14:05	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-117		1		04/06/18 14:05	17060-07-0	
Toluene-d8 (S)	96	%	80-115		1		04/06/18 14:05	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/06/18 14:05		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267576

Sample: HP-07-20180405 **Lab ID: 60267576003** Collected: 04/05/18 09:30 Received: 04/06/18 06:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.3J**	ug/L	10.0	1.9	1		04/06/18 14:19	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/06/18 14:19	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/06/18 14:19	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/06/18 14:19	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/06/18 14:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/06/18 14:19	78-93-3	
Carbon disulfide	**0.32J**	ug/L	5.0	0.12	1		04/06/18 14:19	75-15-0	B
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/06/18 14:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.21	1		04/06/18 14:19	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/06/18 14:19	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/06/18 14:19	67-66-3	
Chloromethane	**0.37J**	ug/L	1.0	0.080	1		04/06/18 14:19	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/06/18 14:19	124-48-1	
1,1-Dichloroethane	**0.70J**	ug/L	1.0	0.050	1		04/06/18 14:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/06/18 14:19	107-06-2	
1,1-Dichloroethene	**0.46J**	ug/L	1.0	0.20	1		04/06/18 14:19	75-35-4	
cis-1,2-Dichloroethene	**3.2**	ug/L	1.0	0.080	1		04/06/18 14:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/06/18 14:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/06/18 14:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/06/18 14:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/06/18 14:19	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/06/18 14:19	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/06/18 14:19	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/06/18 14:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/06/18 14:19	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/06/18 14:19	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/06/18 14:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/06/18 14:19	127-18-4	
Toluene	**0.22J**	ug/L	1.0	0.17	1		04/06/18 14:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/06/18 14:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/06/18 14:19	79-00-5	
Trichloroethene	**4.6**	ug/L	1.0	0.17	1		04/06/18 14:19	79-01-6	
Vinyl chloride	**0.14J**	ug/L	1.0	0.13	1		04/06/18 14:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/06/18 14:19	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-119		1		04/06/18 14:19	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-117		1		04/06/18 14:19	17060-07-0	
Toluene-d8 (S)	107	%	80-115		1		04/06/18 14:19	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/06/18 14:19		

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ANALYTICAL RESULTS

Project: FORT SMITH, AR
Pace Project No.: 60267576

Sample: TMW-33-SHALLOW-20180405 **Lab ID: 60267576004** Collected: 04/05/18 12:30 Received: 04/06/18 06:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**2.9J**	ug/L	10.0	1.9	1		04/06/18 14:33	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		04/06/18 14:33	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		04/06/18 14:33	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		04/06/18 14:33	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		04/06/18 14:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		04/06/18 14:33	78-93-3	
Carbon disulfide	**0.17J**	ug/L	5.0	0.12	1		04/06/18 14:33	75-15-0	B
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		04/06/18 14:33	56-23-5	
Chlorobenzene	**0.45J**	ug/L	1.0	0.21	1		04/06/18 14:33	108-90-7	
Chloroethane	ND	ug/L	1.0	0.15	1		04/06/18 14:33	75-00-3	
Chloroform	**0.34J**	ug/L	1.0	0.14	1		04/06/18 14:33	67-66-3	
Chloromethane	**0.19J**	ug/L	1.0	0.080	1		04/06/18 14:33	74-87-3	B
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/06/18 14:33	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	0.050	1		04/06/18 14:33	75-34-3	
1,2-Dichloroethane	**0.15J**	ug/L	1.0	0.12	1		04/06/18 14:33	107-06-2	
1,1-Dichloroethene	**0.60J**	ug/L	1.0	0.20	1		04/06/18 14:33	75-35-4	
cis-1,2-Dichloroethene	**3.0**	ug/L	1.0	0.080	1		04/06/18 14:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		04/06/18 14:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.16	1		04/06/18 14:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	1		04/06/18 14:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.12	1		04/06/18 14:33	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.18	1		04/06/18 14:33	100-41-4	
2-Hexanone	ND	ug/L	10.0	1.2	1		04/06/18 14:33	591-78-6	
Methylene chloride	ND	ug/L	1.0	0.15	1		04/06/18 14:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		04/06/18 14:33	108-10-1	
Styrene	ND	ug/L	1.0	0.12	1		04/06/18 14:33	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		04/06/18 14:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		04/06/18 14:33	127-18-4	
Toluene	**0.27J**	ug/L	1.0	0.17	1		04/06/18 14:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		04/06/18 14:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		04/06/18 14:33	79-00-5	
Trichloroethene	**156**	ug/L	1.0	0.17	1		04/06/18 14:33	79-01-6	
Vinyl chloride	**0.26J**	ug/L	1.0	0.13	1		04/06/18 14:33	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		04/06/18 14:33	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-119		1		04/06/18 14:33	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-117		1		04/06/18 14:33	17060-07-0	
Toluene-d8 (S)	90	%	80-115		1		04/06/18 14:33	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		04/06/18 14:33		

REPORT OF LABORATORY ANALYSIS

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9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60267576

QC Batch: 520784 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60267576001, 60267576002, 60267576003, 60267576004

METHOD BLANK: 2131586 Matrix: Water
Associated Lab Samples: 60267576001, 60267576002, 60267576003, 60267576004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.11	04/06/18 13:37	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.15	04/06/18 13:37	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.20	04/06/18 13:37	
1,1-Dichloroethane	ug/L	ND	1.0	0.050	04/06/18 13:37	
1,1-Dichloroethene	ug/L	ND	1.0	0.20	04/06/18 13:37	
1,2-Dichloroethane	ug/L	ND	1.0	0.12	04/06/18 13:37	
1,2-Dichloropropane	ug/L	ND	1.0	0.16	04/06/18 13:37	
2-Butanone (MEK)	ug/L	ND	10.0	0.59	04/06/18 13:37	
2-Hexanone	ug/L	ND	10.0	1.2	04/06/18 13:37	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	0.42	04/06/18 13:37	
Acetone	ug/L	ND	10.0	1.9	04/06/18 13:37	
Benzene	ug/L	ND	1.0	0.060	04/06/18 13:37	
Bromodichloromethane	ug/L	ND	1.0	0.19	04/06/18 13:37	
Bromoform	ug/L	ND	1.0	0.070	04/06/18 13:37	
Bromomethane	ug/L	ND	5.0	0.16	04/06/18 13:37	
Carbon disulfide	ug/L	0.23J	5.0	0.12	04/06/18 13:37	
Carbon tetrachloride	ug/L	ND	1.0	0.18	04/06/18 13:37	
Chlorobenzene	ug/L	ND	1.0	0.21	04/06/18 13:37	
Chloroethane	ug/L	ND	1.0	0.15	04/06/18 13:37	
Chloroform	ug/L	ND	1.0	0.14	04/06/18 13:37	
Chloromethane	ug/L	0.19J	1.0	0.080	04/06/18 13:37	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.080	04/06/18 13:37	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.14	04/06/18 13:37	
Dibromochloromethane	ug/L	ND	1.0	0.21	04/06/18 13:37	
Ethylbenzene	ug/L	ND	1.0	0.18	04/06/18 13:37	
Methylene chloride	ug/L	ND	1.0	0.15	04/06/18 13:37	
Styrene	ug/L	ND	1.0	0.12	04/06/18 13:37	
Tetrachloroethene	ug/L	ND	1.0	0.10	04/06/18 13:37	
Toluene	ug/L	ND	1.0	0.17	04/06/18 13:37	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.20	04/06/18 13:37	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.12	04/06/18 13:37	
Trichloroethene	ug/L	ND	1.0	0.17	04/06/18 13:37	
Vinyl chloride	ug/L	ND	1.0	0.13	04/06/18 13:37	
Xylene (Total)	ug/L	ND	3.0	0.42	04/06/18 13:37	
1,2-Dichloroethane-d4 (S)	%	97	80-117		04/06/18 13:37	
4-Bromofluorobenzene (S)	%	103	80-119		04/06/18 13:37	
Toluene-d8 (S)	%	99	80-115		04/06/18 13:37	

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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9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: FORT SMITH, AR
Pace Project No.: 60267576

LABORATORY CONTROL SAMPLE: 2131587

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.4	97	87-122	
1,1,2,2-Tetrachloroethane	ug/L	20	19.3	97	74-121	
1,1,2-Trichloroethane	ug/L	20	19.4	97	83-119	
1,1-Dichloroethane	ug/L	20	20.3	101	85-128	
1,1-Dichloroethene	ug/L	20	18.2	91	85-123	
1,2-Dichloroethane	ug/L	20	20.8	104	77-120	
1,2-Dichloropropane	ug/L	20	20.9	105	81-126	
2-Butanone (MEK)	ug/L	100	105	105	65-134	
2-Hexanone	ug/L	100	109	109	68-132	
4-Methyl-2-pentanone (MIBK)	ug/L	100	108	108	66-139	
Acetone	ug/L	100	88.3	88	62-142	
Benzene	ug/L	20	20.2	101	81-118	
Bromodichloromethane	ug/L	20	19.9	99	85-123	
Bromoform	ug/L	20	20.5	102	83-123	
Bromomethane	ug/L	20	19.0	95	39-149	
Carbon disulfide	ug/L	20	19.6	98	85-124	
Carbon tetrachloride	ug/L	20	20.3	101	85-126	
Chlorobenzene	ug/L	20	19.7	99	87-118	
Chloroethane	ug/L	20	15.6	78	73-134	
Chloroform	ug/L	20	20.4	102	85-119	
Chloromethane	ug/L	20	18.6	93	20-174	
cis-1,2-Dichloroethene	ug/L	20	20.2	101	84-121	
cis-1,3-Dichloropropene	ug/L	20	20.6	103	80-124	
Dibromochloromethane	ug/L	20	20.6	103	83-122	
Ethylbenzene	ug/L	20	20.0	100	80-118	
Methylene chloride	ug/L	20	19.5	98	81-126	
Styrene	ug/L	20	21.1	106	85-120	
Tetrachloroethene	ug/L	20	19.9	99	87-120	
Toluene	ug/L	20	19.7	98	82-118	
trans-1,2-Dichloroethene	ug/L	20	20.5	102	83-121	
trans-1,3-Dichloropropene	ug/L	20	20.0	100	80-122	
Trichloroethene	ug/L	20	19.4	97	82-120	
Vinyl chloride	ug/L	20	21.9	109	74-147	
Xylene (Total)	ug/L	60	59.9	100	81-120	
1,2-Dichloroethane-d4 (S)	%			103	80-117	
4-Bromofluorobenzene (S)	%			100	80-119	
Toluene-d8 (S)	%			101	80-115	

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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Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: FORT SMITH, AR
Pace Project No.: 60267576

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: 520784

[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.

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORT SMITH, AR
Pace Project No.: 60267576

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60267576001	**TB-03-20180405**	EPA 5030B/8260	520784		
60267576002	**HP-08-20180405**	EPA 5030B/8260	520784		
60267576003	**HP-07-20180405**	EPA 5030B/8260	520784		
60267576004	**TMW-33-SHALLOW-20180405**	EPA 5030B/8260	520784		

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Pace Analytical
www.pacelabs.com

Sample Condition Upon Receipt

WO# : 60267576

60267576

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: 266 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 3.5 **Corr. Factor** +0.2 **Corrected** 3.7

Date and initials of person examining contents: JM 4/6/18

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	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: 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	
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
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

Section A Required Client Information:

Company: Ramboll
Address: 7500 College Blvd., Ste. 925
Overland Park, KS 66210
Email To: thouseknight@ramboll.com
Phone: 913-553-5926 Fax:
Requested Due Date/TAT: Same Day TAT

Section B Required Project Information:

Report To: Tamara House-Knight
Copy To: nzurweller@ramboll.com
mmilson@ramboll.com
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: Richard Mannz
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	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: 8260 VOCs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TB-03-20180405	WT	G			4-5-18	-		2				X				X			60267576 2(DEAH) 01
2	HP-08-20180405	WT	G				0820		3				X				X			3(DEAH) 02
3*	HP-07-20180405	WT	G				0930		3				X				X			03
4	MW-33-SHALLOW-20180405	WT	G				1230		3				X				X			04
5	HP-09-20180405	WT	G				1550		~~2~~ 3				X				X			2(DEAH) 05
6																				
7																				
8																				
9																				
10																				
11																				
12																				

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)
Same Day TAT	Nick Zurweller/Ramboll	4/5/18	1800	[signature] /PACE	4/6/18	0630	3.7	Y	Y	Y
*line item 3 is "HP-07-20180405"										
Hold ~~HP-07-20180405~~, NT2										
~~HP-08-20180405~~ + NT2										
HP-09-20180405 ← Hold										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nick Zurweller
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 4/5/18

*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

Appendix D

Notification Letters Regarding Offsite Impacts West of the Former Whirlpool Property

RAMBOLL

ENVIRONMENT
& HEALTH

Mr. John Cummings, Chief Engineer
The Arkansas Missouri Railroad Company
306 East Emma
Springdale, Arkansas 72764

RE: Notification Letter
Whirlpool Corporation - Fort Smith, Arkansas
EPA No. ARD042755389
AFIN No. 66-00048
CAO LIS 13-202-001

Dear Mr. Cummings:

May 4, 2018

Ramboll
1807 Park 270 Drive
Suite 450
St. Louis, Missouri 63146
USA

T +1 314 590 2950
F +1 314 590 2951
www.ramboll.com

Ramboll US Corporation (Ramboll), on behalf of Whirlpool Corporation (Whirlpool), appreciates the access The Arkansas Missouri Railroad Company provided to investigate groundwater along the railroad adjacent to the southwest boundary of the former Whirlpool facility in Fort Smith, Arkansas. As a result of the ongoing investigation activities at the former Whirlpool property and in accordance with the Remedial Action Decision Document (RADD) with the Arkansas Department of Environmental Quality (ADEQ), we are notifying The Arkansas Missouri Railroad Company that groundwater with trichloroethene (TCE) concentrations greater than 5 microgram per liter (µg/L) or parts per billion (ppb) has migrated from the former Whirlpool property on to The Arkansas Missouri Railroad Company property. The specific location where impacted groundwater has been identified is along the railroad approximately 250 feet north of East Geren Road near the southwest entrance to the former Whirlpool property. The attached figure depicts the specific section of railroad property where impacted groundwater has been identified between locations TMW-31 on the north side and HP-07 on the south side.

Whirlpool is continuing to work with ADEQ to investigate the boundaries of groundwater impact in this area. Whirlpool is planning a groundwater remediation effort on the former Whirlpool property in 2018 to mitigate further migration of impacted groundwater in this area.

If you have any questions please feel free to contact Jeff Noel with Whirlpool at 269-923-0107 or me. Information regarding the former Whirlpool site is available at www.whirlpoolfortsmith.com.

-oo0oo-

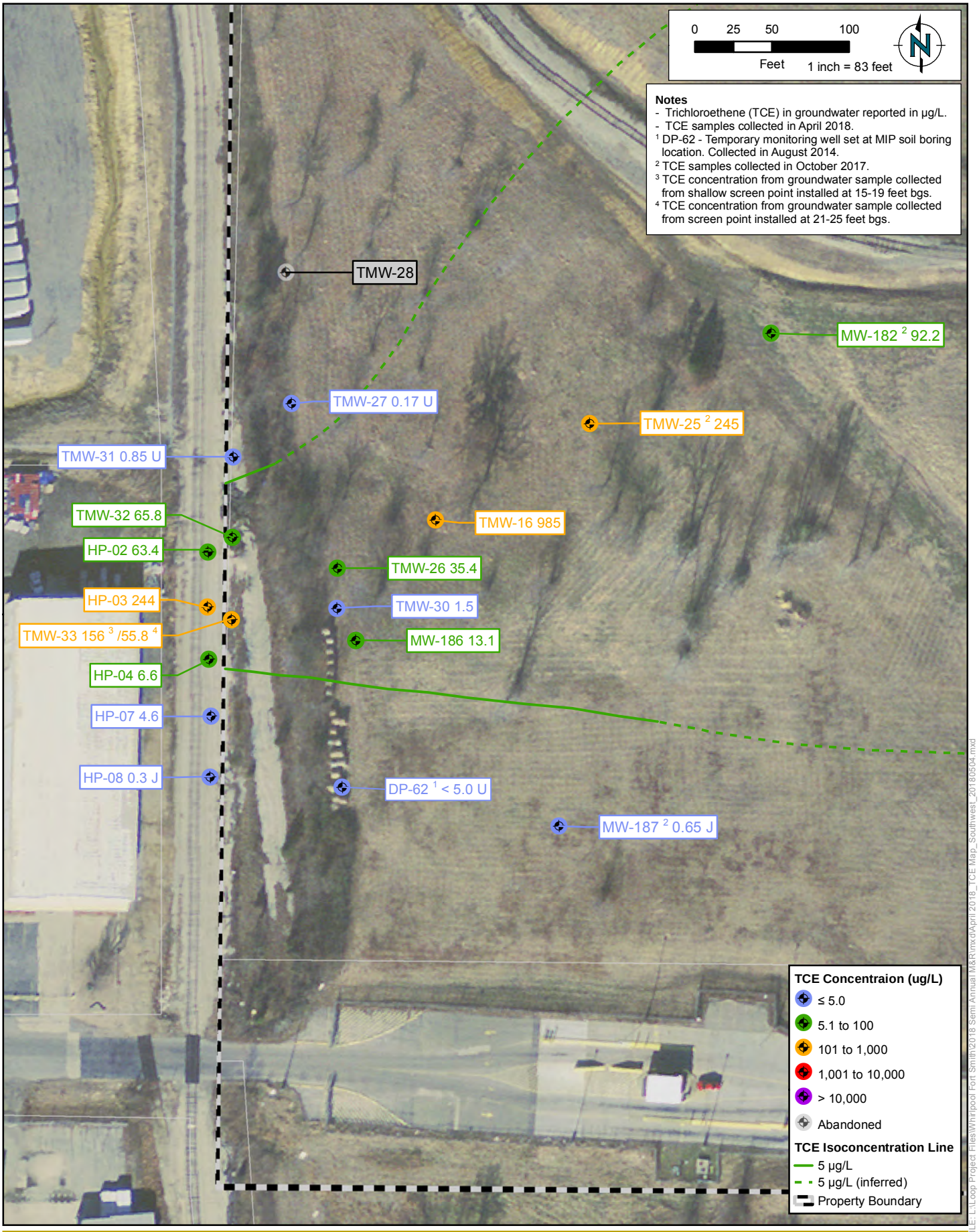
Sincerely,



Michael F. Ellis, PE
Principal

D +1 314 590 2967
mellis@ramboll.com

cc: Mostafa Mehran (ADEQ)
William Killoran (Whirlpool)



FILE: L:\Logo Project Files\Whirlpool Fort Smith\2018 Semi Annual M&R\mxd\April 2018_TCE Map_Southwest_20180504.mxd

RAMBOLL

DRAFTED BY: FK | DATE: 05/04/2018

APRIL 2018 TCE CONCENTRATION MAP
SOUTH PLUME

Whirlpool Facility - Fort Smith, Arkansas

Figure 1

PROJECT: 1690007739

RAMBOLL

ENVIRONMENT
& HEALTH

Mr. Ed Whittington
B&M Oil Company, Inc.
1201 Geren Road
Fort Smith, Arkansas 72908

RE: Notification Letter
Whirlpool Corporation - Fort Smith, Arkansas
EPA No. ARD042755389
AFIN No. 66-00048
CAO LIS 13-202-001

Dear Mr. Whittington:

May 4, 2018

Ramboll
1807 Park 270 Drive
Suite 450
St. Louis, Missouri 63146
USA

T +1 314 590 2950
F +1 314 590 2951
www.ramboll.com

Ramboll US Corporation (Ramboll) has been working with Whirlpool Corporation (Whirlpool) to investigate groundwater at the former Whirlpool facility in Fort Smith, Arkansas. As a result of the ongoing investigation, activities at the former Whirlpool property and in accordance the Remedial Action Decision Document (RADD) with the Arkansas Department of Environmental Quality (ADEQ), we are notifying the B&M Oil Company, Inc. that groundwater with trichloroethene (TCE) concentrations greater than 5 microgram per liter (µg/L) or parts per billion (ppb) may have migrated from the former Whirlpool property across the railroad property and on to the B&M Oil Company, Inc. property located at 1201 Geren Road in Fort Smith, Arkansas. The specific location where impacted groundwater has been encountered is along the railroad immediately east of the B&M Oil Company, Inc. property approximately 250 feet north of East Geren Road. The attached figure depicts the specific section of railroad property where impacted groundwater has been identified between locations TMW-31 on the north side and HP-07 on the south side. Although we have not investigated the B&M Oil Company, Inc. property we anticipate a limited amount of impacted groundwater is present west of the railroad property.

Whirlpool is continuing to work with ADEQ to investigate the boundaries of groundwater impact in this area. Whirlpool is planning a groundwater remediation effort on the former Whirlpool property in 2018 to mitigate further migration of impacted groundwater in this area. As a result of this ongoing investigation, we respectfully request access to your property to complete the investigation of the extent of TCE groundwater impact in this area. Please call me at your convenience to discuss Whirlpool and Ramboll's access to the B&M Oil Company, Inc. property to investigation the extent of TCE groundwater impacts.

If you have other questions please feel free to contact Jeff Noel with Whirlpool at 269-923-0107 or me. Information regarding the former Whirlpool site is available at www.whirlpoolfortsmith.com.

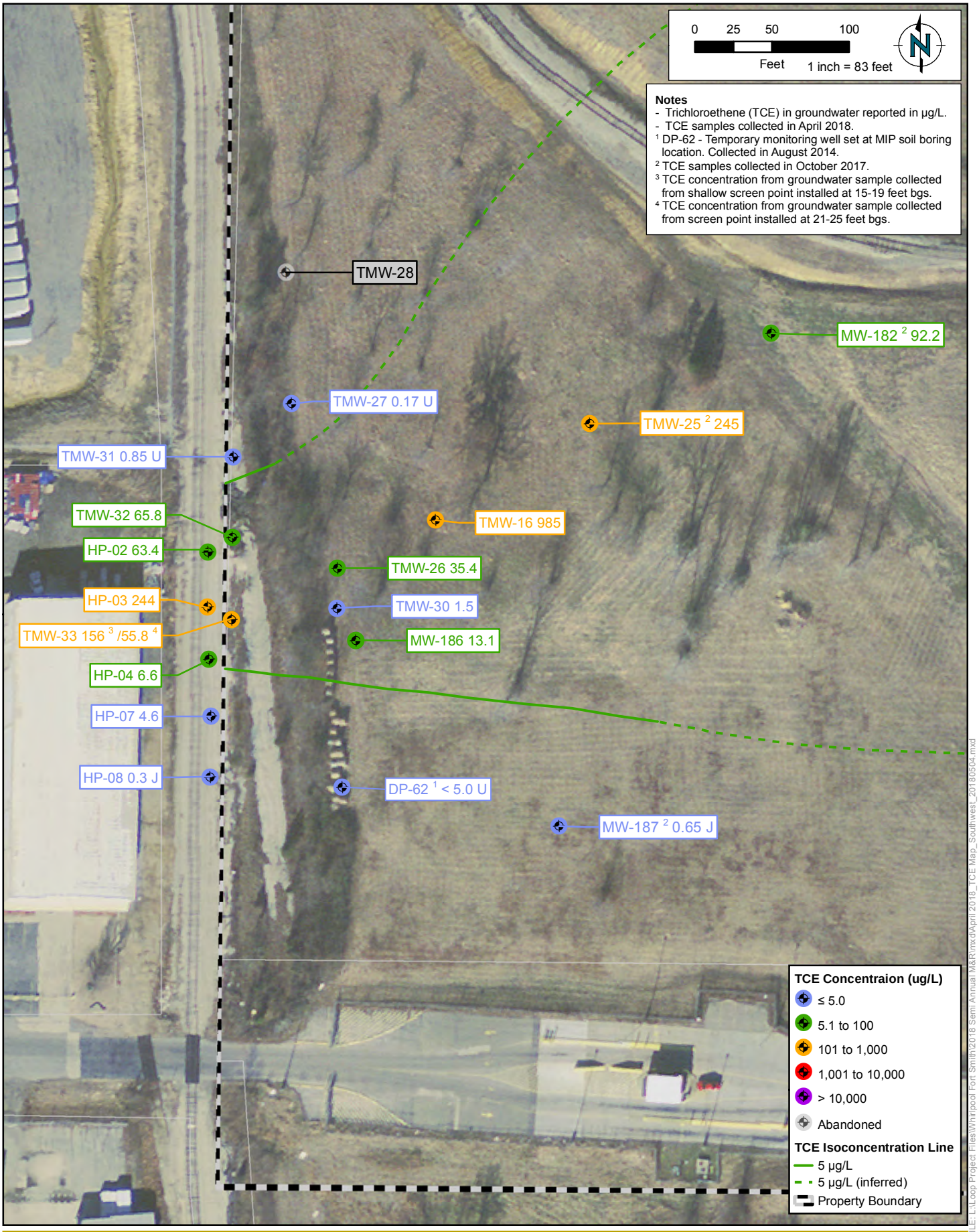
Sincerely,



Michael F. Ellis, PE
Principal

D +1 314 590 2967
mellis@ramboll.com

cc: Mostafa Mehran (ADEQ)
William Killoran (Whirlpool)



FILE: L:\Logo Project Files\Whirlpool Fort Smith\2018 Semi Annual M&R\mxd\April 2018_TCE Map_Southwest_20180504.mxd

RAMBOLL

DRAFTED BY: FK | DATE: 05/04/2018

APRIL 2018 TCE CONCENTRATION MAP
SOUTH PLUME

Whirlpool Facility - Fort Smith, Arkansas

Figure 1

PROJECT: 1690007739